Methionine from France

Investigation No. 731-TA-1534 (Final)

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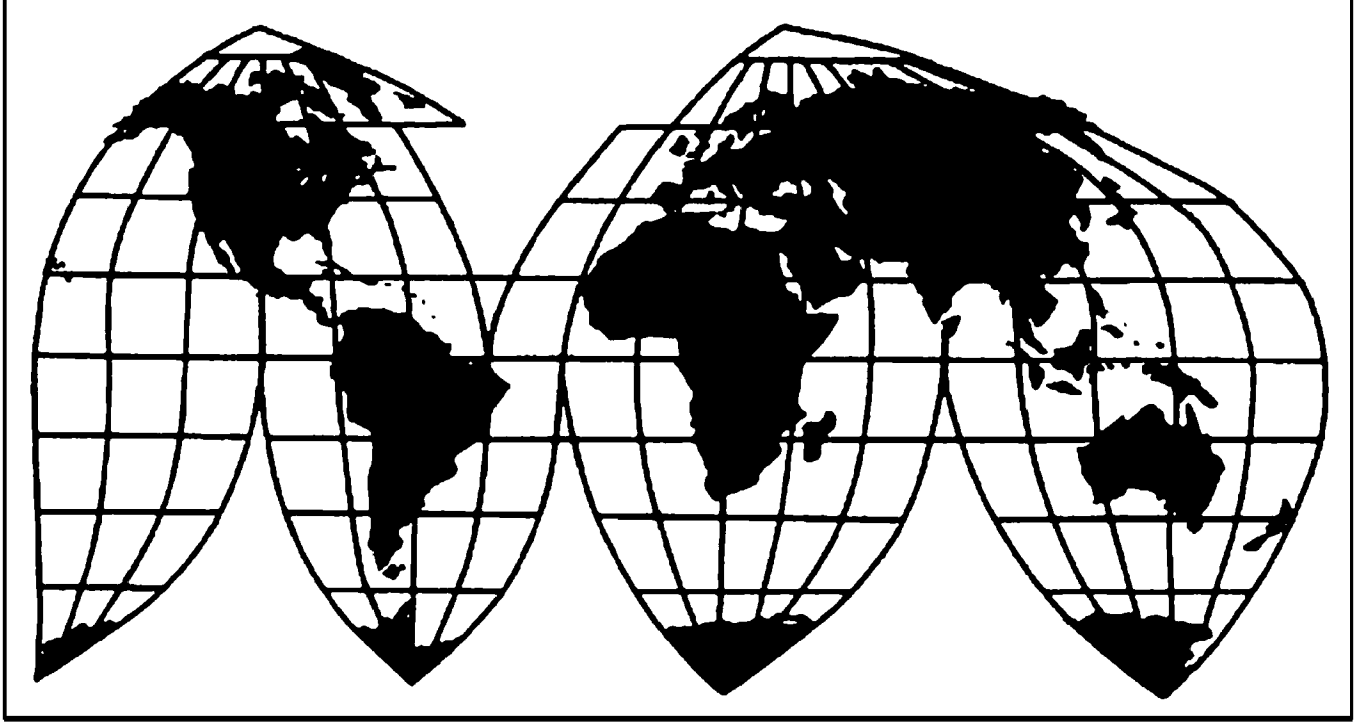
U.S. International Trade Commission



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Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified by brackets in confidential reports and is deleted and replaced with asterisks (***) in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1534 (Final)

Methionine from France

DETERMINATION

On the basis of the record[1] developed in the subject investigation, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is materially injured by reason of imports of methionine from France, provided for in subheadings 2930.40.00 and 2930.90.46 of the Harmonized Tariff Schedule of the United States, that have been found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").[2] [3]

BACKGROUND

The Commission instituted this investigation effective July 29, 2020, following receipt of a petition filed with the Commission and Commerce by Novus International, Inc., St. Charles, Missouri. The Commission scheduled the final phase of the investigation following notification of a preliminary determination by Commerce that imports of methionine from France were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of March 9, 2021 (86 FR 13585). In light of the restrictions on access to the Commission building due to the COVID–19 pandemic, the Commission conducted its hearing by video conference on May 11, 2021. All persons who requested the opportunity were permitted to participate.

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[1] The record is defined in § 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

[2] 86 FR 26697 (May 17, 2021).

[3] The Commission also finds that imports subject to Commerce's affirmative critical circumstances determination are not likely to undermine seriously the remedial effect of the antidumping duty order on France.

Views of the Commission

Based on the record in the final phase of this investigation, we determine that an industry in the United States is materially injured by reason of imports of methionine from France found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value. We also find that critical circumstances do not exist with respect to imports of methionine from France subject to Commerce's affirmative critical circumstances determination.

I. Background

Novus International, Inc. ("Novus" or "Petitioner"), a U.S. producer of methionine, filed petitions on July 29, 2020, seeking imposition of antidumping duties on imports of methionine from France, Japan, and Spain.[1] The investigation schedules became staggered in March 2021, when Commerce postponed its final antidumping duty determinations regarding methionine from Japan and Spain ("the trailing investigations"), but not its final antidumping duty determination regarding methionine from France.[2] Commerce published its final determination with respect to methionine from France on May 17, 2021.[3] This necessitated

[1] *Methionine From France, Japan, and Spain; Institution of Anti-Dumping Duty Investigations and Scheduling of Preliminary Phase Investigations*, 85 Fed. Reg. 47243, 47244 (Aug. 4, 2020).

[2] *Methionine From Japan: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Affirmative Determination of Critical Circumstances and Postponement of Final Determination and Extension of Provisional Measures*, 86 Fed. Reg. 12625, 12626 (Mar. 4, 2021) ("Commerce Japan Preliminary"); *Methionine From Spain: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Negative Determination of Critical Circumstances, Postponement of Final Determination, and Extension of Provisional Measures*, 86 Fed. Reg. 12614, 12616 (Mar. 4, 2021) ("Commerce Spain Preliminary"); *Methionine From France: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Partial Affirmative Determination of Critical Circumstances*, 86 Fed. Reg. 12627, 12629 (Mar. 4, 2021).

[3] *Methionine From France: Final Determination of Sales at Less Than Fair Value and Final Partial Determination of Critical Circumstances*, 86 Fed. Reg. 26697 (May 17, 2021) ("Commerce France Final").

that the Commission issue an earlier final determination in the antidumping duty investigation of methionine from France than in the trailing investigations. Pursuant to the statutory provision on staggered investigations, the record for the trailing investigations will be the same as the record in the investigation of methionine from France except, prior to the Commission's determinations on methionine from Japan and Spain, the Commission shall include in the record Commerce's final dumping determinations and the parties' final comments concerning those determinations.[4]

Petitioner's representatives provided written testimony, appeared at the hearing accompanied by counsel, and submitted prehearing and posthearing briefs as well as final comments.[5] A number of respondent entities participated in the final phase of the methionine investigations. Representatives of Adisseo France SAS, Adisseo España SA, and Adisseo USA Inc. (collectively, "Adisseo"), foreign producers and a U.S. importer of subject merchandise, respectively, provided written testimony, appeared at the hearing accompanied by counsel, and submitted prehearing and posthearing briefs as well as final comments. Representatives of Sumitomo Chemical Company, Ltd. and Sumitomo Chemical America, Inc. (collectively "Sumitomo"), a foreign producer and U.S. importer of subject merchandise, respectively, provided written testimony, appeared at the hearing accompanied by counsel, and submitted prehearing and posthearing briefs as well as final comments. Finally, representatives for the

[4] *See* 19 U.S.C. 1677(7)(G)(iii). Commerce is currently scheduled to issue its final determinations in the trailing investigations by July 17, 2021. *See* Commerce Japan Preliminary, 86 Fed. Reg. at 12626; Commerce Spain Preliminary, 86 Fed. Reg. at 12616.

[5] In light of restrictions on access to the Commission building due to the COVID-19 pandemic, the Commission conducted its hearing by video conference on May 11, 2021, as set forth in procedures provided to the parties.

Pet Food Institute ("PFI"), an association of pet food makers that purchase methionine, filed written testimony, participated in the hearing, and filed prehearing and posthearing briefs.[6]

U.S. industry data are based on the questionnaire responses from two domestic producers, *i.e.*, Petitioner Novus and Evonik, that accounted for all known domestic production of methionine in 2020.[7] U.S. import data are based on official Commerce import statistics and questionnaire responses of five U.S. importers of methionine accounting for *** U.S. imports from France, *** U.S. imports from Japan, and *** U.S. imports from Spain in 2020.[8] Data concerning the subject industries are based on questionnaire responses from three foreign producers, one in each of the three subject countries, accounting for *** production of subject merchandise in 2020.[9]

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the "domestic like product" and the "industry."[10] Section 771(4)(A) of the Tariff Act

[6] PFI members are U.S. purchasers of methionine; they account for the vast majority of U.S. cat and dog food production. PFI Posthearing Brief, EDIS Doc. 742731 (May 17, 2021) at 1.

[7] Confidential Report ("CR"), Memorandum INV-TT-072 at III-1 and Table III-1; *Methionine from France*, Inv. No. 731-TA-1534 (Final), USITC Pub. 5206 (June 2021), Public Report ("PR") at III-1 and Table III-1.

[8] CR/PR at IV-1 and Table IV-1.

[9] CR/PR at VII-3, VII-8, VII-14. Adisseo France SAS's exports to the United States accounted for *** percent of U.S. imports of methionine from France in 2020. CR/PR at VII-3. Sumitomo Chemical's exports to the United States accounted for *** percent of U.S. imports of methionine from Japan in 2020. CR/PR at VII-8. Adisseo España's exports to the United States accounted for *** percent of U.S. imports of methionine from Spain in 2020. CR/PR at VII-14.

[10] 19 U.S.C. § 1677(4)(A).

of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[11] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[12]

By statute, the Commission's "domestic like product" analysis begins with the "article subject to an investigation," *i.e.*, the subject merchandise as determined by Commerce.[13] Therefore, Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value is "necessarily the starting point of the Commission's like product analysis."[14] The Commission then defines the domestic like product in light of the imported articles Commerce has identified.[15] The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the

[11] 19 U.S.C. § 1677(4)(A).

[12] 19 U.S.C. § 1677(10).

[13] 19 U.S.C. § 1677(10). The Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value. *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[14] *Cleo Inc. v. United States*, 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v. United States*, 949 F.3d 710, 714-15 (Fed. Cir. 2020) (the statute requires the Commission to start with Commerce's subject merchandise in reaching its own like product determination).

[15] *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Torrington Co. v. United States*, 747 F. Supp. 744, 748–52 (Ct. Int'l Trade 1990) (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991).

Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[16] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[17] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[18]

B. Product Description

Commerce defined the scope of the imported merchandise under investigation as follows:

> {M}ethionine and dl-Hydroxy analogue of dl-methionine, also known as 2-Hydroxy 4-(Methylthio) Butanoic acid (HMTBa), regardless of purity, particle size, grade, or physical form. Methionine has the chemical formula $C_5H_{11}NO_2S$, liquid HMTBa has the chemical formula $C_5H_{10}O_3S$, and dry HMTBa has the chemical formula $(C_5H_9O_3S)_2Ca$.
>
> Subject merchandise also includes methionine processed in a third country including, but not limited to, refining, converting from liquid to dry or dry to liquid form, or any other processing that would not otherwise remove the merchandise from the scope of

[16] *See, e.g., Cleo*, 501 F.3d at 1299; *NEC Corp. v. Dep't of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington*, 747 F. Supp. at 749 n.3 ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors, including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[17] *See*, *e.g.*, S. Rep. No. 96-249 at 90–91 (1979).

[18] *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748–49; *see also* S. Rep. No. 96-249 at 90–91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

> these investigations if performed in the country of manufacture of the in-scope methionine or dl-Hydroxy analogue of dl-methionine.
>
> The scope also includes methionine that is commingled (*i.e.,* mixed or combined) with methionine from sources not subject to these investigations. Only the subject component of such commingled products is covered by the scope of these investigations.
>
> Excluded from these investigations is United States Pharmacopoeia (USP) grade methionine. In order to qualify for this exclusion, USP grade methionine must meet or exceed all of the chemical, purity, performance, and labeling requirements of the United States Pharmacopeia and the National Formulary for USP grade methionine.
>
> Methionine is currently classified under subheadings 2930.40.0000 and 2930.90.4600 of the Harmonized Tariff Schedule of the United States (HTSUS). Methionine has the Chemical Abstracts Service (CAS) registry numbers 583–91–5, 4857–44–7, 59–51–8 and 922–50–9. While the HTSUS subheadings and CAS registry numbers are provided for convenience and customs purposes, the written description of the scope of these investigations is dispositive.[19]

The scope includes both methionine and a hydroxy analogue of methionine. Methionine is an essential amino acid with the chemical formula of $C_5H_{11}NO_2S$ and with two different isomers: D-methionine and L-methionine.[20] A mixture of the two isomers is called DL-methionine ("DLM") and is one of the forms of methionine within the scope.[21] Another form of methionine within the scope is the hydroxy analogue of DLM ("MHA"), with the following chemical formulas: $C_5H_{10}O_3S$ (in liquid form) and $(C_5H_9O_3S)_2Ca$ (in dry form).[22] Both forms are

[19] Commerce France Final, 86 Fed. Reg. at 26699.

[20] CR/PR at I-7. A feed grade version of L-biomethionine, produced using bio-based inputs, falls within the scope. CR/PR at I-9.

[21] CR/PR at I-7. Throughout this opinion, the term "methionine" will be used to describe all in-scope merchandise.

[22] CR/PR at I-7.

primarily used in animal feed preparations, including aquaculture, and can be in liquid and dry form.[23] MHA is a chemical precursor to DLM and is converted by the animal's digestive system into DLM.[24] A higher purity form of methionine, United States Pharmacopoeia grade methionine, is excluded from the scope of the investigations.[25]

C. Domestic Like Product Analysis

Based on the record in the final phase, we define a single domestic like product consisting of DLM and MHA, coextensive with the scope. Petitioner contends that the Commission should define a single domestic like product consisting of DLM and MHA as it did in the preliminary determinations.[26] Sumitomo argues that the Commission should find that MHA and DLM constitute separate domestic like products.[27]

In the preliminary determinations, the Commission defined a single domestic like product coextensive with the scope definition.[28] The Commission found that, although MHA and DLM differ in physical characteristics, and have distinct manufacturing facilities, processes, and employees, both of these forms of methionine have virtually identical uses and channels of distribution.[29] Moreover, the Commission found that DLM and MHA are substantially interchangeable, that customers and producers perceive DLM and MHA to be similar products

[23] CR/PR at I-8.

[24] CR/PR at I-8–9.

[25] CR/PR at I-9.

[26] Novus Prehearing Brief, EDIS Doc. 741514 (May 4, 2021) at 4; Novus Posthearing Brief, EDIS Doc. 742721 (May 17, 2021) at 3–4; Novus Final Comments, EDIS Doc. 744207 (June 8, 2021) at 2–3.

[27] Sumitomo Prehearing Brief, EDIS Doc. 741544 (May 4, 2021) at 3–14; Sumitomo Posthearing Brief, EDIS Doc. 742647 (May 17, 2021) at 14–15; Sumitomo Final Comments, EDIS Doc. 744274 (June 8, 2021) at 2.

[28] *Methionine from France, Japan, and Spain*, Inv. Nos. 731-TA-1534-1536 (Preliminary), USITC Pub. 5121 (Sept. 2020) ("*Preliminary Determinations*") at 12–13.

[29] *Preliminary Determinations*, USITC Pub. 5121 at 12.

that provide methionine for animal feed, and that MHA and DLM are similarly priced when adjusted for activity level.[30] As explained below, we find that the record in the final phase warrants the same conclusion.

Physical Characteristics and Uses. DLM and MHA, although distinct chemical compounds, share similar physical characteristics and serve the same end use. MHA is an organic acid, not an amino acid, because MHA has a hydroxy group where the amine group is located on the DLM molecule.[31] DLM is primarily sold as a dry crystalline powder in the U.S. market, while MHA is primarily sold as a liquid.[32] MHA, while distinguished from DLM as an organic acid, is enzymatically converted to DLM after it is ingested by an animal, thus serving the same end use in animal feed preparation, including aquaculture,[33] although it may have lower bioefficacy than DLM because not all of the chemical is converted into DLM upon digestion.[34] Notwithstanding their distinct chemical forms, DLM and MHA have the same end-use as a feed supplement for animal feed preparations (*e.g.*, poultry, swine), including aquaculture.[35]

[30] *Preliminary Determinations*, USITC Pub. 5121 at 12.

[31] CR/PR at I-8.

[32] Hearing Transcript ("Hr. Tr.") at 18 (Klopfenstein). Novus is the only domestic producer of MHA while Evonik is the only domestic producer of DLM. CR/PR at I-10. Liquid MHA (88 percent activity level) accounted for *** percent of domestic producers' U.S. shipments while dry MHA (84 percent activity level) accounted for *** percent in 2020; dry DLM (99 percent activity level) accounted for *** percent of domestic producers' U.S. shipments in 2020. CR/PR at Table E-1.

[33] CR/PR at I-8.

[34] CR/PR at I-9. Industry sources disagree about the bioefficacy of MHA after ingestion, indicating it may be lower than the 84 percent to 88 percent dry weight activity level. CR/PR at I-9 n.23; Hr. Tr. at 115 (Barnes), 210–211 (Mitchell) (". . . you'll find some {nutritionists} that say . . . it is exact like the dry weight conversion. You'll see, no, the animal is very inefficient . . .").

[35] CR/PR at I-8.

The Commission asked domestic producers and importers in preliminary phase questionnaires to rate and comment on the comparability of DLM and MHA with respect to the six domestic like product factors.[36] Regarding physical characteristics, *** U.S. producer and *** U.S. importer indicated that they are "fully" comparable; *** U.S. producer indicated that they are "mostly" comparable; *** U.S. importers reported that they are "somewhat" comparable.[37]

Interchangeability. Both DLM and MHA are used as supplements to add methionine to animal feed. Petitioner Novus and domestic producer Evonik report that both DLM and MHA can be used interchangeably as animal feed supplements.[38] Importer Adisseo USA reported that because DLM tends to be dry and MHA tends to be liquid, they ***.[39] Petitioner acknowledges that the different forms of DLM and MHA (dry versus liquid) may limit their interchangeability, but asserts that these limitations are largely based on purchaser decisions regarding production technology.[40] Respondent Adisseo also acknowledges that, to some extent, dry DLM and the liquid MHA are interchangeable but that an end user may need to modify its operating process to switch between methionine forms.[41]

[36] *See* Preliminary Phase Report, INV-SS-108 (Sept. 4, 2020) at Table I-1. The questionnaires asked if the two are "fully," "mostly," "somewhat" or "not at all" comparable. Two domestic producers and three importers responded. *Id*.

[37] Preliminary Phase Report at Table I-1.

[38] Preliminary Phase Report at D-3.

[39] Preliminary Phase Report at D-4. Sumitomo USA observed that the "***" *Id.*

[40] Novus Prehearing Brief at 4–5; Hr. Tr. at 229 (Drake).

[41] Adisseo Prehearing Brief at 20–21.

The record shows that there is considerable interchangeability of DLM and MHA though one may be preferred in certain applications. MHA is preferred in feed preparations for dairy cows,[42] and PFI's witness testified that dog and cat food makers use DLM almost exclusively.[43] Purchasers' responses on interchangeability of DLM and MHA were mixed, with eight of 17 reporting that dry DLM and dry MHA were completely or moderately interchangeable and nine of 17 reporting that dry DLM and dry MHA were only slightly or not at all interchangeable. As to dry DLM verses liquid MHA, eight of 19 purchasers reported that they were not at all interchangeable, while four purchasers reported they were completely interchangeable.[44] Nevertheless, over half of the responding purchasers (13 of 22) reported that they could switch between DLM and MHA[45] and 11 of 28 purchasers reported purchasing both DLM and MHA.[46]

Manufacturing Facilities, Production Processes, and Employees. The record indicates that DLM and MHA are produced by different producers in different facilities with different employees, but that production processes are to a substantial degree similar. Novus and Evonik also use different chemical syntheses to produce MHA and DLM, respectively.

Novus produces 3-methylthiopropionaldehyde ("MMP") and then reacts it with hydrogen cyanide ("HCN") to form liquid MHA.[47] Notably, Novus converts the liquid MHA to

[42] Hr. Tr. at 116 (Barnes), 212 (Mitchell); CR/PR at II-13.

[43] Hr. Tr. at 148 (Tabor).

[44] CR/PR at II-13. In their preliminary phase questionnaire responses, three of the five responses from domestic producers and importers indicated that DLM and MHA are fully interchangeable.[44] Specifically, *** U.S. producers and *** U.S. importer indicated they are fully interchangeable, *** U.S. importer indicated they are somewhat interchangeable, and ***U.S. importer reported they are never interchangeable. *See* Preliminary Phase Report at Table I-1.

[45] CR/PR at II-12.

[46] CR/PR at II-12. Five of 21 responding end users and three of eight responding distributors reported purchasing both DLM and MHA. CR/PR at Appendix D.

[47] CR/PR at I-10.

dry MHA by reacting it with calcium hydroxide to produce MHA calcium salt.[48] In comparison, Evonik utilizes a process similar to a carbonate process to produce DLM and reacts MMP, HCN, carbon dioxide, and ammonia to form hydantoin.[49] The hydantoin is hydrolyzed to form potassium methioninate which is converted to DLM cake and then dried to a concentration of 99 percent by weight.[50] Thus, the production processes of the two U.S. producers are similar in that they both use MMP, formed from reacting acrolein with methyl mercaptan, and hydrogen cyanide as the basic starting materials in the processes, but the processes differ beyond that point.[51]

In responding to the questionnaires with respect to this factor (*i.e.*, manufacturing facilities, production processes, and employees), three of five responses indicated that DLM and MHA are at least mostly comparable with respect to manufacturing facilities, production processes, and employees.[52] More specifically, *** U.S. producer indicated DLM and MHA are fully comparable, and *** U.S. producer and *** U.S. importer indicated they were mostly comparable; *** U.S. importer indicated that they are somewhat comparable, and *** U.S. importer reported they are never comparable.[53]

[48] CR/PR at I-10.
[49] CR/PR at I-10.
[50] CR/PR at I-10–11.
[51] CR/PR at I-9.
[52] Preliminary Phase Report at Table I-1.
[53] Preliminary Phase Report at Table I-1. Sumitomo argues that the final phase record is materially different from that of the preliminary phase with respect to the interchangeability of MHA and DLM. *See* Sumitomo Posthearing Brief at 15; Sumitomo Final Comments at 2. While certain individual purchasers did report that DLM and MHA are not fully interchangeable for every end use, *see* Sumitomo Prehearing Brief at 7–10, the record does not demonstrate an overall lack of interchangeability between the two forms; as indicated above, most purchasers indicated that they can switch between DLM and MHA, several end users purchase both forms of the product, and several purchasers reported that DLM and MHA were completely or moderately interchangeable.

Channels of Distribution. Domestically produced DLM and MHA are both distributed primarily to end users. Evonik ships *** of its DLM to end users and Novus ships the *** of its MHA to end users.[54] As noted above, multiple responding end users reported purchasing both DLM and MHA.[55]

Producer and Customer Perceptions. Novus indicates that DLM and MHA are both seen as ***.[56] Evonik reports that customers have ***. It reports that customers generally believe that ***.[57]

In responding to the questionnaires with respect to perceptions in the marketplace, three of five responses indicated that DLM and MHA are at least "mostly" comparable.[58] *** U.S. producer indicated that DLM and MHA are "fully" comparable, and *** U.S. producer and *** U.S. importer indicated that they are "mostly" comparable; *** U.S. importers reported that DLM and MHA are "somewhat" comparable.[59]

Price. The pricing data in the record are reported based on an equivalent activity level.[60] Based on this adjustment, prices for domestically produced pricing products *** (MHA) and *** (DLM) were roughly comparable during the period of investigation ("POI").[61]

[54] Novus Producer Questionnaire, EDIS Doc. 738267, response to question II-8; Evonik Producer Questionnaire, EDIS Doc. 738150, response to question II-8.

[55] CR/PR at Appendix D.

[56] Preliminary Phase Report at D-3.

[57] Preliminary Phase Report at D-3.

[58] Preliminary Phase Report at Table I-1.

[59] Preliminary Phase Report at Table I-1.

[60] CR/PR at V-6.

[61] *See* CR/PR at Tables V-3–4.

Conclusion. The final phase record indicates that DLM and MHA have identical end-uses as an animal feed additive, are both perceived as an animal feed additive by market participants, are substantially interchangeable, have common channels of distribution, and are priced comparably once adjusted for activity levels. For the reasons discussed above, we define a single domestic like product consisting of both DLM and MHA, coextensive with the scope of the investigation.[62]

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[62] CR/PR at II-11. Sumitomo relies on prior Commission determinations for the proposition that it is appropriate to treat dry and liquid forms of chemicals as distinct like products, but this reliance is misplaced. As an initial matter, each Commission investigation is *sui generis* and based on the unique facts and record before it, such that prior decisions cannot override the record of these investigations, which, as described above, we find supports a single domestic like product. *Hitachi Metals*, 949 F.3d at 718.

The prior cases cited by Sumitomo reflect the distinct records of those investigations and do not detract from our domestic like product definition here. Sumitomo first relies on *Potassium Hydroxide from Canada, Italy, and the United Kingdom*, Inv. Nos. 731-TA-542-544 (Preliminary), USITC Pub. 2482 (Feb. 1992) at 6–9. *See* Sumitomo Prehearing Brief at 12. In those investigations, however, the Commission explicitly stated that "{i}n previous investigations, the Commission has found the liquid and dry forms of a material to be one like product when the liquid and dry forms have been at least somewhat interchangeable" and elaborated that, "while customers might develop a preference for one form over another, for the most part, customers can . . . use these products interchangeably." USITC Pub. 2482 at 8. The Commission's reasoning in those investigations consequently supports finding a single domestic like product here. Sumitomo also cites the Commission finding of separate like products in *Certain Potassium Phosphate Salts from China*. Inv. Nos. 701-TA-473 and 731-TA-1173 (Preliminary), USITC Pub. 4110 (Nov. 2009) at 11. *See* Sumitomo Prehearing Brief at 12. There, however, the Commission emphasized distinctions in end use, lack of interchangeability, and different customer perceptions that are absent in these investigations. USITC Pub. 4110 at 11. These distinctions are also present in the third investigation on which Sumitomo relies. *See* Sumitomo Prehearing Brief at 13. The bulk of the Commission's analysis in that investigation, *Hydrofluorocarbons Blends and Components from China*, Inv. No. 731-TA-1279 (Final), USITC Pub. 4629 (Aug. 2016), focused on the out-of-scope product's lack of interchangeability with in-scope merchandise, its distinct characteristics, end uses, channels of distribution, and reports of market participants that they viewed it as a distinct product from in-scope merchandise. *Id.* at 9.

Our prior determinations concerning methionine also support the like product definition we are adopting here. While each like product definition is *sui generis* and must be based upon the current record, the Commission found DLM and MHA to be within the same domestic like product in two prior investigations concerning methionine. In *Animal Feed Grade DL-Methionine from France*, Inv. No. 731-TA-255 (Preliminary), USITC Pub. 1699 at 3–5 (May 1985), the Commission defined the domestic like product to include both MHA and DLM even though the scope only covered DLM. In *Synthetic Methionine from Japan,* Inv. No. AA1921-115 (Review) USITC Pub. 3205 at 4–6 (July 1999), the Commission found that DLM and MHA were chemically similar, had the same uses, and were

III. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[63] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

There are no related parties or other domestic industry issues in the final phase of this investigation. No domestic producer imported or purchased subject merchandise during the January 2018–December 2020 POI or is related to an importer or exporter of subject merchandise.[64] Therefore, we define the domestic industry to include the two domestic producers of methionine: Novus and Evonik.

IV. Cumulation[65]

For purposes of evaluating the volume and effects for a determination of material injury by reason of subject imports, section 771(7)(G)(i) of the Tariff Act requires the Commission to

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interchangeable. While recognizing that there were production differences, the Commission found they were outweighed by the virtually complete overlap between end uses and the customer markets for the products as well as producer and customer perceptions. *Id*. Additionally, we observe that the Commission recently found a single domestic like product in the investigations of corrosion inhibitors from China, the scope of which included both solid and liquid forms of tolyltriazole and benzotriazole. *Corrosion Inhibitors from China*, Inv. Nos. 701-TA-638 and 731-TA-1473 (Final), USITC Pub. 5169 at 4–8 (Mar. 2021).

[63] 19 U.S.C. § 1677(4)(A).

[64] CR/PR at III-2 and Table III-2.

[65] Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall generally be deemed negligible. 19 U.S.C. §§ 1671b(a),

cumulate subject imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with the domestic like product in the U.S. market. In assessing whether subject imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

> (1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;
>
> (2) the presence of sales or offers to sell in the same geographic markets of subject imports from different countries and the domestic like product;
>
> (3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and
>
> (4) whether the subject imports are simultaneously present in the market.[66]

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for

1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)). The exceptions to this general rule are not applicable here.

From July 2019 through June 2020, the 12-month period preceding the filing of the petition, subject imports from France accounted for 7.1 percent of the volume of total U.S. methionine imports. CR/PR at Table IV-7. Because subject imports from France are above the statutory negligibility threshold, we find that they are not negligible.

[66] *See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-280 (Final), USITC Pub. 1845 (May 1986), *aff'd*, *Fundicao Tupy, S.A. v. United States*, 678 F. Supp. 898 (Ct. Int'l Trade), *aff'd*, 859 F.2d 915 (Fed. Cir. 1988).

determining whether the subject imports compete with each other and with the domestic like product.[67] Only a "reasonable overlap" of competition is required.[68]

Petitioner urges the Commission to cumulate imports from all subject countries.[69] Respondents do not assert any arguments concerning cumulation.

In our determination in the investigation concerning methionine from France, subject imports from France, Japan, and Spain are eligible for cumulation. This is because Novus filed the antidumping petitions on methionine from France, Japan, and Spain on the same day, July 29, 2020.[70] None of the statutory exceptions to cumulation apply.

Fungibility. *** responding U.S. producers and the vast majority of U.S. purchasers reported that domestically produced methionine is always interchangeable with methionine produced in each subject country. *** of three responding U.S. importers reported that domestically produced methionine was sometimes interchangeable, and *** reported that it was always interchangeable, with methionine from each subject country.[71] In all comparisons between imports from different subject countries, *** U.S. producers and a vast majority of

[67] *See*, *e.g.*, *Wieland Werke, AG v. United State*s, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[68] The Uruguay Round Agreements Act Statement of Administrative Action ("SAA") expressly states that "the new section will not affect current Commission practice under which the statutory requirement is satisfied if there is a reasonable overlap of competition." H.R. Rep. No. 103-316, Vol. I at 848 (1994) (*citing Fundicao Tupy, S.A. v. United States*, 678 F. Supp. at 902; *see Goss Graphic Sys., Inc. v. United States*, 33 F. Supp. 2d 1082, 1087 (Ct. Int'l Trade 1998) ("cumulation does not require two products to be highly fungible"); *Wieland Werke, AG*, 718 F. Supp. at 52 ("Completely overlapping markets are not required.").

[69] Novus Prehearing Brief at 8–11.

[70] 19 U.S.C. § 1677)(7)(G)(i)(I). *See Methionine From France, Japan, and Spain; Institution of Anti-Dumping Duty Investigations and Scheduling of Preliminary Phase Investigations*, 85 Fed. Reg. 47243, 47244 (July 29, 2020).

[71] CR/PR at Table II-10.

responding U.S. purchasers reported that the products were always interchangeable; a majority of responding importers reported that imports from different subject countries were sometimes interchangeable except in the comparison of subject imports from France and Spain for which the three responding importers provided mixed responses.[72]

In 2020, the domestic industry, and importers of subject merchandise from France and Japan supplied DLM. The domestic industry and the importer of subject merchandise from Spain supplied solid MHA, and the domestic industry and importers of subject merchandise from Japan and Spain supplied liquid MHA.[73] While there may be some differences in the form of methionine supplied by different sources, as explained above several purchasers reported that DLM and MHA are interchangeable.[74] Additionally, in comparisons between the domestic product and imports from each subject source concerning 15 purchasing factors, a majority of responding purchasers reported that the domestic product and the imports from each subject country and imports from each subject country were comparable with respect to every factor.[75] Several purchasers indicated purchasing both domestic and imported product, and two reported purchasing domestically produced product and imports from each subject country.[76]

Channels of Distribution. The domestic like product was predominantly sold to end users, as this channel accounted for at least *** percent of U.S. shipments during each year

[72] CR/PR at Table II-10. With respect to imports from France and Spain, each importer provided a different response, with one each responding that the imports were always, sometimes, and never interchangeable. *Id.*

[73] CR/PR at Table IV-8.

[74] CR/PR at II-12.

[75] CR/PR at Table II-9.

[76] CR/PR at Appendix D.

of the POI.[77] This was also true of subject imports from Japan (at least *** percent of U.S. shipments during each year) and subject imports from Spain (at least *** percent for each year).[78] U.S. shipments of subject imports from France were mostly sold to distributors, but at least *** percent were shipped to end users during each year.[79] Consequently, an appreciable percentage of the domestic like product and imports from each subject source was sold to end users.

Geographic Overlap. *** domestic producers and importers of subject merchandise from each subject country reported shipments of methionine to multiple U.S. regions.[80]

Simultaneous Presence in Market. Subject imports from France and Japan were present in the U.S. market in each month of the POI while subject imports from Spain were present in each month of the POI except for April and May 2018.[81] The domestic like product was present in the U.S. market during each quarter of the POI.[82]

Conclusion. The petitions were filed on the same day, thereby satisfying the threshold requirement for cumulation. The record supports finding that subject imports from each subject country are fungible with the domestic like product and with each other and that methionine from each source was sold in overlapping channels of distribution. It also indicates an overlap between and among the sources of subject imports and the domestic like product in

[77] CR/PR at Table II-1.
[78] CR/PR at Table II-1.
[79] CR/PR at Table II-1.
[80] CR/PR at Table II-2.
[81] CR/PR at Table IV-10.
[82] *See* CR/PR at Tables V-3–5.

terms of geographic markets within the United States, and methionine from each source was simultaneously present in the U.S. market during the POI.

In light of the foregoing, we find that there is a reasonable overlap of competition between the domestic like product and imports from each subject country and between imports from each subject country. Therefore, we will analyze subject imports on a cumulated basis for our assessment of material injury by reason of subject imports.

V. Material Injury by Reason of Subject Imports

Based on the record in this investigation, we find that an industry in the United States is materially injured by reason of dumped imports of methionine from France.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[83] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[84] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[85] In assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United

[83] 19 U.S.C. §§ 1671d(b), 1673d(b).

[84] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor . . . and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[85] 19 U.S.C. § 1677(7)(A).

States.[86] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[87]

Although the statute requires the Commission to determine whether the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[88] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[89] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[90]

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[86] 19 U.S.C. § 1677(7)(C)(iii).

[87] 19 U.S.C. § 1677(7)(C)(iii).

[88] 19 U.S.C. §§ 1671d(b), 1673d(b).

[89] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'd,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[90] The Federal Circuit, in addressing the causation standard of the statute, observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. U.S. Int'l Trade Comm'n*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. U.S. Int'l Trade Comm'n*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[91] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[92] Nor does

[91] SAA at 851-52 ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

[92] SAA at 851–52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n,* 266 F.3d at 1345 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[93] It is clear that the existence of injury caused by other factors does not compel a negative determination.[94]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports."[95] The Commission ensures that it has "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and that it is "not attributing injury from other sources to the subject imports."[96] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[97]

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[93] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[94] *See Nippon Steel Corp*., 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

[95] *Mittal Steel*, 542 F.3d at 876, 878; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology."), *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[96] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 877-79. We note that one relevant "other factor" may involve the presence of significant volumes of price-competitive nonsubject imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

[97] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[98] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[99]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.

1. Demand Conditions

All forms of methionine within the scope are primarily used as an additive in animal feed and in aquaculture, such that demand for methionine reflects trends in meat industries such as the poultry and swine industries.[100] *** U.S. producers and a majority of U.S. importers and purchasers reported that U.S. demand for methionine has increased since 2018.[101] Apparent U.S. consumption of methionine rose by *** percent over the POI, increasing from *** short tons in 2018 to *** short tons in 2019 and *** short tons in 2020.[102]

2. Supply Conditions

There are relatively few methionine producers, with only nine known producers worldwide, six of which accounted for *** percent of global production capacity in 2018.[103]

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[98] We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[99] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[100] CR/PR at I-8–9; Adisseo Prehearing Brief at 9; Sumitomo Prehearing Brief at 15.

[101] CR/PR at Table II-4.

[102] CR/PR at Tables IV-12 and C-1.

[103] Adisseo Prehearing Brief at 4–5; CR/PR at I-11.

Methionine production is capital intensive, providing incentives for producers to attain high levels of production to absorb high fixed costs and provide an adequate return on investment.[104]

Domestic production accounted for the largest source of supply to the U.S. market during each year of the POI. The domestic industry's share of apparent U.S. consumption declined from *** percent in 2018 to *** percent in 2019 and *** percent in 2020.[105] The two domestic producers, Novus and Evonik, produce MHA (liquid and dry) and DLM (dry), respectively.[106]

The domestic industry's capacity utilization rate declined from *** percent in 2018 to *** percent in 2019 and *** percent in 2020.[107] Further, the domestic industry exported a substantial proportion of its total shipments (between *** percent and *** percent) during the POI.[108] In 2019, Novus announced the cancelation of a $360 million investment for plant construction in Bloomington, TX.[109]

Cumulated subject imports accounted for the second largest source of supply to the U.S. market during the POI. Their share of apparent U.S. consumption increased from *** percent

[104] CR/PR at V-12–13; Novus Prehearing Brief at 1–2.

[105] CR/PR at Tables IV-12 and C-1. Thus, the domestic industry's share of apparent U.S. consumption decreased *** percentage points over the POI. *Id*.

[106] CR/PR I-10–11 and VI-1. As discussed in section II.C. above, Evonik's and Novus's production processes are slightly different. Evonik reported ***. *Id*. at II-1 n.6.

[107] CR/PR at Tables III-4 and C-1. Accordingly, the domestic industry's capacity utilization declined *** percentage points over the POI. *Id*. The domestic industry had *** short tons of available production capacity in 2020. *Calculated from* Table III-4.

[108] CR/PR at Table III-5.

[109] CR/PR at III-2 and Table III-3.

in 2018 to *** percent in 2019 and *** percent in 2020.[110] Adisseo reportedly accounts for all methionine production in France and Spain; it produces DLM (dry) in France and MHA (liquid and dry) in Spain.[111] Sumitomo reportedly accounts for all methionine production in Japan where it produces both DLM (dry) and MHA (liquid).[112]

Imports from nonsubject sources accounted for the smallest source of supply to the U.S. market during the POI; their share of apparent U.S. consumption declined substantially from *** percent in 2018 to *** percent in 2019 and *** percent in 2020.[113] China was the largest source of nonsubject imports to the U.S. market in 2018. Declines in nonsubject import volume after 2018 were driven by declines in nonsubject imports from China, which became subject to additional duties under Section 301 of the Trade Act of 1974[114] ("Section 301 tariffs") beginning in September 2018.[115]

Half of the responding U.S. producers and importers and seven of 27 responding purchasers reported supply constraints, primarily beginning from 2019. Purchasers reported supply constraints for both importers and domestic producers.[116]

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[110] CR/PR at Tables IV-12 and C-1. Thus, subject imports' share of apparent U.S. consumption increased *** percentage points over the POI. *Id*.

[111] CR/PR at VII-3, VII-14, and Table E-2.

[112] CR/PR at VII-8 and Table E-2.

[113] CR/PR at Tables IV-12 and C-1. Therefore, nonsubject imports' share of apparent U.S. consumption declined *** percentage points over the POI.

[114] 19 U.S.C. § 2411.

[115] CR/PR at Tables IV-12 and C-1. Section 301 tariffs were imposed on imports from China in September 2018 at 10 percent *ad valorem* and subsequently increased to 25 percent *ad valorem* in May 2019. *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 47974 (Sept. 21, 2018); *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 Fed. Reg. 20459 (May 9, 2019).

[116] CR/PR at II-8.

3. Substitutability and Other Conditions

The record indicates that there is a moderately high degree of substitutability between domestically produced methionine and methionine from subject sources of the same type and form.[117] DLM (solid, 99 activity level), MHA (solid, 84 activity level), and MHA (liquid, 88 activity level) are each supplied by both cumulated subject imports and the domestic industry.[118] A majority of purchasers reported that domestically produced methionine and methionine from subject sources were comparable with respect to 15 purchasing factors and were always interchangeable; a vast majority of purchasers reported domestically produced methionine and methionine from subject sources always met minimum quality specifications.[119] Purchaser questionnaire responses also indicated that there is some level of interchangeability between liquid and dry forms of methionine and between different activity levels of methionine. Fourteen of 26 responding purchasers reported that they could switch between dry and liquid methionine using currently installed equipment, 12 of 18 reported that they could switch between methionine of different activity levels, and 13 of 22 reported that they could switch between MHA and DLM.[120] In some instances, however, substitutability may be limited by availability, application, the cost of shifting between methionine types, and customer preference.[121]

[117] CR/PR at II-11.

[118] *See* CR/PR at Tables E-1 and E-2.

[119] CR/PR at Tables II-9–11. With respect to price, a higher number responding purchasers reported that domestically produced methionine was inferior (*i.e.*, higher priced) to imports from each subject country than reported that domestically produced methionine was superior (*i.e.*, lower priced). *Id*. at Table II-9.

[120] CR/PR at II-12.

[121] CR/PR at II-11.

The record indicates that price is an important factor in purchasing decisions. Purchasers most frequently cited price after reliability/availability of supply as among the three top factors in purchasing decisions.[122] Eighteen of 28 responding purchasers reported that they usually purchased the lowest price product,[123] and 23 of 28 responding purchasers rated price as a very important purchasing factor.[124]

The record reflects that purchasers often maintain multiple sources of supply. Seventeen of 28 responding purchasers reported that they maintained multiple sources of supply during the POI. Nine of 28 purchasers reported that maintaining multiple sources of supply was very important and eight reported that it was important.[125]

The main raw materials used to manufacture methionine are acrolein and methyl mercaptan, which respectively accounted for *** percent and *** percent of domestic producers' raw material costs in 2020.[126] Raw material costs were the *** component of the domestic industry's cost of goods sold ("COGS") and decreased by *** percent overall during the POI.[127] Raw material costs, as a portion of the domestic industry's total COGS, increased overall, from *** percent in 2018 to *** percent in 2020.[128]

Most U.S. methionine sales in 2020 were pursuant to contracts. During that year, long-term contracts accounted for *** percent of U.S. producers' domestic shipments, annual contracts accounted for *** percent, and short-term contracts accounted for *** percent.

[122] CR/PR at Table II-6.
[123] CR/PR at II-14.
[124] CR/PR at Table II-7.
[125] CR/PR at II-14.
[126] CR/PR at V-1 and Table VI-4.
[127] CR/PR at VI-10.
[128] CR/PR at V-1 and Table VI-1.

U.S. importers' U.S. shipments in 2020 were sold primarily though long-term (*** percent) and annual contracts (*** percent).[129] U.S. producers reported that their annual and long-term contracts — which jointly accounted for *** of their sales in 2020 — provided for price renegotiation during the contract term and that contract prices were not indexed to raw material costs.[130] While U.S. purchasers have access to multiple published price lists, 19 of 28 purchasers reported that they did not rely on price publications when negotiating spot or contract pricing with suppliers.[131]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[132]

The volume of cumulated subject imports increased substantially over the POI. It rose from 33,722 short tons in 2018 to 61,278 short tons in 2019 and 80,057 short tons in 2020, an increase of 137.4 percent from 2018 to 2020.[133]

As a share of apparent U.S. consumption, cumulated subject imports increased from *** percent in 2018 to *** percent in 2019 and *** percent in 2020, an overall increase in market share of *** percentage points.[134]

[129] CR/PR at Table V-2.
[130] CR/PR at V-3.
[131] CR/PR at V-4.
[132] 19 U.S.C. § 1677(7)(C)(i).
[133] CR/PR at Tables IV-2 and C-1.
[134] CR/PR at Table IV-12.

Accordingly, we conclude that the volume of cumulated subject imports and the increase in the volume of cumulated subject imports is significant in both absolute terms and relative to apparent U.S. consumption.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of the subject imports, the Commission shall consider whether

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[135]

We previously found in section V.B.3. that there is a moderately high degree of substitutability between the domestic like product and cumulated subject imports of the same type and form, and that price is an important factor in purchasing decisions.

The Commission collected quarterly pricing data from U.S. producers and importers for the total quantity and f.o.b. values of three pricing products shipped to unrelated U.S. customers during the POI.[136] Pricing product 1 includes sales of dry MHA, pricing product 2 includes sales of liquid MHA, and pricing product 3 includes sales of dry DLM.[137] Two U.S.

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[135] 19 U.S.C. § 1677(7)(C)(ii).

[136] CR/PR at V-6. The full definitions of the pricing products are as follows:

Product 1.-- Methionine, whether DL-methionine or its hydroxy analog, 84% activity level, in dry form.

Product 2.-- Methionine, whether DL-methionine or its hydroxy analog, 88% activity level, in liquid form.

Product 3.-- Methionine, whether DL-methionine or its hydroxy analog, 99% activity level, in dry form. *Id*.

[137] *See* Tables E-1 and E-2. Domestic pricing data for product 1 consists of ***. Only importer ***. CR/PR at Table V-3, notes. Domestic pricing data for product 2 consist of ***. Only importer ***, and only importer ***. CR/PR at Table V-4, notes. Domestic pricing data for product 3 consist of ***. Only importer ***, and only importer ***. Because ***. CR/PR at Table V-5, notes.

producers and two importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters. Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' U.S. shipments and *** U.S. shipments of cumulated subject imports in 2020.[138] Pricing is calculated on a short ton 100-percent equivalent activity weight ("STEAW") basis to facilitate meaningful comparison between methionine types.[139]

The pricing data indicate predominant overselling by cumulated subject imports. Specifically, cumulated subject imports oversold the domestic like product in *** (or *** percent of) quarterly comparisons involving *** STEAW of cumulated subject imports and undersold the domestic like product in the remaining *** (or *** percent of) comparisons involving *** STEAW of cumulated subject imports. Margins of overselling ranged from *** percent to *** percent, while margins of underselling ranged from *** percent to *** percent. Overselling was primarily concentrated in price comparisons for products ***, while underselling was concentrated in price comparisons for product ***.[140]

The record also contains purchaser responses regarding lost sales. Twenty of the 28 responding purchasers reported that they had purchased cumulated subject imports instead of U.S.-produced methionine during the POI, and 11 indicated that the subject imports were

[138] CR/PR at V-6.
[139] CR/PR at V-6 and Table V-7.
[140] CR/PR at Table V-7.

priced lower.[141] Eight of these purchasers reported that price was a primary reason for the decision to purchase methionine from subject sources instead of domestically produced product.[142] These eight purchasers indicated that they collectively purchased *** STEAW of subject imports in lieu of domestically produced methionine primarily due to price.[143] This volume equates to *** percent of the total volume of subject imports that all of the responding purchasers bought during the POI[144] and also equates to *** percent of the increase in subject import volume over the POI.[145] Thus, although the pricing data indicate predominant overselling by cumulated subject imports, the record indicates that purchasers

[141] CR/PR at Table V-9. Although 20 purchasers responded that they had purchased subject imports instead of domestic product, only 16 of these purchasers responded to the question asking if the subject imports they purchased were priced lower than the domestic product. *Id.* Thus, 11 out of 16 responding purchasers reported that the subject imports were lower priced.

[142] CR/PR at V-20 and Table V-9.

[143] *See* CR/PR at Table V-9. Our tabulation does not include *** short tons listed in Table V-9. Purchasers indicating that they purchased subject imports instead of the domestic like product primarily due to price indicated purchasing DLM (***), MHA (***), or both (***). *See* Tables V-9 and D-1.

Adisseo highlights the fact that the volume of confirmed lost sales due to lower subject import prices is larger than the volume of subject imports in the underselling quarters of the pricing data. Adisseo Posthearing Brief, Annex VII at 2. These data, however, concern different comparisons and we do not find them to be inconsistent. The pricing data compare actual domestic industry sales to importers' sales of subject imports, while the lost sales data concern individual transactions where domestic producers did not win the sale. That there may be a smaller volume of subject imports reported as underselling the domestic industry's prices in the pricing data does not negate or otherwise contradict the data showing that domestic producers were losing sales due to the lower prices offered for subject imports. Indeed, as discussed below, domestic producers were forced to lower prices in order to retain sales in response to lower-priced offers for subject imports, and thus the aggregate overselling by subject imports in the pricing data may reflect these efforts by domestic producers to maintain sales volume. The pricing data also consist of quarterly average prices, which aggregate multiple sales to different purchasers. Several of these quarterly comparisons have low overselling margins for the subject imports (*e.g.*, 0.4 percent, 0.5 percent, 1.4 percent, 2.0 percent), which suggests that these data likely include specific sales of lower-priced subject imports that may not be reflected in the total quantity reported as underselling the domestic product. CR/PR at Tables V-4 and V-5.

[144] *See* CR/PR at Table V-8 (showing *** STEAW of subject imports purchased during the POI).

[145] *Calculated from* CR/PR at Tables IV-12 and C-1.

were offered lower-priced subject imports in particular transactions and that cumulated subject imports were able to take substantial quantities of sales from the domestic industry due to their pricing. As a result, the domestic industry lost a substantial volume of sales to subject imports due to price.[146] These lost sales occurred while the domestic industry lost *** percentage points of market share to the subject imports from 2018 to 2020.[147]

[146] Respondents assert that inconsistencies in *** questionnaire response raise doubts as to whether it is appropriate to characterize its reported *** STEAW of subject imports as lost sales. Specifically, Respondents highlight that *** reported ***. Adisseo Prehearing Brief at 46; Adisseo Posthearing Brief, Responses to Commissioner Questions at 2–3; Sumitomo Posthearing Brief at 55, Responses to Commissioner Questions at 52–53.

Despite Respondents' assertions, we decline to disregard *** stated reason for purchasing subject imports instead of the domestic product. The purchaser stated that price was a primary reason for purchasing lower priced subject imports instead of the domestic like product and provided information in its questionnaire response indicating the importance of price in purchasing decisions. *** ranked price as a top three purchasing factor, reported price as a very important purchasing factor, and indicated that it usually purchased the product that is offered at the lowest price. *** U.S. Purchaser Questionnaire Response, EDIS Doc. 738718 at III-29, III-30, and III-33. Moreover, while *** reported that prices for the U.S.-produced product and subject imports from Spain were generally comparable, it specifically reported that subject imports from Spain were lower priced than the domestic like product with respect to the sales in question. *Id*. at III-38(b). It is not inconsistent for *** to report concerns about the availability of the U.S.-produced product, that it had not changed suppliers during the POI, or that maintaining multiple sources of supply was very important, but to also purchase lower priced subject imports for price reasons. Accordingly, and based on the record as a whole, we find that the response of this purchaser in which it reported that price was a primary reason for the decision to purchase lower priced subject imports instead of the domestic like product is internally consistent with its reported data and otherwise supported by the record.

[147] CR/PR at Tables IV-12 and C-1. Chair Kearns and Commissioner Karpel find that the record evidence in this investigation supports a finding of significant underselling. In particular, they note that probative evidence of underselling may include pricing data, purchaser responses, and other record evidence indicating that subject import prices or offers are below those of domestic producers. Here, the record indicates that there is a moderately high degree of substitutability between the domestic like product and cumulated subject imports of the same type and form, and that price is an important factor in purchasing decisions. Further, 11 of 16 responding purchasers reported that they purchased subject imports instead of the domestic like product, and that these subject imports were lower priced. CR/PR at Table V-9. In addition, purchasers who reported purchasing subject imports primarily because of their lower price reported such purchases totaling *** short tons. *Id*. As noted, these confirmed lost sales constituted *** percent of the increase in subject imports during the POI, and these lost sales occurred as domestic producers lost *** percentage points of market share during the POI. Record evidence provided by Novus in the form of contemporaneous email correspondence further indicates that cumulated subject imports were offered at prices lower than those offered by domestic producers. Novus Posthearing Br. at Exh. 2. This correspondence includes instances where lower price offers from

We have also considered price trends for the domestic like product and subject imports. Prices for products *** fluctuated downwards during the POI. For the domestically produced products, product *** prices were *** percent lower in the fourth quarter of 2020 than the first quarter of 2018 and product *** prices were *** percent lower. For cumulated subject imports, price declines during this period for these two products ranged from *** percent.[148] These two pricing products accounted for vast majority (approximately *** percent) of U.S. producers' U.S. commercial shipments in 2020.[149] Prices for product ***, which accounted for only *** percent of all domestic producers' U.S. commercial shipments in 2020,[150] displayed different patterns. Prices for the domestically produced product *** increased by *** percent from the first quarter of 2018 to the fourth quarter of 2020; subject

subject imports resulted in lost sales, *see e.g.* id. at Exh. 2, Att. C (correspondence with ***, which did not report lost sales in its Commission questionnaire response), and instances where lower price offers exerted pricing pressure, *see e.g.* Exh. 2, Att. B (correspondence from purchaser ***, one of the largest purchasers of subject imports which reported that it increased subject import purchases by *** percent during the POI, indicating that it received lower price offers for subject imports); *see* also CR/PR at Table V-8. This offering of subject imports at lower prices in some instances resulted in a sale of subject imports at a lower price than the domestic like product and in other instances resulted in domestic producers lowering their price to win the sale. Regardless of the result, these offers of lower priced subject imports can be probative of whether subject imports engaged in significant underselling, and we note that price offers that do not result in a sale are not reflected in the Commission's quarterly price comparisons. Finally, as discussed above, we find that the record does not support that non-price reasons, such as supplier diversification, explain the increase in subject import volumes and market share during the POI, and that the record supports that the low prices of subject imports are responsible for a shift in market share from domestic producers to subject imports. In view of the totality of this evidence, we find that there has been significant price underselling by subject imports.

[148] CR/PR at Table V-6.

[149] CR/PR at Table E-1.

[150] CR/PR at Table E-1.

imports of this product were present during only two quarters of 2018 and fluctuated within a narrow range during 2019 and 2020.[151]

The record reflects that *** of U.S. producers' sales are made pursuant to annual and long-term contracts, some of which contain price renegotiation or "meet or release" clauses. These contract negotiations allow purchasers to inform suppliers of a lower-priced offer and purchase the lower-priced product from another supplier if the supplier it is negotiating with is unable or unwilling to offer a lower price.[152] Although the record does not contain direct evidence of purchasers formally exercising meet-or-release clauses, evidence in the record, including purchaser emails and Novus's internal communications, demonstrate instances where customers notified Novus of offers of lower prices for subject imports and either ***.[153] Given the importance of price in purchasing decisions, the moderately high degree

[151] CR/PR at Tables V-3 and V-6.

[152] CR/PR at V-3 and Table V-2; Novus Posthearing Brief at 7 and Exh. 2, Att. A.

[153] Novus Posthearing Brief at Exh. 2. Specifically, ***. Novus Posthearing Brief at Exh. 2, Att. B. Similarly, ***. Novus Posthearing Brief at Exh. 2, Att. C. Moreover, Novus's internal communications indicate that it ***. *See* Novus Posthearing Brief at Exh. 2, Att. D (***). *See also* Novus Posthearing Brief at Exh. 2, Att. E (***).

While Adisseo objects to Novus's submission of this material in its posthearing brief, *see* Adisseo Posthearing Brief at 7–10, we note that Novus submitted the material in response to inquiries at the Commission hearing. *See* Novus Posthearing Brief, Response to Commission Questions at 1. Consequently, Novus's submission of this material in its posthearing brief was appropriate. *See* 19 C.F.R. § 207.25. We also observe that while Adisseo provided examples where it retained accounts notwithstanding rejecting customers' requests for lower prices, *see* Adisseo Posthearing Brief, Responses to Commissioner Questions Annex IV at 2–3, these do not concern the same accounts identified by Novus nor do they negate the examples of pricing pressure that Novus provided. Additionally, ***. This response does not support that price or total costs are unimportant in purchasing decisions, as claimed by Adisseo. *Id*. at Exh. 5.

of substitutability between methionine of the same type and form from all sources, and capital intensive nature of methionine production, which requires that producers maintain high capacity utilization levels in order to adequately cover fixed costs, domestic producers were forced to cut prices in response to prices offered for subject imports in order to maintain sales volume.[154] The declining prices reflected in the pricing data are also consistent with such a pricing strategy, especially given the otherwise strong demand during the POI.[155] Hearing testimony also reflects Novus's concerns that it "had to repeatedly lower our floor price in order to allow our team to compete and retain as much volume as we could," which is consistent with contemporaneous internal communications provided by Novus, and that consequently the lower offers for subject imports would not necessarily be reflected in the underselling data.[156]

We find that factors other than subject imports cannot explain the magnitude of the price declines for the domestic like product. As previously discussed, apparent U.S.

[154] Additionally, we observe that two purchasers reported that U.S. producers had reduced prices in order to compete with lower-priced subject imports. CR/PR at V-23 (As additional context, 15 purchasers reported not knowing whether U.S. producers had reduced prices in order to compete with lower-priced imports from France, 14 purchasers reported not knowing whether U.S. producers had reduced prices in order to compete with lower-priced imports from Japan, and 18 purchasers reported not knowing whether U.S. producers had reduced prices in order to compete with lower-priced imports from Spain).

[155] *See* CR/PR at Tables V-4 and V-5.

[156] Hr. Tr. at 22 (Galo), 45–46 (Drake).

consumption of methionine increased throughout the POI.[157] While the domestic industry's COGS declined over the POI, this decline was considerably less significant than the decline in sales values. On a unit basis, the domestic industry's COGS declined by $*** from 2018 to 2020. Average unit sales values, however, declined by $*** over the same period.[158]

Respondents contend that global excess production capacity, rather than low-priced subject imports, drove down the domestic industry's methionine prices.[159] As an initial matter, to the extent that global excess production capacity were to affect pricing in the U.S. market, it necessarily would do so via import competition, and cumulated subject import volumes *** nonsubject import volumes in 2019 and 2020, indicating that low-priced cumulated subject imports would carry into the U.S. market any downward pricing pressure created by global excess capacity. Moreover, the reason subject imports are offered for low prices in the United States does not detract from the adverse price effects of those low-priced subject imports on domestic producer prices. In addition, even if there were declining prices in non-U.S. markets, record evidence, including customer communications, reflects that competing offers to purchasers in the U.S. are used as benchmarks for U.S. price negotiation, not global or non-U.S. price lists.[160]

[157] CR/PR at Table IV-11.

[158] CR/PR at Tables VI-1, VI-2.

[159] Adisseo Prehearing Brief at 36–38; Adisseo Posthearing Brief at 12–13; Adisseo Final Comments at 1–2; Sumitomo Prehearing Brief at 41–44; Sumitomo Posthearing Brief at 7–8; Sumitomo Final Comments at 13–14.

[160] Novus Posthearing Br., Exh 2; Hr. Tr. at 40 (Hux), 42–43 (Drake), 43–44 (Galo), 158 (Batal). As discussed above, a majority of responding purchasers reported they do not rely on published price lists when negotiating price for methionine purchases. CR/PR at V-4.

The record also does not support Respondents' contention that declining prices for the domestic like product were caused by declines in the price of soybean meal.[161] Responding U.S. purchasers overwhelmingly reported that soybean meal was not a substitute for methionine; 22 of 26 responding purchasers reported that there were no substitutes for methionine, and only two purchasers named soybean meal as a substitute.[162] Hearing testimony confirmed that soybean meal and methionine are not practical substitutes and that their prices do not move in concert.[163]

Consequently, other factors cannot explain the magnitude of the observed price declines for the domestic like product during the POI. Accordingly, we find cumulated subject imports depressed prices for the domestic like product to a significant degree.

We have considered several additional arguments Respondents asserted for the proposition that cumulated subject imports did not have significant price effects. Respondents

[161] Specifically, Respondents claim that soybean meal, which is a natural source of methionine, can be incorporated in feed mixes in varying proportions to DLM and MHA and that this proportion will increase as soybean meal's price declines relative to methionine prices. Adisseo Prehearing Brief at 38–40; Adisseo Posthearing Brief at 13–14; Sumitomo Prehearing Brief at 52–53; Sumitomo Posthearing Brief at 10–14; Sumitomo Final Comments at 8–11.

[162] CR/PR at II-10–11. The record contains evidence that the methionine content of soybean meal is approximately ***. Novus Posthearing Br., Exh 2, Declaration of Eduardo Galo at 3. When compared to the domestic industry's average unit values ranging from $*** per short ton to $*** per short ton over the POI, *see* CR/PR at Table VI-1, the record indicates that soybean meal is not a viable or cost effective substitute for methionine.

[163] Hr. Tr. at 157 (Williams), 224 (Streatfeild), 225 (Barnes). Respondents' own witnesses did not suggest a strong correlation between soybean meal and methionine prices, with one witness testifying that "methionine has a *slightly different value* now that soybean meal has escalated up to $500 a ton than it was when it was $270 a ton." Hr. Tr. at 157 (Williams) (emphasis added); *see also Id.* at 158 (Batal) (noting that "if soybean meal has gone up, we may expect a price increase. Not always."). Moreover, there appears to be a relative lack of correlation between Novus's methionine prices and soybean meal prices from 2005 to 2020. *See* Novus Posthearing Br., Exh 2, Att. I.

stress the predominant overselling by cumulated subject imports reflected in the pricing data,[164] but while the pricing product data shows predominant overselling, these data are not the only information in the record concerning relative prices of the domestic like product and the subject imports. As discussed above, numerous purchasers reported that the subject imports they purchased were priced lower than the domestic product and that the lower price affected their purchasing decisions, and contemporaneous documentation provided by both Petitioner and Respondents shows price competition between the domestic product and subject imports.[165] Additionally, the prevalent overselling in the pricing data are consistent with purchaser responses and correspondence submitted by Petitioner that domestic producers often had to lower prices to win the sale.[166] As discussed above and reflected in the data on lost sales and market shares, in other instances domestic producers lost sales to subject imports due to price.

Finally, Respondents' arguments that Novus cannot speak to *** strategy in establishing prices for product *** because *** of that product are unavailing.[167] As an initial matter, we note that the statute requires we examine

[164] *See* Adisseo Prehearing Brief at 31–44; Sumitomo Prehearing Brief at 40–55.

[165] CR/PR at Table V-9; Novus Posthearing Brief at Exh. 2; Adisseo Posthearing Brief at Exhs. 5 and 6.

[166] *See* Novus Posthearing Brief at Exh. 2. The relevant statutory provision requires the Commission to consider both whether "there has been significant price underselling" by subject imports and whether subject imports "*otherwise* depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree." 19 U.S.C. § 1677(7)(C)(ii)(I), (II) (emphasis added). Accordingly, the Commission is not precluded from finding that subject imports had significant price effects absent a finding of significant underselling.

[167] Adisseo Posthearing Brief, Responses to Commissioner Questions at 1–2; Sumitomo Posthearing Brief, Responses to Commissioner Questions at 16–17.

the domestic industry as a whole.[168] Regardless, *** in Novus's internal communications, reflecting the same desire to maintain sales through aggressive price competition.[169] In the preliminary phase, ***.[170] Moreover, Evonik reported that it had lost sales and revenue due to competition with subject imports.[171] None of these statements suggest that Evonik has been unaffected by price competition from cumulated subject imports or that it has not *** with cumulated subject imports.

For the foregoing reasons, we find that cumulated subject imports depressed prices for the domestic like product to a significant degree. Accordingly, we conclude that cumulated subject imports had significant price effects.

E. Impact of the Subject Imports[172]

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on

[168] 19 U.S.C. § 1677(4)(A).

[169] Novus Posthearing Brief, Exh. 2, Att. D.

[170] Evonik Postconference Comments, EDIS Doc. 717997, at 5.

[171] CR/PR at V-16 (observing that both domestic producers submitted lost sales and revenue allegations).

[172] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determination of sales at less value, Commerce found dumping margins of 43.82 percent for Adisseo France SAS and a dumping margin of 16.17 percent for all other exporters or producers. Commerce France Final, 86 Fed. Reg. at 26698. In its preliminary determinations, Commerce found a dumping margin of 135.10 percent for all producers or exporters from Japan and a dumping margin of 31.98 percent for producers or exporters from Spain. Commerce Japan Preliminary, 86 Fed. Reg. at 12625; Commerce Spain Preliminary, 86 Fed. Reg. at 12614. We take into account in our analysis the fact that Commerce has made preliminary or final findings that all cumulated subject imports are sold in the United States at less than fair value. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the significant price effects of cumulated subject imports, described in both the price effects discussion and below, is particularly probative to an assessment of the impact of the subject imports on the domestic industry.

the state of the industry."[173] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[174]

While certain measures of the domestic indsutry's output increased during the POI, these increases were not commensurate with concurrent increases is apparent U.S. consumption. Moreover, most of the domestic industry's employment and financial indicators declined.

The domestic industry's trade indicators were mixed over the POI. Its production capacity was stable at *** short tons throughout the POI. Production declined from *** short tons in 2018 to *** short tons in 2019 and *** short tons in 2020, a decrease of *** percent over the POI. Capacity utilization declined from *** percent in 2018 to *** percent in 2019 and *** percent in 2020.[175] The industry's U.S. shipment

[173] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

[174] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[175] CR/PR at Tables III-4 and C-1.

quantity increased from *** short tons in 2018 to *** short tons in 2019 and *** short tons in 2020. The domestic industry's share of apparent U.S. consumption decreased from *** percent in 2018 to *** percent in 2019 and to *** percent in 2020, an overall decrease of *** percentage points over the POI.[176] Its export shipment quantities increased from *** short tons in 2018 to *** short tons in 2019 and *** short tons in 2020.[177] The domestic industry's end-of-period inventories decreased from *** short tons in 2018 to *** short tons in 2019 and *** short tons in 2020.[178]

Most of the domestic industry's employment-related indicators declined over the POI. The number of production related workers declined from *** in 2018 to *** in 2019 and *** in 2020, while hours worked declined from *** hours in 2018 to *** hours in 2019 and *** hours in 2020. Wages paid declined from $*** in 2018 to $*** in 2019 and $*** in 2020. However, productivity increased, as measured in short tons per 1,000 hours, from *** in 2018 to *** in 2019 and *** in 2020.[179]

Nearly all indicators of the domestic industry's financial performance declined over the POI. Despite an increase in net sales quantities from *** short tons in 2018 to *** short tons in 2019 and *** short tons in 2020, declining prices caused the industry's net sales revenues to fall from $*** in 2018 to $*** in 2019 and $*** in 2020. Gross profit declined from $*** in 2018 to $*** in 2019 and $*** in 2020. Operating income declined from $*** in 2018 to ***

[176] CR/PR at Table IV-12.
[177] CR/PR at Tables III-5 and C-1.
[178] CR/PR at Table III-6.
[179] CR/PR at Table III-8.

*** $*** in 2019 and *** $*** in 2020; the domestic industry's operating margin decreased from *** percent in 2018 to *** percent in 2019 and *** percent in 2020. Net income declined from a $*** in 2018 to a $*** in 2019 but improved to a $*** in 2020.[180]

Both capital investments and research and development ("R&D") expenditures declined over the POI. Capital investments declined from $*** in 2018 to $*** in 2019 and $*** in 2020, while R&D expenditures declined from $*** in 2018 to $*** in 2019 and $*** in 2020.[181] ***.[182]

For the reasons discussed above, we find that the significant volume of low-priced subject imports exerted downward pressure on prices for the domestic like product, depressing prices to a significant degree. The domestic industry also lost sales to subject imports due to price and subject imports gained *** percentage points of market share from the domestic industry.[183] Consequently, the domestic industry's output and revenues were lower than they otherwise would have been, and the domestic industry's financial performance declined over the POI.

[180] CR/PR at Tables VI-1, VI-3 and C-1. The ***. CR/PR at VI-16.

[181] CR/PR at Table VI-6.

[182] CR/PR at Table VI-9. Respondents contest that cumulated subject imports contributed to *** and claim that *** was due to increased construction costs. Adisseo Prehearing Brief at 53–56; Adisseo Final Comments at 14–15; Sumitomo Prehearing Brief at 63–65; Sumitomo Final Comments at 12–13.

[183] CR/PR at Table IV-12.

We have also considered other factors to ensure that we are not attributing injury from other factors to the subject imports. Nonsubject imports declined after imposition of Section 301 tariffs on nonsubject imports from China, which Adisseo admits largely contributed to its decision to switch sourcing during the POI from nonsubject imports from China to subject imports from Spain.[184] Domestic producers could reasonably have expected to gain market share following the exit of these imports from the U.S. market, but both nonsubject imports and the domestic industry instead lost market share during each year of the POI as subject imports gained market share in their stead.[185] In light of their rapidly declining presence in the market, the record does not reflect that nonsubject imports placed pressure on prices for the domestic like product.[186] Moreover, purchaser responses regarding lost sales, and the price declines the Petitioner documented reflect direct price competition from cumulated subject imports.

Respondents argue that, because U.S. producers were operating at high capacity utilization levels, nonsubject imports were withdrawing from the U.S. market, and U.S. demand was increasing, domestic producers would not have been able to ship materially more product than they did and that additional quantities of cumulated subject imports were necessary to satisfy U.S. demand.[187] This argument fails for two reasons. First, it is not supported by

[184] CR/PR at VII-17, n.23; Adisseo Posthearing Brief, Annex VI at 5.

[185] CR/PR at Table IV-12. As discussed in section V.D. above, during the POI cumulated subject imports captured market share from both the domestic industry and nonsubject imports. This undercuts Respondents' assertions that cumulated subject imports merely replaced volumes of nonsubject imports as they receded from the U.S. market. Adisseo Prehearing Brief at 22; Sumitomo Prehearing Brief at 33.

[186] CR/PR at Table C-1.

[187] Adisseo Prehearing Brief at 27–28; Sumitomo Prehearing Brief at 39–40.

evidence on the record. While *** throughout the POI, there were relatively few purchasers that reported they could not obtain supply from domestic producers during the POI.[188] Moreover, *** capacity utilization rate *** percent to *** percent over the POI, resulting in *** short tons of excess production capacity with which it could increase production in 2020.[189] Second, even assuming *arguendo* that the domestic industry could not have increased its U.S. shipments during the POI, this circumstance would not explain the revenues that the domestic industry lost due to the significant price-depressing effects of the subject imports.

By the same token, while we do not dispute Respondents' assertion that declining AUVs on export shipments may have contributed to declines in the domestic industry's financial performance,[190] we find that subject imports were an independent cause of these declines. Domestic shipments constituted *** of the domestic industry's total shipments during the POI,[191] and as we found in section V.D. above, subject imports were a cause of the declining prices the domestic industry received on its U.S. shipments, irrespective of global price trends. Thus, the lower prices the domestic industry received for these U.S. shipments due to price competition from the cumulated subject imports played a material role in its overall declines in financial performance.

[188] *See* CR/PR at II-8 and Table III-4. Five of 20 responding purchasers reported being placed on allocation from U.S. importers and producers.

[189] *Calculated from* CR/PR at Table III-4. While *** reported one supply constraint, this concerned a time after the conclusion of the POI. CR/PR at II-8. Petitioner also indicates that the domestic industry serves a full range of customers. *See* Novus Posthearing Brief, Response to Commission Questions at 30–31; Exh.2.

[190] Adisseo Prehearing Brief at 51–53; Sumitomo Prehearing Brief at 60–63.

[191] CR/PR at Table III-5.

We also find unpersuasive Respondents' argument that the variance in the performance between domestic producers indicates that that any negative performance by the domestic industry as a whole is not due to cumulated subject imports but is instead due to *** inefficient operations.[192] As an initial point, the Commission generally considers the domestic industry as a whole.[193] Moreover, the alleged inefficiencies of *** operations notwithstanding, *** was able to operate with *** in 2018 before the significant increase in cumulated subject import volumes,[194] while *** remained profitable during the POI only because it reduced costs to a greater extent that ***, notwithstanding that it also experienced declining revenues and unit net sales.[195]

For the reasons discussed above, we conclude that the cumulated subject imports had a significant impact on the domestic industry. We accordingly determine that the domestic industry was materially injured by reason of cumulated subject imports.

VI. Critical Circumstances

A. Legal Standards and Party Arguments

In its final antidumping determination concerning methionine from France, Commerce found that critical circumstances exist with respect to all subject imports exported by Adisseo France SAS.[196] Because we have determined that the domestic industry is materially injured by reason of subject imports from France, we must further determine "whether the imports

[192] Adisseo Prehearing Brief at 58–64; Sumitomo Prehearing Brief at 67–73.

[193] *See* 19 U.S.C. § 1677(4)(A). *See Iwatsu Elec. Co. v. United States*, 758 F. Supp. 1506, 1518 (CIT 1991) (*stating* "importers take the domestic industry as they find it.").

[194] CR/PR at Table IV-3.

[195] CR/PR at Table VI-3.

[196] Commerce France Final, 86 Fed. Reg. at 26698

subject to the affirmative {Commerce critical circumstances} determination ... are likely to undermine seriously the remedial effect of the antidumping {and/or countervailing duty} order{s} to be issued."[197]

The SAA indicates that the Commission is to determine "whether, by massively increasing imports prior to the effective date of relief, the importers have seriously undermined the remedial effect of the order" and specifically "whether the surge in imports prior to the suspension of liquidation, rather than the failure to provide retroactive relief, is likely to seriously undermine the remedial effect of the order."[198] The legislative history for the critical circumstances provision indicates that the provision was designed "to deter exporters whose merchandise is subject to an investigation from circumventing the intent of the law by increasing their exports to the United States during the period between initiation of an investigation and a preliminary determination by {Commerce}."[199] An affirmative critical circumstances determination by the Commission, in conjunction with an affirmative determination of material injury by reason of subject imports, would normally result in the retroactive imposition of duties for those imports subject to the affirmative Commerce critical circumstances determination for a period of 90 days prior to the suspension of liquidation.

The statute provides that, in making this determination, the Commission shall consider, among other factors it considers relevant,

(I) the timing and the volume of the imports,

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[197] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

[198] SAA at 877.

[199] *ICC Industries, Inc. v United States,* 812 F.2d 694, 700 (Fed. Cir. 1987), *quoting* H.R. Rep. No. 96-317 at 63 (1979), *aff'g,* 632 F. Supp. 36 (Ct. Int'l Trade 1986). *See* 19 U.S.C. §§ 1671b(e)(2), 1673b(e)(2).

(II) a rapid increase in inventories of the imports, and
(III) any other circumstances indicating that the remedial effect of the {order} will be seriously undermined.[200]

In considering the timing and volume of subject imports, the Commission's practice is to consider import quantities prior to the filing of the petition with those subsequent to the filing of the petition, using monthly statistics on the record regarding those firms for which Commerce has made an affirmative critical circumstances determination.[201]

Petitioner, the sole party to assert critical circumstances arguments with respect to methionine from France, argues that the volume of subject imports from Adisseo France SAS rose considerably between the pre- and post-petition periods and highlights that inventories of methionine from Adisseo France increased irregularly during the post-petition period. Petitioner claims that this increase in import volumes from Adisseo France SAS and importer inventories will undermine the remedial effects of any order.[202]

B. Analysis

We first consider the appropriate period for comparisons in our critical circumstances analysis. The Commission frequently relies on six-month comparison periods, and there is no argument that we should do otherwise here.[203] We have thus determined to compare the

[200] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

[201] *See Lined Paper School Supplies from China, India, and Indonesia,* Inv. Nos. 701-TA-442-43, 731-TA-1095-97**,** USITC Pub. 3884 at 46-48 (Sept. 2006); *Carbazole Violet Pigment from China and India, Inv.* Nos. 701-TA-437 and 731-TA-1060-61 (Final), USITC Pub. 3744 at 26 (Dec. 2004); *Certain Frozen Fish Fillets from Vietnam,* Inv. No. 731-TA-1012 (Final), USITC Pub. 3617 at 20-22 (Aug. 2003).

[202] Novus Posthearing Brief, Responses to Commissioner Questions at 41–42.

[203] The Commission has relied on shorter periods when Commerce's preliminary determination applicable to the country at issue fell within the six-month post-petition period the Commission typically considers. *Certain Hot-Rolled Steel Flat Products from Australia, Brazil, Japan, Korea, the Netherlands, Turkey, and the United Kingdom*, Inv. Nos. 701-TA-545-547, 731-TA-1291-1297 (Final), USITC Pub. 4638 at 49-50 (Sept. 2016); *Certain Corrosion-Resistance Steel Products from China, India, Italy, Korea, and Taiwan*, Inv. No. 701-TA-534-537 and 731-TA-1274-1278 (Final), USITC Pub. 4630 at 35-40 (July 2016);

volume of subject imports in the six months prior to the filing of the petition (February 2020 – July 2020) with the volume of subject imports in the six months after the filing of the petition (August 2020 – January 2021).[204]

Subject imports from Adisseo France SAS increased from *** short tons in the pre-petition period to *** short tons in the post-petition period, an increase of *** percent.[205] End-of-period U.S. inventories of merchandise produced by Adisseo France SAS increased from *** short tons in July 2020 to *** short tons in February 2021.[206]

The record reflects that the increased volumes and inventories of imports subject to Commerce's critical circumstances determination will not undermine the remedial effects of the antidumping duty order. Even considering the relatively large percentage increases, the actual quantities of imports involved are quite modest in the context of the overall U.S. market. Import quantities were *** short tons in the post-petition period, *** short tons greater than pre-petition quantities,[207] and inventories were *** short tons in February 2021, *** short tons higher than in July 2020.[208] By contrast, apparent U.S. consumption was ***

Carbon and Certain Steel Wire Rod from China, Inv. Nos. 701-TA-512, 731-TA-1248 (Final), USITC Pub. 4509 at 25-26 (Jan. 2015) (using five-month periods because preliminary Commerce countervailing duty determination was during the sixth month after the petition). That situation does not arise here with Commerce issuing its preliminary determination in the investigation concerning France in March 2021.

We note that the Commission is not required to examine the same periods that Commerce examined in performing the critical circumstances analysis. *See Certain Polyester Staple Fiber from China*, Inv. No. 731-TA-1104 (Final), USITC Pub. 3922 at 35 (June 2007); *Steel Concrete Reinforcing Bars from Turkey*, Inv. No. 731-TA-745 (Final), USITC Pub. 3034 at 34 (Apr. 1997).

[204] CR/PR at Table IV-3.

[205] CR/PR at Table IV-3.

[206] CR/PR at Table IV-4.

[207] CR/PR at Table IV-3.

[208] CR/PR at Table IV-4.

short tons in 2020.[209] In addition, Petitioner also submitted information that suggests that the volumes involved will not undermine the remedial effects of the order. Specifically, it claims that there was *** and other significant benefits to domestic producers such as ***.[210] These improvements suggest that the volume of subject imports and inventories in the post-petition period will not seriously undermine the remedial effect of the order.

In light of these considerations, we find that the increases in the volumes and inventory levels during the post-petition period of those subject imports from France subject to Commerce's affirmative critical circumstances determination are not of such a magnitude that would undermine seriously the remedial effect of the antidumping duty order. Consequently, we determine that critical circumstances do not exist with respect to subject imports from Adisseo France SAS.[211]

[209] CR/PR at Table IV-11.

[210] Novus Posthearing Brief, Answers to Commissioner Questions, at 23. The period for which the Commission collected pricing and performance data for the domestic industry concluded in December 2020, so there is no questionnaire data covering this period.

[211] Chair Kearns and Commissioner Karpel observe that the statute directs the Commission to consider the following factors in making this determination: "the timing and volume the imports, a rapid increase in the inventories of the imports, and any other circumstances indicating that the remedial effect of the antidumping order will be seriously undermined." 19 U.S.C. §1673d(b)(4)(A)(ii). In their analysis, they would therefore take into account a number of factors as appropriate to a given investigation (as directed by the statute) and do not necessarily give precedence to the pre- and post-petition subject import volumes. Among the factors they may consider, depending on the facts of the investigation and the available data, are the parties' arguments, subject import volumes relative to apparent U.S. consumption or production, monthly changes in subject import volume, subject import inventories (both absolute and relative to imports or shipments of imports), purchaser inventories, pricing, and the domestic industry's performance. Chair Kearns and Commissioner Karpel concur that the record in this investigation does not support a finding that the subject imports from Adisseo France SAS would undermine seriously the remedial effects of the order.

V. Conclusion

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of subject imports of methionine from France that are sold in the United States at less than fair value. We also find that critical circumstances do not exist with respect to imports from Adisseo France SAS.

Part I: Introduction

Background

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by Novus International, Inc. ("Novus"), St. Charles, Missouri, on July 29, 2020, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of methionine[1] from France, Japan, and Spain. The following tabulation provides information relating to the background of these investigations.[2] [3]

Effective date	Action
July 29, 2020	Petitions filed with Commerce and the Commission; institution of Commission investigations (85 FR 47243, August 4, 2020)
August 18, 2020	Commerce's notice of initiation (85 FR 52324, August 25, 2020)
September 14, 2020	Commission's preliminary determinations (85 FR 58385, September 18, 2020)
February 24, 2021	Scheduling of final phase of Commission investigations (86 FR 13585, March 9, 2021)
March 4, 2021	Commerce's preliminary affirmative AD determination and preliminary partial affirmative determination of critical circumstances for France (86 FR 12627)
March 4, 2021	Commerce's preliminary affirmative AD determination, preliminary affirmative determination of critical circumstances, and postponement of final AD determination for Japan (86 FR 12625)
March 4, 2021	Commerce's preliminary affirmative AD determination, preliminary negative determination of critical circumstances, and postponement of final AD determination for Spain (86 FR 12614)
May 11, 2021	Commission's hearing

[1] See the section entitled "The subject merchandise" in Part I of this report for a complete description of the merchandise subject in this proceeding.

[2] Pertinent *Federal Register* notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[3] Appendix B presents a list of witnesses who appeared at the Commission's hearing.

Effective date	Action
May 17, 2021	Commerce's final affirmative AD determination and final partial affirmative determination of critical circumstances for France (86 FR 26697)
June 10, 2021	Commission's vote
June 30, 2021	Commission's views

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

> *shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[4]

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential*

[4] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, dumping margins, and domestic like product. Part II of this report presents information on conditions of competition and other relevant economic factors. Part III presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. Parts IV and V present the volume of subject imports and pricing of domestic and imported products, respectively. Part VI presents information on the financial experience of U.S. producers. Part VII presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

Market summary

The only known U.S. producers of methionine are ***, while leading producers of methionine in the subject countries include *** of France, *** of Japan, and *** of Spain. The leading U.S. importer of methionine from France and Spain is ***, while the leading importer of methionine from Japan is ***. Leading importers of product from nonsubject countries include ***.

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

Apparent U.S. consumption of methionine totaled *** short tons ($***) in 2020. U.S. producers' U.S. shipments of methionine totaled *** short tons ($***) in 2020, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from subject sources totaled 80,057 short tons ($126.3 million) in 2020 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from nonsubject sources totaled 5,792 short tons ($13.0 million) in 2020 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

Summary data and data sources

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of two firms that accounted for *** U.S. production of methionine in 2020. U.S. import data are based on official U.S. import statistics.

Previous and related investigations

Methionine has been the subject to prior antidumping duty investigations in the United States. In May 1973, the Commission determined that the methionine industry in the United States was being injured by reason of imports of synthetic methionine from Japan.[6] On July 10, 1973, the Department of Treasury issued an antidumping finding on synthetic methionine from Japan.[7] In May 1981, the Commission instituted a changed circumstance review of the antidumping duty order and determined that no industry in the United States would be materially injured or threatened with material injury by reason of imports of synthetic L-methionine from Japan if the order were modified to exclude synthetic L-methionine.[8]

In April 1985, the Commission instituted an antidumping duty investigation to determine whether an industry in the United States was materially injured or threatened with material injury by reason of LTFV imports of animal feed grade DL-methionine from France.[9] In May 1985, the Commission determined that there was no reasonable indication that an

[6] Synthetic Methionine from Japan, Inv. No. AA1921-115 (Final), USITC Publication 578, May 1973, pp. 1-2.

[7] 38 FR 18382, July 10, 1973.

[8] 46 FR 38785, July 14, 1981.

[9] Animal Feed Grade DL-Methionine from France, Inv. No. 731-TA-255 (Preliminary), USITC Publication 1699, May 1985, p. 1.

industry in the United States was materially injured or threatened with material injury by reason of imports of animal feed grade DL-methionine from France.[10]

In August 1998, the Commission instituted a five-year review to determine whether revocation of the of the antidumping duty order on synthetic methionine from Japan would be likely to lead to continuation or recurrence of material injury and determined in November 1998 that it would conduct a full review.[11] In July 1999, the Commission determined that revocation of the antidumping finding on synthetic methionine from Japan would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[12] In August 1999, Commerce revoked its antidumping finding on synthetic methionine from Japan.[13]

Nature and extent of sales at LTFV

Sales at LTFV

On March 4, 2021, Commerce published a notice in the *Federal Register* of its preliminary determination of sales at LTFV with respect to imports from Japan[14] and Spain.[15] On May 17, 2021, Commerce published a notice in the Federal Register of its final determination of sales at LTFV with respect to imports from France.[16] Tables I-1, I-2, and I-3 present Commerce's dumping margins with respect to imports of methionine from France, Japan, and Spain, respectively.

Table I-1
Methionine: Commerce's final weighted-average LTFV margins with respect to imports from France

Exporter/producer	Final dumping margin (percent)
Adisseo France SAS and Commentry	43.82
All others	16.17

Source: 86 FR 26697, May 17, 2021.

[10] Animal Feed Grade DL-Methionine from France, Inv. No. 731-TA-255 (Preliminary), USITC Publication 1699, May 1985, p. 1.
[11] 63 FR 41290, August 3, 1998 and 63 FR 63748, November 16, 1998.
[12] 64 FR 38693, July 19, 1999.
[13] 64 FR 45510, August 20, 1999.
[14] 86 FR 12625, March 4, 2021.
[15] 86 FR 12614, March 4, 2021.
[16] 86 FR 26697, May 17, 2021.

Table I-2
Methionine: Commerce's preliminary weighted-average LTFV margins with respect to imports from Japan

Exporter/producer	Preliminary dumping margin (percent)
Sumitomo Chemical Company, Ltd	135.10
All others	135.10

Source: 86 FR 12625, March 4, 2021.

Table I-3
Methionine: Commerce's preliminary weighted-average LTFV margins with respect to imports from Spain

Exporter/producer	Preliminary dumping margin (percent)
Adisseo España S.A.	31.98
All others	31.98

Source: 86 FR 12614, March 4, 2021.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:[17]

> *The merchandise covered by this investigation is methionine and dl-Hydroxy analogue of dl-methionine, also known as 2-Hydroxy 4-(Methylthio) Butanoic acid (HMTBa), regardless of purity, particle size, grade, or physical form. Methionine has the chemical formula $C_5 H_{11} NO_2 S$, liquid HMTBa has the chemical formula $C_5 H_{10} O_3 S$, and dry HMTBa has the chemical formula $(C_5 H_9 O_3 S)_2 Ca$.*
>
> *Subject merchandise also includes methionine processed in a third country including, but not limited to, refining, converting from liquid to dry or dry to liquid form, or any other processing that would not otherwise remove the merchandise from the scope of this investigation if performed in the country of manufacture of the in-scope methionine or dl-Hydroxy analogue of dl-methionine.*
>
> *The scope also includes methionine that is commingled (i.e., mixed or combined) with methionine from sources not subject to this investigation. Only the subject component of such commingled products is covered by the scope of this investigation.*

[17] 86 FR 26697, May 17, 2021.

Excluded from this investigation is United States Pharmacopoeia (USP) grade methionine. In order to qualify for this exclusion, USP grade methionine must meet or exceed all of the chemical, purity, performance, and labeling requirements of the United States Pharmacopeia and the National Formulary for USP grade methionine.

Tariff treatment

Based upon the scope, information available to the Commission indicates that the merchandise subject to these investigations—methionine and a precursor to methionine, DL-hydroxy analog of DL-methionine—is classified under subheadings 2930.40.00 ("methionine") and 2930.90.46 ("*DL*-Hydroxy analog of *DL*-methionine") of the Harmonized Tariff Schedule of the United States ("HTS"). The 2021 general rate of duty for both subheadings is free. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

The product

Description and applications

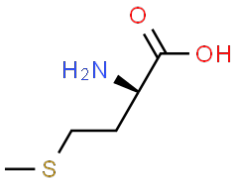
Methionine, an organic chemical, is an essential amino acid with the chemical formula $C_5H_{11}NO_2S$.[18] Methionine hydroxy analogues ("MHA"), included in the scope, are organic acids and have the following chemical formulas: if liquid, $C_5H_{10}O_3S$, or if dry, $(C_5H_9O_3S)_2Ca$.[19] Methionine, like other amino acids, exists in three forms—the D isomer, the L isomer, and the product covered in the scope of this investigation: a mixture of the L and D isomers called D,L-methionine (hereafter called "DLM"). Whereas these stereoisomers of each chemical have the same chemical formulas mentioned above, the spatial (or 3D) configurations of the isomers differ, potentially providing the stereoisomers different properties (figure I-1 shows the

[18] Essential amino acids are not made in the body and, therefore, must be provided via food.

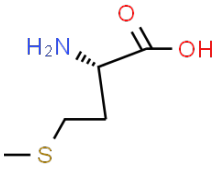
[19] Mercedes Vazquez-Añon, "Comparison of L-Methionine, DL-Methionine and Methionine Hydroxy Analogue in a High Ambient Temperature Environment," Novus International, found at https://www.novusint.com/Portals/0/Documents/Methionine/Comparison%20of%20Methionine%20Sources_Full%20Article.pdf?timestamp=1443715076894, retrieved August 20, 2020.

isomeric forms of D-methionine and L-methionine as examples).[20] MHA, a precursor to DLM, is an organic acid and not an amino acid because it doesn't contain an amine group. [21]

Figure I-1
Methionine: Chemical structure of D-methionine and L-methionine



D-Methionine



L-Methionine

Source: D-Methionine structure, found on ChemSpider at http://www.chemspider.com/Chemical-Structure.76512.html?rid=1a02d31d-86c8-46d2-b203-6ae036c52b13, retrieved August 27, 2020; and L-methionine structure, found on ChemSpider at http://www.chemspider.com/Chemical-Structure.5907.html?rid=7e804181-0043-44d0-be86-ffcbf2f4f3c7, retrieved August 27, 2020.

The forms of methionine and MHA identified in the scope are primarily used in animal feed preparations (e.g., poultry and swine) and aquaculture. DLM and MHA sold in animal feed applications are typically sold as technical grade products in either liquid or dry form. ***. MHA reportedly accounts for about 70 percent of the U.S. market while DLM accounts for the

[20] Stereoisomers of a given chemical have the same composition but the atoms are arranged differently resulting in mirror images of the isomers not being superimposable (much like one's left and right hands). The naming convention for isomers is L ("left-handed"), D ("right handed"), or DL (mixtures of L isomers and D isomers). Pearson Education, "The Biology Place," found at http://www.phschool.com/science/biology_place/biocoach/biokit/stereo.html, retrieved August 20, 2020; Pearson Education, "L- and D-Amino Acids: Amino Acids Can Occur in L- and D-Forms, But Only L-Forms Are Used by Cells," found at http://www.phschool.com/science/biology_place/biocoach/bioprop/landd.html, retrieved August 20, 2020.

[21] Conference transcript, p. 24 (Klopfenstein); Mercedes Vazquez-Añon, "Comparison of L-Methionine, DL-Methionine and Methionine Hydroxy Analogue in a High Ambient Temperature Environment," Novus International, found at https://www.novusint.com/Portals/0/Documents/Methionine/Comparison%20of%20Methionine%20Sources_Full%20Article.pdf?timestamp=1443715076894, retrieved August 20, 2020.

remainder.[22] MHA used in feed is converted to DLM in the animal at varying conversion rates (i.e., activity level or bioefficacy, most commonly at 84, 88, and 99 percent activity level) after the animal feed is ingested.[23] Also, a feed grade version of L-biomethonine is produced using biobased inputs.[24]

There are other forms of methionine. Two synthetic methionine products not in scope, pharmaceutical grade L-methionine and DLM (which has a higher purity level than technical grade DLM and, as such, reportedly costs more) are generally used to produce pharmaceuticals.[25]

[22] Conference transcript, p. 102. ***.

[23] Industry sources disagree about the conversion rate of MHA after ingestion, potentially affecting the type and amount of MHA used. Also, several people form the decision to use MHA or DLM (and the levels used), including nutritionists, product manufacturers, and the consuming entity. ***.

[24] An emerging trend is for companies to produce biomethinonine (feedgrade L-methionine) via fermentation. Arkema and CheilJedang are producing L-methionine commercially via fermentation in Malaysia by reacting a biobased intermediate product (derived from sugars and plants) with methyl mercaptan produced onsite by Arkema. Evonik is also reportedly exploring commercial use of a fermentation process to manufacture a 100-percent biobased biomethionine. ***.

Using fermentation to produce methionine can reduce production costs; reduce waste; and, because such processes can be conducted under ambient temperatures and pressures, reduce energy needed for heating and pressurization. Such fermentation processes can also be safer and more environmentally friendly, in part because they can also limit/eliminate the need for HCN, a hazardous chemical used in the chemical synthesis of DLM and MHA. Arkema, "Innovation for Urbanization: 2019 Annual and Sustainable Performance Report," found at https://e-brochure.arkema.com/media/2019-annual-sustainable-performance-report/article/34/, retrieved August 21, 2020, p. 35; Evonik, "Evonik to Acquire Technology from METEX for the Fermentative Production of Methionine," press release, November 28, 2016, found at https://corporate.evonik.com/en/evonik-to-acquire-technology-from-metex-for-the-fermentative-production-of-methionine-106336.html; Arkema, "Innovation for Urbanization: 2019 Annual and Sustainable Performance Report," found at https://e-brochure.arkema.com/media/2019-annual-sustainable-performance-report/article/34/, p. 35; Michael McCoy, "Firms Target Biomethionine," April 18, 2011, found at https://cen.acs.org/articles/89/i16/Firms-Target-Biomethionine.html.

[25] Petition, p. I-6.

Manufacturing processes

Although the two U.S. producers—Novus and Evonik—use different chemical syntheses to produce MHA and DLM, respectively, they both use 3-methylthiopropionaldehyde ("MMP"), formed from reacting acrolein with methyl mercaptan, and hydrogen cyanide ("HCN") as the basic starting materials. Novus produces liquid MHA at a facility in Alvin (Chocolate Bayou), Texas, ***; this facility was started up in 1983 and underwent "the most recent large expansion" in 1999.[26] Novus converts the liquid product to dry MHA at a facility in Little Rock, Arkansas.[27] The company produces MMP from inputs obtained from other companies and then reacts it with HCN to form liquid MHA.[28] Novus then ships some of the liquid MHA to its facility in Little Rock, AR, where it reacts it with calcium hydroxide to produce the MHA calcium salt, which is then bagged and shipped to customers.[29]

By comparison, Evonik uses the carbonate process to form dry DLM at facility in Theodore, Alabama, ***.[30] Evonik is backward integrated, producing acrolein, MMP, and HCN at its AL site; [31] it purchases methyl mercaptan from "longtime methyl mercaptan suppliers" Arkema Inc. and Chevron Phillips Chemical Company LLC.[32] MMP, HCN, carbon dioxide ("CO_2"), and ammonia ("NH_3") are reacted to form hydantoin.[33] The hydantoin is hydrolyzed to form potassium methioninate ("KMET") and the KMET is converted to DL-methionine cake, which is then dried to a concentration of 99 percent

[26] Conference transcript, pp. 24, 53, and 144. ***.

[27] Conference transcript, p. 24; ***.

[28] Petition, pp. I-14 and I-51. ***.

[29] Conference transcript, p. 42 (Klopfenstein).

[30] Evonik, "Mobile (Alabama, USA)," found at https://animal-nutrition.evonik.com/en/contact/locations/mobile, retrieved August 21, 2020. ***.

[31] Evonik, "Mobile (Alabama, USA)," found at https://animal-nutrition.evonik.com/en/contact/locations/mobile, retrieved August 21, 2020, for production information. ***.

[32] Kaija Wilkinson, "Evonik Inks Deal with Supplier, Taking $65M Expansion Off Table," March 28, 2019, found at https://www.al.com/press-register-business/2009/07/evonik_inks_deal_with_supplier.html; Evonik, "Mobile (Alabama, USA)," found at https://animal-nutrition.evonik.com/en/contact/locations/mobile, retrieved August 21, 2020. ***.

[33] *Chemical Engineering*, "Technology Profile: D,L-Methionine Production via the Carbonate Process," November 14, 2014. The article says the process presented is "similar to one developed by Evonik Industries AG."

by weight.[34] In addition to the lack of co-products produced by the carbonate process, Evonik also recycles the CO_2 and NH_3 back into the production process, potentially reducing production costs.[35] ***.[36] Evonik says that "The degree of backward integration and handling of by-products is critical for the cash production costs."[37]

The top 6 largest companies—Evonik, Adisseo, Novus, Sumitomo, CJ CheilJedang, and Ningxia Unisplendour Tianhua—reportedly accounted for *** in 2018; ***.[38] Companies have been bringing new large-scale commercial methionine plants online with at least one company—Sumitomo—retiring an older plant that is considered a less efficient.[39] ***.[40] Reports indicate that Novus was reportedly considering bringing new methionine production capacity onstream

[34] *Chemical Engineering*, "Technology Profile: D,L-Methionine Production via the Carbonate Process," November 14, 2014.

[35] *Chemical Engineering*, "Technology Profile: D,L-Methionine Production via the Carbonate Process," November 14, 2014; Elizabeth R. Nesbitt, "Using Waste Carbon Feedstocks to Produce Chemicals," April 2020, found at https://www.usitc.gov/sites/default/files/publications/332/working_papers/using_waste_carbon_feedstocks_to_produce_chemicals_0.pdf. ***.

[36] ***.

[37] Evonik post-conference brief, p. 3. See also eFeedLink, "Evonik Mulls US$65 Million Methionine Intermediate Plant in the US," June 10, 2008, found at https://www.efeedlink.com/contents/06-10-2008/5fc4afad-8529-4937-96f7-beccc02a6921-a181.html.

[38] Conference transcript, p. 144. ***.

[39] Sumitomo announced in 2019 that it was closing a methionine production facility that is 54 years old because of increasing maintenance and other costs; the plant to be closed is on the site of a new facility Sumitomo opened in 2018. It also announced it was seeking to increase exports of methionine from the site. Sumitomo Chemical, "Sumitomo Chemical to Strengthen the Competitiveness of its Feed Additive Methionine Business by Improving Production Efficiency," press release, October 1, 2019, found at https://www.sumitomo-chem.co.jp/english/news/detail/20191001e.html; Michael McCoy, "Sumitomo to Close a Methionine Plant," October 19, 2018, found at https://cen.acs.org/food/agriculture/Sumitomo-close-methionine-plant/97/i40; Sumitomo Chemical, "Feed Additive Methionine Logistics Operations Certified by Government as "Comprehensive Efficiency Plan," press release, April 15, 2019, found at https://www.sumitomo-chem.co.jp/english/news/detail/20190415e.html.

[40] ***.

in Texas, in partnership with INEOS Nitriles LLC, but cancelled the project in 2019 because of rising construction costs, in part due to the steel and aluminum tariffs and fuel costs.[41]

Domestic like product issues

In the preliminary phase of these investigations, the petitioner argued that the domestic like product should be a single like product, co-extensive with the scope of these investigations.[42] Respondent Sumitomo Chemical argued that DLM and MHA should constitute separate like products.[43] Respondent Adisseo acknowledged Sumitomo Chemical's argument that DLM and MHA constitute separate like products, but took no position.[44]

In the final phase of these investigations, the petitioner argues that the Commission should find a single like product co-extensive with the scope of these investigations.[45] Respondent Sumitomo Chemical argues that DLM and MHA should constitute separate like products.[46] Sumitomo Chemical contends that DLM and MHA are different chemical compounds with different physical, chemical, and metabolic properties, are not interchangeable, have different manufacturing facilities, production processes, and production employees, and are perceived differently by consumers.[47] Respondent Adisseo acknowledges Sumitomo Chemical's argument that DLM and MHA constitute separate like products, but does not contest the Commission's domestic like product definition from the preliminary phase of these investigations.[48]

[41] Novus, "Novus International Selects Calhoun County, Texas For Manufacturing Expansion," November 10, 2017, found at https://www.prnewswire.com/news-releases/novus-international-selects-calhoun-county-texas-for-manufacturing-expansion-300553501.html; Jessica Priest, "Novus Cancels Plans to build Multimillion-Dollar Plant in Calhoun County," *Victoria Advocate*, April 26, 2019 found at https://www.victoriaadvocate.com/counties/calhoun/novus-cancels-plans-to-build-multimillion-dollar-plant-in-calhoun-county/article_2320323a-683e-11e9-9323-e3bd92c57551.html. ***.

[42] Petitioner's postconference brief, questions from staff, pp. 8-12.

[43] Respondent Sumitomo Chemical's postconference brief, pp. 2-17.

[44] Respondent Adisseo's postconference brief, p. 3

[45] Petitioner's posthearing brief, p. 4.

[46] Respondent Sumitomo Chemical's prehearing brief, pp. 2-14.

[47] Ibid.

[48] Respondent Adisseo's prehearing brief, p. 4.

Part II: Conditions of competition in the U.S. market

U.S. market characteristics

Methionine is an amino acid and is used as a livestock feed additive.[1] It is primarily used in poultry feed ***, but is also used in feed for swine, dairy cows, and aquaculture.[2] Pharmaceutical-grade methionine accounts for a small proportion of the market and is of a higher purity.[3]

Methionine is available in both dry and liquid forms. Included in the scope are DL-methionine ("DLM") and a methionine hydroxy analog ("MHA"), both of which can be used in the same applications.[4] Liquid MHA typically is available in an 88 percent activity level (i.e., mixed with 12 percent water)[5] while dry MHA is available in a concentration of 84 percent. Dry DLM is available in a 99 percent concentration.[6] In 2020, *** percent of methionine imports were in dry form versus *** percent were in liquid form, and *** percent were DLM while *** percent were MHA.[7] Petitioner Novus produces liquid and dry MHA at its two production facilities in Texas and Arkansas, whereas dry DLM is available from U.S. producer Evonik.[8] Both types of methionine are imported from subject countries; DLM is available from France and Japan, whereas MHA is available from Japan and Spain. Adisseo, the largest liquid methionine supplier in the world, produces dry DLM in two production facilities in France, and both dry and

[1] ***.

[2] ***.

[3] Conference transcript, p. 18 (Klopfenstein).

[4] Other types of methionine also exist. L-methionine is not produced in the United States or imported from subject countries.

[5] Conference transcript, p. 15 (Klopfenstein).

[6] DLM is also produced in a liquid form. ***, April 23, 2021.

[7] Conference transcript, p. 87 (Klopfenstein) and p. 201 (Harari), and ***.

[8] Hearing transcript, p. 18 (Klopfenstein) and conference transcript, p. 46 (Drake).

liquid MHA in one production facility in Spain.[9] The activity level of the methionine is reportedly the most important factor in determining prices.[10]

Apparent U.S. consumption of methionine increased during January 2018-December 2020. Overall, apparent U.S. consumption in 2020 was *** percent higher than in 2018. Worldwide growth of methionine consumption reportedly has been approximately 6 percent per year while growth in the United States has been 3 to 4 percent annually.[11] According to ***, future growth of U.S. methionine consumption is expected to be *** percent annually through 2023.[12]

U.S. purchasers

The Commission received 28 usable questionnaire responses from firms that had purchased methionine during January 2018 to December 2020.[13] [14] Nine responding purchasers are distributors, 21 are end users, and 3 identified themselves as follows: *** as a protein company, *** as a blender, and *** as a feed manufacturer. A majority of responding U.S. purchasers were located in the Midwest. The responding purchasers represented firms in a variety of industries, including poultry and animal feed integrators and

[9] Hearing transcript, p. 118 (Harrari).

[10] The activity level represents the concentration of methionine contained in the product. Petition, p. I-12.

[11] Conference transcript, p. 13 (Hux), p. 24 (Galo), p. 172 (Harari). One representative of respondent Sumitomo reported higher U.S. methionine consumption growth based on faster growth in certain market segments. Conference transcript., p. 171 (Barnes).

[12] ***.

[13] The following firms provided purchaser questionnaire responses: ***. ***.

[14] Of the 28 responding purchasers, 17 purchased the domestic methionine, 7 purchased subject imports of methionine from France, 17 purchased subject imports of methionine from Japan, 7 purchased subject imports of methionine from Spain, and 9 purchased imports of methionine from other sources.

mixers and mineral complex manufacturers. Large purchasers include ***. Appendix D details purchasers reported firm type, type of methionine purchased (DLM, MHA, or both), and the source and supplier of their purchases.

Channels of distribution

U.S. producers and importers from Japan and Spain sold the vast majority of their methionine to end users, while importers of methionine from France sold to both distributors and end users, with a majority of shipments going to distributors, as shown in table II-1.

Table II-1
Methionine: U.S. producers' and importers' U.S. shipments, by sources and channels of distribution, January 2018-December 2020

Item	Calendar year		
	2018	2019	2020
	Share of reported shipments (percent)		
U.S. producers' U.S. shipments of methionine:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' U.S. shipments of methionine from France:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' U.S. shipments of methionine from Japan:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' U.S. shipments of methionine from Spain:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' U.S. shipments of methionine from all other countries:			
Distributors	***	***	***
End users	***	***	***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

Geographic distribution

U.S. producers and importers reported selling methionine to all regions in the contiguous United States (table II-2). *** of methionine from Spain reported selling to all regions in the United States, including "Other," while all responding firms reported selling to all regions except "Other." For U.S. producers, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000

miles, and *** percent were over 1,000 miles. Importers sold *** percent within 100 miles of their U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-2
Methionine: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	France	Japan	Spain	Subject Importers
Northeast	***	***	***	***	***
Midwest	***	***	***	***	***
Southeast	***	***	***	***	***
Central Southwest	***	***	***	***	***
Mountains	***	***	***	***	***
Pacific Coast	***	***	***	***	***
Other	***	***	***	***	***
All regions (except Other)	***	***	***	***	***
Reporting firms	***	***	***	***	***

Note: All other includes U.S. markets, such as AK, HI, PR, and VI.

Source: Compiled from data submitted in response to Commission questionnaires.

Supply and demand considerations

U.S. supply

Table II-3 provides a summary of the supply factors regarding methionine from U.S. producers and from subject countries. Domestic supply includes production of both MHA and DLM. *** are the sole producers of methionine in France and Spain. It imports DLM from France and MHA from Spain. Sumitomo is the only producer and importer of methionine from Japan. Sumitomo imports and sells DLM in dry form and MHA in liquid form in the United States. Foreign producers in subject countries sent the majority of their shipments of methionine to non-U.S. markets.

Table II-3
Methionine: Supply factors that affect the ability to increase shipments to the U.S. market

	Capacity (short tons)		Capacity utilization (percent)		Ratio of inventories to total shipments (percent)		Shipments by market, 2020 (percent)		Able to shift to alternate products
Country	2018	2020	2018	2020	2018	2020	Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
United States	***	***	***	***	***	***	***	***	0 of 2
France	***	***	***	***	***	***	***	***	0 of 1
Japan	***	***	***	***	***	***	***	***	0 of 1
Spain	***	***	***	***	***	***	***	***	0 of 1

Note: Responding U.S. producers accounted for more than half of U.S. production of methionine in 2020. Responding foreign producer/exporter firms accounted for almost all of U.S. imports of methionine from France, Japan, and Spain during 2020. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources."

Source: Compiled from data submitted in response to Commission questionnaires.

Domestic production

Based on available information, U.S. producers of methionine have the ability to respond to changes in demand with moderate changes in the quantity of shipments of U.S.-produced methionine to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from alternate markets, the availability of limited unused capacity, and some inventories. A factor mitigating responsiveness of supply is the inability to shift production to or from alternate products.

Capacity utilization decreased *** between 2018 and 2020; capacity did not change. ***. Total shipment volumes increased by *** percent between 2018 and 2020.[15] End of period inventories decreased *** between 2019 and 2020. U.S. producers reduced production levels to try to source from inventories; the ratio of inventories to U.S. production decreased from ***.[16]

Exports represented *** of total shipments, with its share increasing slightly from *** percent of total shipments in 2018 to *** percent in 2020. Export volumes increased by *** percent between 2018 and 2020. U.S. producers' principal export markets were ***.

[15] See table III-5.

[16] Hearing transcript, p. 49 (Drake). See also table III-6.

No other products can be produced on the same equipment as methionine and no capacity constraints were reported.

Subject imports from France

Based on available information, producers of methionine from France have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of methionine to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from alternate markets and the availability of some unused capacity. Factors mitigating responsiveness of supply include the limited availability inventories and ***.

Methionine production capacity in France ***.[17] Capacity to produce methionine in France increased slightly between 2018 and 2020, but production declined, reducing capacity utilization. Adisseo only produces dry DLM in its French methionine production plant.[18] On December 20, 2019, Adisseo declared a force majeure in France due to *** and national rail strikes, reducing its ability to source raw materials, produce, and ship its product. The force majeure was lifted in February 2020.[19] Its major export markets include ***. Adisseo France reported it *** other products on the same equipment as methionine.[20] Production constraints included ***.

Subject imports from Japan

Based on available information, producers of methionine from Japan have the ability to respond to changes in demand with moderate changes in the quantity of shipments of methionine to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift production to or from alternate markets, and the availability of

[17] ***.

[18] Conference transcript, p. 123 (Harari).

[19] "Adisseo Declares Force Majeure for Some Methionine Products in France," December 20, 2019, https://marketing.feedinfo.com/adisseo-declares-force-majeure-for-some-methionine-products-in-france/, retrieved April 9, 2021 and "Adisseo Lifts Force Majeure for Some Methionine Products in France, " February 20, 2020, https://marketing.feedinfo.com/adisseo-lifts-force-majeure-for-some-methionine-products-in-france/, retrieved April 9, 2021.

[20] ***.

some inventories. Factors mitigating responsiveness of supply are *** and limited availability of capacity.

Sumitomo's methionine production in Japan increased more quickly than its capacity expanded, leading to increased capacity utilization during 2018-20. Sumitomo produces both *** in Japan.[21] Major export markets for Sumitomo include ***. ***[22]. Sumitomo reported that it *** produce other products on the same equipment as methionine.

Subject imports from Spain

Based on available information, producers of methionine from Spain have the ability to respond to changes in demand with moderate changes in the quantity of shipments of methionine to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from alternate markets, and a projected increase in end-of-period inventories. Factors mitigating responsiveness of supply are minimal available capacity and ***.

Capacity to produce methionine in Spain increased by *** percent between 2018 and 2020, but production also increased, leading to an increase in capacity utilization from *** during 2018-20. Adisseo España only produces the MHA product, but sells both the liquid 88-percent activity level product and the dry 84-percent activity level product.[23] Major export markets include ***. Adisseo España reported it *** produce other products on the same equipment as methionine.[24] Production constraints included ***.

[21] One purchaser (***) reported that Sumitomo no longer carries MHA as of January 1, 2021.

[22] *** questionnaire response at I-9.

[23] A representative for Adisseo stated that it only produces the liquid product at its facility in Spain. Conference transcript, p. 123 (Harari). U.S. producer Novus similarly only makes the liquid MHA at its Chocolate Bayou, Texas plant and ships some to its Little Rock, Arkansas plant to make the calcium salt of the hydroxy analog. Conference transcript, p. 42 (Klopfenstein).

[24] ***. Adisseo España foreign producer questionnaire response at II-3a.

Imports from nonsubject sources

Nonsubject imports accounted for *** percent of total U.S. imports in 2020, a drop from *** percent in 2018. The largest source of nonsubject imports during January 2018-December 2020 was China. Methionine from China accounted for *** percent of nonsubject imports in 2020 versus *** percent in 2018.

Supply constraints

One of two U.S. producers and two of four responding importers reported supply constraints affecting the methionine market since 2018. U.S. producer *** reported temporary supply constraints due to winter storms in February 2021, suspending its methionine production until utilities were restored.[25] Importer ***. Importer *** reported its products were priced out of the market due to preliminary duties. Half of responding purchasers (10 of 20) reported supply constraints. Purchasers *** reported recent weather events as a supply constraint, and several purchasers reported being placed on allocation as a supply constraint (***). Purchaser *** reported being on allocation by Adisseo and Sumitomo (in 2019 and 2020, respectively), and that Sumitomo indicated it may be placing *** on allocation or ceasing supply. Purchaser *** reported that two domestic companies were not able to supply its needs. Purchaser *** reported that it saw allocations at least twice on MHA from U.S.-produced product and subject imports.

Seven of 27 responding purchasers reported that certain grades or types of methionine were only available from one source. Purchasers reported that DLM was produced in the U.S. (Evonik), France (Adisseo, which reportedly ceased exporting DLM to the U.S. in 2021), and Japan (Sumitomo). DLM was also reported to be available in China, and a similar product in Malaysia. Purchasers reported that Sumitomo ceased selling MHA in January 1, 2021, but purchasers were able to purchase MHA from Novus and Adisseo.

New suppliers

Ten of 28 purchasers indicated that new suppliers have entered the U.S. market since January 1, 2018. Purchasers reported that NHU (China, cited by 3 firms), CJ Bio (Malaysia, 1 firm), Unisplendor (China, 1 firm), and CJ America (United States, 2 firms) had entered the

[25] *** questionnaire response at II-14.

market. *** reported that new suppliers from China entered the market but exited after the imposition of import tariffs in 2018.

U.S. demand

Based on available information, the overall demand for methionine is likely to experience small changes in response to changes in price. The main contributing factors are the limited range of substitute products and the small cost share of methionine in most of its end-use products. According to an industry report, the demand for methionine has been driven by growth in the poultry and swine industries, ***.[26]

End uses and cost share

U.S. demand for methionine ultimately depends on the demand for animal protein. Reported end uses include feed, including broiler chicken, turkey, swine, and ruminant feed. Methionine accounts for a very small share of the cost of feed end-use products. Reported cost shares were between 0.4 to 3.0 percent for animal feed, with poultry feed on the lower end of the range. Methionine was reported to be 80 percent of the cost share for rumen protected DLM and 59 to 60 percent for zinc methionine.

Business cycles

Most firms (*** producers, all 4 responding importers and 22 of 27 responding purchasers) reported that the methionine market was not subject to business cycles and *** producers, 3 of 4 responding importers and 18 of 27 responding purchasers indicated that the methionine market was not subject to distinct conditions of competition. Some firms (*** U.S. producers, 1 of 4 responding importers, and 11 of 27 responding purchasers) indicated that the market was subject to business cycles or conditions of competition. ***, one importer, and 11 of 20 responding purchasers indicated that there had been changes to business cycles or conditions of competition since 2018. Specifically, U.S. producer *** indicated that demand is driven by production of animal protein, feed costs, and nutritional strategies. Purchaser *** reported that livestock demand, raw material costs, natural disasters, etc. formed distinct conditions of competition for the methionine market and that plant shutdowns due to hurricanes and African Swine Fever (ASF) had changed business cycles

[26] ***.

or conditions of competition since 2018. *** also referred to weather events/natural disasters, swine flu, and bird flu as distinct or changes to the conditions of competition. Purchaser *** reported that feed demand in the U.S. was seasonal, and that ***.

Demand trends

Most firms reported an increase in U.S. demand for methionine since January 1, 2018 (table II-4). According to ***, demand has increased throughout the period of investigation. It also reported that the top five to six U.S. methionine consumers are mainly MHA consumers, accounting for more than 50 percent of demand. Purchaser *** reported that COVID-19 caused a large increase in demand as hoarding began and facilities shut down. It also cited a shortage of container freight availability, a shortage of truck drivers and space on trucks, an increase in export market for U.S.-produced meat products, and an increase in formulations to use synthetic methionine for monogastric and dairy diets as reasons for increased demand.

Table II-4
Methionine: Firms' responses regarding U.S. demand and demand outside the United States

Item	Number of firms reporting			
	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	***	***	***	***
Importers	3	1	0	0
Purchasers	18	2	1	4
Demand outside the United States				
U.S. producers	***	***	***	***
Importers	3	1	0	0
Purchasers	11	2	1	4
Demand for end-use products outside the United States				
Purchasers	11	1	2	10

Source: Compiled from data submitted in response to Commission questionnaires.

Substitute products

*** producers, 2 of 4 responding importers, and 4 of 26 responding purchasers reported that there were substitutes. U.S. producer/importer *** reported no product as substitutes for methionine that were outside the scope of these investigations.[27] Importer

[27] Producer/importer *** named dry and liquid MHA and L-methionine with a 99-percent activity level as substitutes.

*** reported that, in addition to L-methionine, all cereal grains, vegetable proteins, vegetable protein byproducts, animal byproducts (e.g., fishmeal, bone meal), and ethanol production byproducts were substitutes. Purchaser *** reported that soybean meal was a substitute, while *** reported soybean meal, corn gluten meal, and meat and bone meal as substitutes.

Substitutability issues

The degree of substitution between domestic and imported methionine depends upon such factors as relative prices, quality (e.g., grade standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). Based on available data, staff believes that there is a moderately high degree of substitutability between domestically produced methionine and methionine imported from subject sources of the same type and form (liquid versus dry, and DLM versus MHA). Approximately half of purchasers reported being able to switch between different types of methionine and several purchase both DLM and MHA. While most purchasers rated methionine from all sources as comparable and generally interchangeable, substitutability may be limited by availability, application, the cost of shifting between methionine types, and customer preference. In addition, France does not produce MHA and Spain does not produce DLM, but Japan produces both MHA and DLM, which could limit potential sources for those purchasers that only purchase one type of methionine.

Lead times

Methionine is exclusively sold from inventory. U.S. producers reported that lead times averaged *** days, while importers reported that lead times averaged *** days from U.S. inventories and *** days from foreign inventories. U.S. importers reported that *** of commercial U.S. shipments are from U.S. inventories, with the remainder from foreign inventories.

Knowledge of country sources

Twenty purchasers indicated they had marketing/pricing knowledge of domestic product, 12 of French methionine, 18 of Japanese methionine, 7 of Spanish methionine, and 13 of nonsubject countries.

As shown in table II-5, most purchasers and their customers reported that they never make purchasing decisions based on the producer or country of origin. *** reported that they always make decisions based the manufacturer, with ***

***.

Table II-5
Methionine: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	3	1	5	19
Purchaser's customers make decision based on producer	0	0	5	18
Purchaser makes decision based on country	1	2	6	19
Purchaser's customers make decision based on country	0	0	7	16

Source: Compiled from data submitted in response to Commission questionnaires.

Methionine types

Of the 28 purchasers, ten purchasers only purchased DLM, seven only purchased MHA, and eleven purchased both (see appendix D). Of the purchasers that purchased both DLM and MHA, only *** did not purchase from the United States. The majority of purchasers that purchased both identified as end users (see appendix D).

Purchasers were asked if they were able to switch between types of methionine using their currently installed equipment. Fourteen of 26 responding purchasers reported that they could switch between dry and liquid methionine, while 13 of 22 responding purchasers reported that they could switch between DLM and MHA, and 12 of 18 responding purchasers reported that they could switch between methionine of different activity levels; several of these purchasers identified as feed manufacturers/mills. In addition, *** producing both DLM and MHA. Producing MHA requires the disposal of ammonium sulfate, a hazardous byproduct, as well as transportation in specialized ISO tanks.[28] Purchasers *** also reported that the tanks used for liquid methionine storage and transportation differ from the tanks used for storage and transportation of dry methionine.[29]

Purchasers reported a range of cost estimates to switch between dry and liquid methionine. *** reported that it would cost less than $5,000 to switch, while *** estimated $10,000 and that it takes 1-2 weeks for 3 nutritionists to switch. *** estimated costs between $5,000 to $10,000, and *** estimated it would cost between $25,000 to $30,000. *** estimated it would need to invest $50,000 in equipment to switch between dry and liquid. *** reported that it had spent $100,000 for liquid system five years ago but would need to clean the pipe and tank to use it again after it had been idle for

[28] Hearing transcript, p. 108 (Ishige).
[29] *** purchaser questionnaire at III-35 and *** purchaser questionnaire at III-36.

three years. *** also reported that the product in the existing tank would need to be removed and flushed for liquid, and *** would need to change bin allocations to allow for dry product.

With respect to DLM versus MHA, *** reported that dry MHA is "mostly used in dairy and DLM cannot be fed to dairy cattle," while *** reported that MHA is only for dairy applications and DLM is for swine due to price. *** reported that it cannot interchange DLM and MHA in production because chelated minerals utilize DLM to bind together, improving availability of these trace minerals to animals. In contrast, *** reported that, with some formulation changes, its customers can switch back and forth between dry DLM and dry MHA, but that Novus historically positioned its dry MHA in the market against the higher-priced coated or protected bypass methionine sources versus trying to compete against dry DLM in monogastric diets. *** reported that it could make the switch in a few days with no cost, and *** reported that it would not cost anything.

Purchasers *** provided reasons for being able to switch between methionine of different activity levels. These responses stipulated that formulation change would be required to adjust for different activity levels in the same form of methionine, and that nutritionist specifications would be used to calculate the equivalent activity level.

Purchasers were asked how interchangeable different types of methionine were for their different applications; responses were also mixed. Purchasers reported the following interchangeability for dry 99% DLM versus dry 84% MHA: "completely" or "not at all" (6 each), "slightly" (3), or "moderately" (2). The majority of purchasers (8 of 19) reported that dry 99% DLM versus liquid 88% MHA or Liquid 88% MHA versus dry 84% MHA were "not at all interchangeable", however, 4 purchasers reported that they were "completely" interchangeable. Purchaser *** reported that its nutritionists will formulate feed to account for whatever product is being used, while *** reported that it conducts an evaluation of the cost per unit because the concentration of methionine in each type is not the same, although both types provide the requisite methionine. *** reported that there is some interchangeability but getting a customer to make these changes is difficult. *** similarly reported that methionine type depends on customer preference.

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for methionine were availability/supply continuity[30] (24 purchasers), price/cost (23), and quality/consistency (18), as shown in table II-6. Quality/consistency and availability/supply continuity were the most frequently cited first-most important factor (cited by 10 firms each), followed by price/cost (7 firms). Price/cost was the most frequently reported second important factor (9 firms), while availability/supply continuity was the most frequently reported third most important factor (8 firms).

Table II-6
Methionine: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
	Number of firms			
Availability / Supply / Dependability / Continuity	10	5	8	23
Price / Cost	6	9	7	22
Quality / Consistency	10	6	1	17
Supplier diversification	0	1	0	1
Competitive	0	0	2	2
Packaging	0	0	2	2
All other factors	1	4	7	NA

Note: Availability / Supply includes factors such as supply dependability and supply continuity.
Note: Other factors include customer service and a competitive market position.

Source: Compiled from data submitted in response to Commission questionnaires.

Most purchasers (18 of 28 responding) reported that they usually purchase the lowest-priced product, while eight purchasers reported that they sometimes purchase the lowest-priced product, two always purchase the lowest-priced product, and one never purchases the lowest-priced product (***).

The majority of purchasers (17 of 28) reported maintaining multiple supply sources between January 2018 and December 2020. The average reported number of suppliers since January 1, 2018 was 3, but purchasers reported purchasing from up to nine different sources. When asked about the importance of maintaining multiple supply sources, nine purchasers reported that it was very important, eight reported that it was important, two reported that it was moderately important, four reported that it was slightly important, and five reported that it was not important. *** reported that its company policy of maintaining at least two suppliers for each major ingredient was implemented after a ***

[30] Availability/supply continuity includes dependability.

*** also reported maintaining two to three suppliers by segment and cited *** as risks.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 15 factors in their purchasing decisions (table II-7). The factors rated as very important by more than half of responding purchasers were reliability of supply (28 purchasers), availability and quality meets industry standards (27 each), product consistency (25), price (23), delivery time (21), and bioefficacy[31] (15).

Table II-7
Methionine: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability	27	0	1
Bioefficacy	15	5	7
Delivery terms	13	12	1
Delivery time	21	7	0
Discounts offered	5	20	4
Minimum quantity requirements	9	7	12
Packaging	6	11	11
Payment terms	4	17	7
Price	23	5	0
Product consistency	25	3	0
Product range	1	14	12
Quality meets industry standards	27	1	0
Quality exceeds industry standards	11	15	1
Reliability of supply	28	0	0
Technical support/service	10	15	3
U.S. transportation costs	7	15	4

Source: Compiled from data submitted in response to Commission questionnaires.

Supplier certification

Twenty-one of 28 purchasers require their suppliers to become certified or qualified to sell methionine to their firm. Generally, purchasers reported that the time to qualify a new supplier ranged from 30 to 60 days.[32] One purchaser, ***, reported that foreign supplier Sichuan Hebang had not been certified yet, but was in the process of being certified.

[31] Bioefficacy is defined as "The product of the availability of a nutrient × its bioconversion to the active form." "bioefficacy." *Oxford Reference*; accessed April 20, 2021. https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095506867.

[32] Purchaser *** reported 90 to 120 days, and *** reported 44,391 days.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2018 (table II-8). The majority of purchasers (16 of 28) reported that they had changed suppliers since January 1, 2018. Specifically, *** reduced purchases from the U.S. because of changes in product mix. *** switched due to a lower price from Novus and *** after investigations were launched. *** dropped Adisseo because it "did not have the desire or ability to grow their DL-methionine supply" and increased purchases from Evonik out of its Mobile, Alabama plant to "supply its growing needs."[33] *** increased purchases from Japan because it "fed more birds."

Table II-8
Methionine: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Increased	Constant	Decreased	Fluctuated	Did Not Purchase
United States	7	5	4	4	3
France	2	2	1	1	10
Japan	8	5	1	2	7
Spain	3	2	1	1	11
All other sources	1	2	5	0	10
Sources unknown	2	0	0	1	12

Source: Compiled from data submitted in response to Commission questionnaires.

Importance of purchasing domestic product

Twenty-one responding purchasers reported that most or all of their purchases did not require purchasing U.S.-produced product. No purchasers reported that domestic product was required by law, whereas two purchasers (***) reported that domestic product was required by their customers and one purchaser (***) reported other preferences for domestic product. Reasons cited for preferring domestic product included product quality and a more consistent supply (reported by ***) and the result of an RFP (***).

[33] ***.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing methionine produced in the United States, France, Japan, Spain, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 15 factors (table II-9) for which they were asked to rate the importance. Most purchasers reported that methionine from all sources was comparable across all factors.

Table II-9
Methionine: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. France			U.S. vs. Japan			United States vs. Spain		
	S	C	I	S	C	I	S	C	I
Availability	1	9	3	3	13	2	0	10	1
Bioefficacy	0	10	1	1	13	0	0	11	0
Delivery terms	1	9	0	2	15	1	0	11	0
Delivery time	2	9	1	3	11	1	0	10	0
Discounts offered	0	10	0	0	12	1	0	11	0
Minimum quantity requirements	0	11	0	2	14	2	0	11	0
Packaging	1	10	0	0	18	0	0	11	0
Payment terms	0	10	1	0	17	1	0	10	1
Price	1	8	2	2	12	4	0	10	1
Product consistency	1	10	1	2	15	1	0	11	0
Product range	0	8	1	0	13	1	0	8	1
Quality meets industry standards	0	11	0	2	15	0	0	11	0
Quality exceeds industry standards	0	9	1	2	13	1	0	10	0
Reliability of supply	1	6	3	3	12	2	0	10	1
Technical support/service	2	9	1	6	10	3	0	9	2
U.S. transportation costs	0	10	0	0	13	2	0	10	0

Factor	France vs. Japan			France vs. Spain			Japan vs. Spain		
	S	C	I	S	C	I	S	C	I
Availability	0	9	2	0	7	0	0	6	0
Bioefficacy	0	10	0	0	7	0	1	5	0
Delivery terms	0	10	1	0	7	0	0	6	0
Delivery time	0	9	1	0	7	0	1	5	0
Discounts offered	0	10	0	0	6	0	0	5	0
Extension of credit	0	9	1	0	7	0	0	5	0
Minimum quantity requirements	0	9	1	0	6	0	1	4	0
Packaging	0	11	0	0	7	0	0	6	0
Price	1	9	1	0	7	0	0	4	1
Product consistency	0	11	0	0	7	0	1	5	0
Product range	0	10	0	0	6	0	1	4	0
Quality meets industry standards	0	11	0	0	7	0	0	6	0
Quality exceeds industry standards	0	10	0	0	6	0	0	5	0
Reliability of supply	1	6	3	0	7	0	1	3	1
Technical support/service	4	6	0	0	6	0	0	3	2
U.S. transportation costs	0	9	0	0	6	0	0	5	0

Table continued on next page.

Table II-9—Continued
Methionine: Purchasers' comparisons between U.S.-produced and imported product

Factor	United States vs. Nonsubject sources			France vs. Nonsubject sources			Japan vs. Nonsubject sources			Spain vs. Nonsubject sources		
	S	C	I	S	C	I	S	C	I	S	C	I
Availability	2	8	0	2	6	0	1	7	0	0	4	0
Bioefficacy	0	9	0	0	8	0	0	8	0	0	4	0
Delivery terms	1	8	1	1	7	0	2	6	0	0	4	0
Delivery time	1	8	1	1	7	0	2	6	0	0	4	0
Discounts offered	0	8	1	0	7	0	0	7	0	0	4	0
Minimum quantity requirements	0	7	1	0	7	0	1	7	0	0	4	0
Packaging	0	8	1	0	7	0	1	6	0	0	3	0
Payment terms	0	9	1	0	7	0	0	8	0	0	4	0
Price	1	7	2	1	7	0	1	6	1	0	4	0
Product consistency	0	9	1	0	8	0	1	7	0	0	4	0
Product range	0	6	1	0	7	0	0	7	0	0	2	1
Quality meets industry standards	0	8	1	0	8	0	1	7	0	0	4	0
Quality exceeds industry standards	0	7	1	0	7	0	1	6	0	0	3	0
Reliability of supply	1	8	1	1	7	0	2	5	0	0	4	0
Technical support/service	4	4	1	3	4	0	2	5	0	0	3	1
U.S. transportation costs	1	7	1	1	6	0	1	6	0	0	3	0

Note: A rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.
Note: S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

Comparison of U.S.-produced and imported methionine

In order to determine whether U.S.-produced methionine can generally be used in the same applications as imports from France, Japan, and Spain, U.S. producers, importers, and purchasers were asked whether methionine from different sources can always, frequently, sometimes, or never be used interchangeably. As shown in table II-10, both producers and most purchasers said methionine was always interchangeable between all sources, while most importers reported that they could sometimes be used interchangeably between all sources. *** reported that DLM from different sources are not identical.[34]

[34] ***.

Table II-10
Methionine: Interchangeability between methionine produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries: U.S. vs. France	***	***	***	***	1	0	2	0	14	0	2	0
U.S. vs. Japan	***	***	***	***	1	0	2	0	15	1	3	0
U.S. vs. Spain	***	***	***	***	1	0	2	0	10	1	1	1
Subject countries comparisons: France vs. Japan	***	***	***	***	1	0	2	0	11	1	1	0
France vs. Spain	***	***	***	***	1	0	1	1	8	1	0	1
Japan vs. Spain	***	***	***	***	1	0	2	0	7	1	0	1
Nonsubject countries comparisons: U.S. vs. nonsubject	***	***	***	***	1	0	2	0	8	2	4	0
France vs. nonsubject	***	***	***	***	1	0	2	0	6	3	2	0
Japan vs. nonsubject	***	***	***	***	1	0	2	0	6	3	2	0
Spain vs. nonsubject	***	***	***	***	1	0	2	0	5	2	1	1

Note: A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

As can be seen from table II-11, responding purchasers reported that domestically produced product always met minimum quality specifications. The vast majority of responding purchasers reported that imports from subject countries always met minimum quality specifications.

Table II-11
Methionine: Ability to meet minimum quality specifications, by source

Source	Always	Usually	Sometimes	Rarely or never
United States	17	1	0	0
France	11	2	0	0
Japan	15	2	0	0
Spain	11	1	0	1

Note: Purchasers were asked how often domestically produced or imported methionine meets minimum quality specifications for their own or their customers' uses.

Source: Compiled from data submitted in response to Commission questionnaires.

In addition, U.S. producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of methionine from the United States, subject, or nonsubject countries. As seen in table II-12, *** generally reported that differences other than price were either *** significant in sales of methionine between sources, while the majority of purchasers reported that differences other than price were always important for all sources except when comparing domestically produced methionine and methionine imported from Japan (eight purchasers each reported "sometimes". Purchaser *** reported that weather risk is a factor for domestically-produced methionine versus imported methionine due to the impact of hurricanes in the Gulf region, while methionine imported from France and Spain has superior technical support to methionine produced in the U.S., Japan, and other countries, and methionine imported from France and Spain has superior application and technical services compared to methionine imported from the U.S., Japan, and other countries. Importers' responses were mixed.

Table II-12
Methionine: Significance of differences other than price between methionine produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries: U.S. vs. France	***	***	***	***	1	1	0	1	7	1	4	6
U.S. vs. Japan	***	***	***	***	1	2	0	0	7	0	8	5
U.S. vs. Spain	***	***	***	***	1	1	0	1	7	0	6	3
Subject countries comparisons: France vs. Japan	***	***	***	***	1	2	0	0	5	0	4	5
France vs. Spain	***	***	***	***	2	0	0	1	5	0	3	3
Japan vs. Spain	***	***	***	***	1	2	0	0	5	0	3	3
Nonsubject countries comparisons: U.S. vs. nonsubject	***	***	***	***	1	2	0	0	6	0	6	3
France vs. nonsubject	***	***	***	***	1	2	0	0	5	0	4	3
Japan vs. nonsubject	***	***	***	***	1	1	0	1	5	0	4	3
Spain vs. nonsubject	***	***	***	***	2	1	0	0	5	0	3	2

Note: A = Always, F = Frequently, S = Sometimes, N = Never.

Source: Compiled from data submitted in response to Commission questionnaires.

Elasticity estimates

This section discusses elasticity estimates; no comments were received in parties' posthearing briefs.

U.S. supply elasticity

The domestic supply elasticity for methionine measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of methionine. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced methionine. Analysis of these factors above indicates that the U.S. industry has the ability to moderately increase or decrease shipments to the U.S. market; an estimate in the range of 3 to 6 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for methionine measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of methionine. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the methionine in the production of any downstream products. Based on the available information, the aggregate demand for methionine is likely to be very inelastic; a range of -0.2 to -0.4 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[35] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/discounts/promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced methionine and imported methionine differs between the segments of the market. The elasticity of substitution between U.S.-produced methionine and imported methionine for DLM and MHA is likely to be in the range of 3 to 6.

[35] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

Elasticities of substitution between U.S.-produced and imported DLM and between U.S. produced and imported MHA would likely be on the higher end of the range, while elasticities of substitution between U.S.-produced MHA and imported DLM and between U.S.-produced produced DLM and imported MHA would likely be on the lower end of the range.

Part III: U.S. producers' production, shipments, and employment

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the dumping margins was presented in *Part I* of this report and information on the volume and pricing of imports of the subject merchandise is presented in *Part IV* and *Part V*. Information on the other factors specified is presented in this section and/or *Part VI* and (except as noted) is based on the questionnaire responses of two firms that accounted for *** of U.S. production of methionine during 2020.

U.S. producers

The Commission issued a U.S. producers questionnaire to two firms, Evonik and Novus, based on information contained in the petitions. Both firms provided usable data on their operations. Staff believes that these responses represent *** U.S. production of methionine in 2020. Table III-1 lists U.S. producers of methionine, their production locations, positions on the petitions, and shares of total production.

Table III-1
Methionine: U.S. producers of methionine, their positions on the petitions, production locations, and shares of reported production, 2020

Firm	Position on petitions	Production location(s)	Share of production (percent)
Evonik	***	Theodore, AL	***
Novus	Petitioner	Alvin, Texas (Chocolate Bayou) Little Rock, Arkansas	***
Total			***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-2 presents information on U.S. producers' ownership, related and/or affiliated firms. No responding U.S. producer is related to a producer/exporter of methionine in France, Japan, or Spain. Novus is related to Mitsui & Co. Ltd ("Mitsui") and Nippon Soda Co., Ltd. ("Nippon Soda"), conglomerates in Japan that have chemical product businesses.[1] Mitsui and Nippon Soda acquired a controlling interest in Novus in 1991.[2] Evonik Corporation is a subsidiary of Evonik AG, which is based in Germany.[3] ***.

Table III-2
Methionine: U.S. producers' ownership, related and/or affiliated firms

Item / Firm	Firm Name	Affiliated/Ownership
Ownership:		
***	***	***
***	***	***
***	***	***
***	***	***
Related producers:		
***	***	***
***	***	***
***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-3 presents U.S. producers' reported changes in operations since January 1, 2018. In November 2017, Novus announced that it would invest $360 million to build a plant on the Ineos Nitriles property south of Bloomington, Texas.[4] However, it was announced in April 2019 that Novus cancelled the project.[5] Representatives from Novus testified that an unprecedented level of construction of natural gas, petroleum, and plastic production facilities

[1] *Novus History*, https://www.novusint.com/en-us/About/History, retrieved August 18, 2020.
[2] Ibid.
[3] *Evonik*, https://corporate.evonik.com/en/company/locations/north-america, retrieved August 20, 2020
[4] *Novus Cancels Plans to Build Multimillion-Dollar Plant in Calhoun County* https://www.victoriaadvocate.com/counties/calhoun/novus-cancels-plans-to-build-multimillion-dollar-plant-in-calhoun-county/article_2320323a-683e-11e9-9323-e3bd92c57551.html, retrieved August 13, 2020.
[5] Ibid.

in the Gulf Coast and construction costs made it uneconomical for Novus to continue the project.[6] ***.

Table III-3
Methionine: U.S. producers' reported changes in operations, since January 1, 2018

Item / Firm	Reported changed in operations
Expansions:	
***	***
Other:	
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. production, capacity, and capacity utilization

Table III-4 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. Novus and Evonik *** in their production capacities from 2018 to 2020, *** short tons, respectively. Their collective production decreased each year during 2018-2020, ending *** percent lower in 2020 than in 2018. Novus's production *** during 2018-20, ending *** percent *** in 2020 than in 2019. Conversely, Evonik's production *** in each year during 2018-20, ending *** percent *** in 2020 than in 2018. Since *** accounted for *** of overall production in the United States, the decrease in the responding U.S. producers' collective production reflects *** operations. U.S. producers' capacity utilization decreased from *** percent in 2018 to *** percent in 2020. Novus's capacity utilization *** in each year during 2018-2020, from *** percent to *** percent, while Evonik's capacity utilization *** in each year, from *** percent in 2018 to *** percent in 2020.[7]

[6] Hearing transcript, p. 95 (Khalaf).
[7] Evonik noted that ***. Email from ***, April 6, 2021.

Table III-4
Methionine: U.S. producers' production, capacity, and capacity utilization, 2018-20

Item	Calendar year		
	2018	2019	2020
	Capacity (short tons)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Production (short tons)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Capacity utilization (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Share of production (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-1
Methionine: U.S. producers' production, capacity, and capacity utilization, 2018-20

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

***.

U.S. producers' U.S. shipments and exports

Table III-5 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. shipments accounted for a slight majority of total shipments in each year during 2018-20.[8] U.S. producers' U.S. shipments increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018. Evonik's U.S. shipments *** in every year during 2018-20, ending *** percent higher in 2020 than in 2018. Novus's U.S. shipments ***, *** by *** percent from 2018 to 2019, but then *** by *** percent from 2019 to 2020, ending *** percent *** in 2020 than in 2018. The value of U.S. producers' U.S. shipments decreased in each year during 2018-20, ending *** percent lower in 2020 than in 2018, with both firms reporting lower values for their shipments in 2020 than in 2018.

Reflecting the increase in the quantity of U.S. producers' U.S. shipments and the decrease in the value of their U.S. shipments, the average unit value of U.S. producers' U.S. shipments decreased in each year during 2018-20, from $*** per short ton in 2018 to $*** per short ton in 2020. The unit value of Novus's U.S. shipments *** during 2018-20, from $*** per short ton in 2018 to $*** per short ton in 2020. The unit value of Evonik's U.S. shipments *** during 2018-20, from $*** per short ton in 2018 to $*** per short ton in 2020.

[8] ***.

***. Part IV and appendix E present data on U.S. producers' U.S. shipments of methionine by product type during 2018-20.

Table III-5
Methionine: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. shipments: Evonik	***	***	***
U.S. shipments: Novus	***	***	***
U.S. shipments: All producers	***	***	***
Export shipments	***	***	***
Total shipments	***	***	***
	Value (1,000 dollars)		
U.S. shipments: Evonik	***	***	***
U.S. shipments: Novus	***	***	***
U.S. shipments: All producers	***	***	***
Export shipments	***	***	***
Total shipments	***	***	***
	Unit value (dollars per short ton)		
U.S. shipments: Evonik	***	***	***
U.S. shipments: Novus	***	***	***
U.S. shipments: All producers	***	***	***
Export shipments	***	***	***
Total shipments	***	***	***
	Share of quantity (percent)		
U.S. shipments: Evonik	***	***	***
U.S. shipments: Novus	***	***	***
U.S. shipments: All producers	***	***	***
Export shipments	***	***	***
Total shipments	***	***	***
	Share of value (percent)		
U.S. shipments: Evonik	***	***	***
U.S. shipments: Novus	***	***	***
U.S. shipments: All producers	***	***	***
Export shipments	***	***	***
Total shipments	***	***	***

Note: Due to rounding, percentages may not add up to 100 percent.

Source: Compiled from data submitted in response to Commission questionnaires.

By quantity, export shipments accounted for at least *** percent of U.S. producers' total shipments during 2018-20. U.S. producers' export shipments, by quantity, increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018.[9] The quantity of Novus's export shipments *** during 2018-20, ending *** percent *** in 2020 than in 2018. The quantity of Evonik's export shipments ***, increasing by *** percent from 2018 to 2019 but then decreasing by *** percent from 2019 to 2020, ending *** percent lower in 2020 than in 2018. The value of U.S. producers' export shipments decreased in each year, ending *** percent lower in 2020 than in 2018.

U.S. producers' inventories

Table III-6 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments**.** U.S. producers' end-of-period inventories decreased by *** percent during 2018-20, with the majority of the decrease occurring from 2019 to 2020.[10] The ratio of U.S. producers' end-of-period inventories to their production decreased from *** percent in 2018 to *** percent in 2020. The ratio of

[9] ***. ***.

In the preliminary phase of these investigations, ***. Email from ***, August 19, 2020; email from ***, March 30, 2021; and email from ***, March 31, 2021.

[10] The decrease in U.S. producers' end-of-period inventories is largely driven by ***. ***. ***. Novus maintains that the quantity of inventories at the end of 2018 was based on projections of increased sales. However, due to sales failing to meet projections in 2019 and 2020, Novus reduced its inventories in order to maintain the required ratio of inventories on hand relative to sales. In 2020, Novus ***. Petitioner's posthearing brief, p. 29, hearing transcript, pp. 76-77 and 102 (Galo) (Hux), and petitioner's producer questionnaire response, section II-7.

U.S. producers' end-of-period inventories to their U.S. shipments decreased from *** percent in 2018 to *** percent in 2020.

Table III-6
Methionine: U.S. producers' end-of-period inventories, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. producers' end-of-period inventories	***	***	***
	Ratio (percent)		
Ratio of inventories to.-- U.S. production	***	***	***
U.S. shipments	***	***	***
Total shipments	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers' imports and purchases

No responding U.S. producer imported methionine from subject sources since 2018 nor did they purchase any methionine from U.S. importers. However, ***. U.S. producers' imports of methionine are presented in table III-7.

Table III-7
Methionine: U.S. producers' U.S. production and imports, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
Evonik's U.S. production	***	***	***
Evonik's U.S. imports from.-- Nonsubject sources (Netherlands)	***	***	***
	Ratio (percent)		
Evonik's ratio to U.S. production of imports from.-- Nonsubject sources (Netherlands)	***	***	***
	Narrative		
Evonik's reason for importing	***		

Source: Compiled from data submitted in response to Commission questionnaires and email from ***, April 6, 2021.

U.S. employment, wages, and productivity

Table III-8 presents U.S. producers' employment-related data. The number of production related workers ("PRWs") decreased in each year during 2018-20, ending *** percent lower in 2020 than in 2018. ***. U.S. producers' productivity increased in each year during 2018-20. Total hours worked by PRWs decreased while hours worked per PRW increased during 2018-20. Hourly wages increased while unit labor costs decreased, overall, during 2018-20.

Table III-8
Methionine: U.S. producers' employment-related data, 2018-20

Item	Calendar year		
	2018	2019	2020
Production and related workers (PRWs) (number)	***	***	***
Total hours worked (1,000 hours)	***	***	***
Hours worked per PRW (hours)	***	***	***
Wages paid ($1,000)	***	***	***
Hourly wages (dollars per hour)	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***
Unit labor costs (dollars per short ton)	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part IV: U.S. imports, apparent U.S. consumption, and market shares

U.S. importers

The Commission issued importer questionnaires to 83 firms believed to be importers of methionine, as well as to all U.S. producers of methionine.[1] Usable questionnaire responses were received from five companies, representing *** U.S. imports from France, *** U.S. imports from Japan, and *** U.S. imports from Spain in 2020 under HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600.[2] Table IV-1 lists all responding U.S. importers of methionine from France, Japan, Spain, and other sources, their locations, and their shares of U.S. imports, in 2020.

Table IV-1
Methionine: U.S. importers, their headquarters, and share of total imports by source, 2020

Firm	Headquarters	Share of imports by source (percent)					
		France	Japan	Spain	Subject sources	Nonsubject sources	All import sources
Sumitomo	New York, NY	***	***	***	***	***	***
Adisseo USA	Alpharetta, GA	***	***	***	***	***	***
Evonik	Parsippany, NJ	***	***	***	***	***	***
Sunrise	Chino, CA	***	***	***	***	***	***
Origination	Woodbury, MN	***	***	***	***	***	***
Total		***	***	***	***	***	***

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

[1] The Commission issued questionnaires to those firms identified in the petitions, along with firms that, based on a review of third-party data, may have accounted for more than one percent of total imports under HTS subheading 2930.40.00 and 2930.90.46 in 2020.

[2] The Commission did not receive responses to the U.S. importers questionnaire from two firms who provided responses to the Commission's questionnaire in the preliminary phase of these investigations: ***. In the preliminary phase of these investigations, ***. One firm that provided a response to the Commission's questionnaire in the preliminary phase of these investigations, ***, reported that ***. In the preliminary phase of these investigations, ***.

U.S. imports

Table IV-2 and figure IV-1 presents data for U.S. imports of methionine from France, Japan, Spain, and all other sources.

Table IV-2
Methionine: U.S. imports by source, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. imports from.--			
France	7,298	5,557	5,901
Japan	12,225	17,861	30,893
Spain	14,198	37,860	43,263
Subject sources	33,722	61,278	80,057
China	25,280	3,936	240
All other sources	3,593	5,118	5,552
Nonsubject sources	28,873	9,054	5,792
All import sources	62,594	70,332	85,849
	Value (1,000 dollars)		
U.S. imports from.--			
France	17,102	11,553	11,474
Japan	26,680	31,962	52,135
Spain	27,540	62,666	62,651
Subject sources	71,322	106,181	126,259
China	54,128	10,183	3,429
All other sources	7,121	9,249	9,539
Nonsubject sources	61,249	19,432	12,968
All import sources	132,571	125,613	139,227
	Unit value (dollars per short ton)		
U.S. imports from.--			
France	2,343	2,079	1,944
Japan	2,182	1,789	1,688
Spain	1,940	1,655	1,448
Subject sources	2,115	1,733	1,577
China	2,141	2,587	14,296
All other sources	1,982	1,807	1,718
Nonsubject sources	2,121	2,146	2,239
All import sources	2,118	1,786	1,622

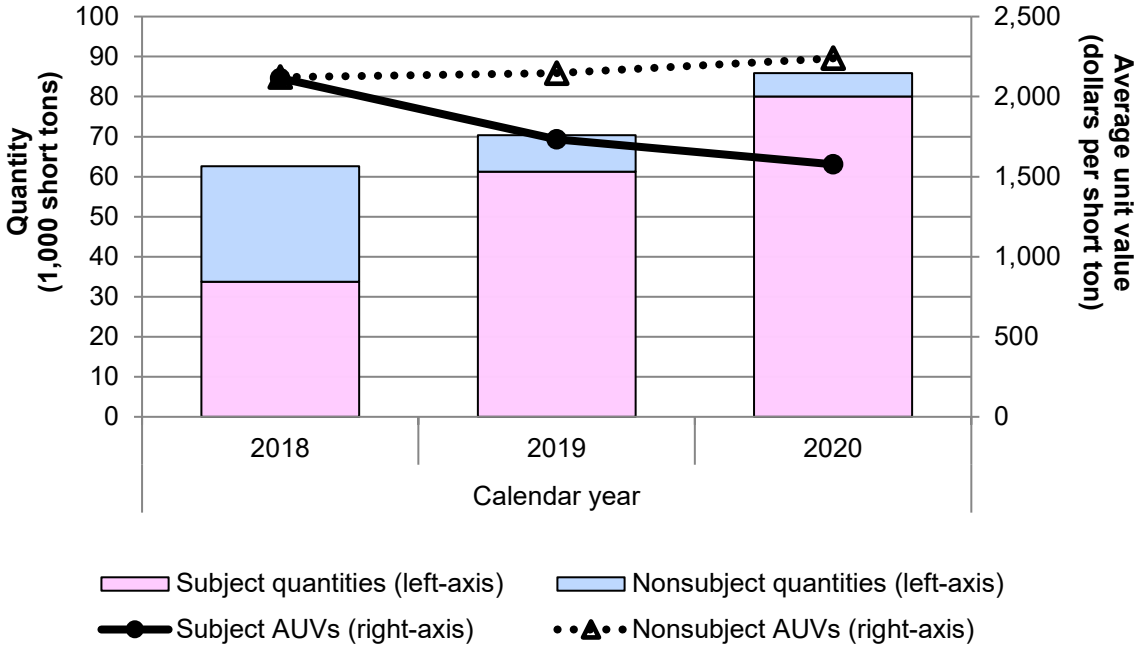
Table continued on next page.

Table IV-2—Continued
Methionine: U.S. imports by source, 2018-20

Item	Calendar year		
	2018	2019	2020
	Share of quantity (percent)		
U.S. imports from.--			
France	11.7	7.9	6.9
Japan	19.5	25.4	36.0
Spain	22.7	53.8	50.4
Subject sources	53.9	87.1	93.3
China	40.4	5.6	0.3
All other sources	5.7	7.3	6.5
Nonsubject sources	46.1	12.9	6.7
All import sources	100.0	100.0	100.0
	Share of value (percent)		
U.S. imports from.--			
France	12.9	9.2	8.2
Japan	20.1	25.4	37.4
Spain	20.8	49.9	45.0
Subject sources	53.8	84.5	90.7
China	40.8	8.1	2.5
All other sources	5.4	7.4	6.9
Nonsubject sources	46.2	15.5	9.3
All import sources	100.0	100.0	100.0
	Ratio to U.S. production		
U.S. imports from.--			
France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

Figure IV-1
Methionine: U.S. import quantities and average unit values, 2018-20



Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

By quantity, U.S. imports from subject sources accounted for a slight majority of total U.S. imports in 2018, but a vast majority in 2019 and 2020. Subject imports' share of total U.S. imports, by quantity, increased during 2018-20 as the share of total imports held by U.S. imports from China decreased. By quantity, U.S. imports from France accounted for an increasingly smaller share of total U.S. imports during 2018-20 (11.7 percent in 2018, 7.9 percent in 2019, and 6.9 percent in 2020). Conversely, U.S. imports from Japan, by quantity, accounted for an increasingly larger share of total U.S. imports during 2018-20 (19.5 percent in 2018, 25.4 percent in 2019, and 36.0 percent in 2020). By quantity, U.S. imports from Spain accounted for the largest share of U.S. imports among subject sources in 2018 and the largest among all sources in 2019 and 2020 (22.7 percent in 2018, 53.8 percent in 2019, and 50.4 percent in 2020).

During 2018-20, the quantity of U.S. imports from France fluctuated year to year, decreasing by 23.9 percent from 2018 to 2019, but then increasing by 6.2 percent from 2019 to 2020, ending 19.1 percent lower in 2020 than in 2018. U.S. imports from Japan, by quantity, increased in each year during 2018-2020, ending 152.7 percent higher in 2020 than in 2018. The quantity of U.S. imports from Spain increased by an even greater rate during 2018-20 (204.7 percent).[3] Overall, the quantity of subject imports increased by 137.4 percent from 2018 to 2020, with the change largely driven by the increase in U.S. imports from Spain between 2018 and 2019 and the increase in U.S. imports from Japan between 2019 and 2020.

By value, U.S. imports from France decreased by 32.9 percent from 2018 to 2020. The value of U.S. imports from Japan increased by 95.4 percent from 2018 to 2020. The value of U.S. imports from Spain increased by 127.5 percent from 2018 to 2020. Overall, the value of subject imports increased by 77.0 percent from 2018 to 2020.

The unit value of U.S. imports from France decreased in each year during 2018-20 from $2,343 per short ton in 2018 to $1,944 per short ton in 2020. The unit value of U.S. imports from Japan also decreased in each year during 2018-20 from $2,182 per short ton in 2018 to $1,688 per short ton in 2020. Exhibiting the same trend as the unit values of U.S. imports from France and from Japan, the unit value of imports from Spain decreased in each year during 2018-20 from $1,940 per short ton in 2018 to $1,448 per short ton in 2020. Overall, the unit value of subject imports decreased from $2,115 per short ton in 2018 to $1,577 per short ton in 2020.

Overall, U.S. imports from nonsubject sources, by quantity, accounted for a near majority of total U.S. imports in 2018 (46.1 percent), but accounted for a small minority in 2019 and 2020 (12.9 percent and 6.7 percent, respectively). U.S. imports from China, by quantity, accounted for the largest share of total U.S. imports in 2018 (40.4 percent), but accounted for a smaller share than U.S. imports from France, Japan, and Spain in 2019 and a negligible share in 2020.

[3] Adisseo USA, which accounted for *** U.S. imports from Spain, noted that ***. Email from ***, April 5, 2021.

U.S. imports from nonsubject sources, by quantity, decreased by 79.9 percent from 2018 to 2020, with the majority of the decrease occurring from 2018 to 2019. The decrease in U.S. imports from nonsubject sources, particularly from 2018 to 2019, was driven by U.S. imports from China, which decreased by 84.4 percent from 2018 to 2019. The decrease in U.S. imports from China during this period corresponds with the Section 301 duties that were imposed on U.S. imports from China. In September 2018, 10 percent ad valorem duties were placed on U.S. imports of methionine from China as part of Section 301 duties.[4] In May 2019, those duties were increased to 25 percent ad valorem.[5]

Critical circumstances

On May 17, 2021, Commerce issued its final determination that critical circumstances exist in the AD investigation with regard to imports from France of methionine from Adisseo France, but do not exist for all other exporters and producers in France.[6] On March 4, 2021, Commerce issued its preliminary determination that critical circumstances exist in the AD investigation of imports from Japan of methionine with respect to Sumitomo Chemical Company, Ltd and for all other producers and exporters in Japan.[7] On March 4, 2021, Commerce issued its preliminary determination that critical circumstances do not exist in the AD investigation with regard to imports from Spain.[8] In these investigations, if both Commerce and the Commission make affirmative final critical circumstances determinations, certain subject imports may be subject to antidumping duties retroactive by 90 days from March 4, 2021, the effective date of Commerce's preliminary affirmative LTFV determinations.

Table IV-3 and figure IV-2 present data on U.S. imports from France that are subject to Commerce's final AD critical circumstances determination, while table IV-4 presents U.S. importer's inventories of U.S. imports from France subject to Commerce's final AD critical circumstances determination. Table IV-5 and figure IV-3 present data on U.S. imports from

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[4] 83 FR 47974, September 21, 2018.

[5] 84 FR 20459, May 9, 2019.

[6] 86 FR 26697, May 17, 2021, referenced in app. A. When petitioners file timely allegations of critical circumstances, Commerce examines whether there is a reasonable basis to believe or suspect that (1) either there is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise, or the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV and that there was likely to be material injury by reason of such sales; and (2) there have been massive imports of the subject merchandise over a relatively short period.

[7] 86 FR 12625, March 4, 2021.

[8] 86 FR 12614, March 4, 2021.

Japan that are subject to Commerce's preliminary AD critical circumstances determination, while table IV-6 presents U.S. importers' inventories of U.S. imports from Japan subject to Commerce's preliminary AD critical circumstances determination.

Table IV-3
Methionine: U.S. imports from France subject to Commerce's final AD critical circumstances determination, February 2020 to January 2021

Month	Actual monthly quantity (short tons)	Outwardly cumulative subtotals (short tons)	Percentage change from comparable period (percent)
2020.-- February	***	***	
March	***	***	
April	***	***	
May	***	***	
June	***	***	
July	***	***	
Petition file date: July 29, 2020			
August	***	***	▲***
September	***	***	▲***
October	***	***	▲***
November	***	***	▲***
December	***	***	▲***
2021.-- January	***	***	▲***

Note: The percent increase or (decrease) is over the comparable pre-petition period.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-2
Methionine: U.S. imports from France subject to Commerce's final AD critical circumstances, February 2020 to January 2021

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-4
Methionine: U.S. importers' inventories of imports from France subject to Commerce's final AD critical circumstances determination, July 2020 to February 2021

Month	Adisseo France	Other importers (France)	Total
Month ending in.-- July 31, 2020	***	***	***
August 31, 2020	***	***	***
September 30, 2020	***	***	***
October 31, 2020	***	***	***
November 30, 2020	***	***	***
December 31, 2020	***	***	***
January 31, 2021	***	***	***
February 28, 2021	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

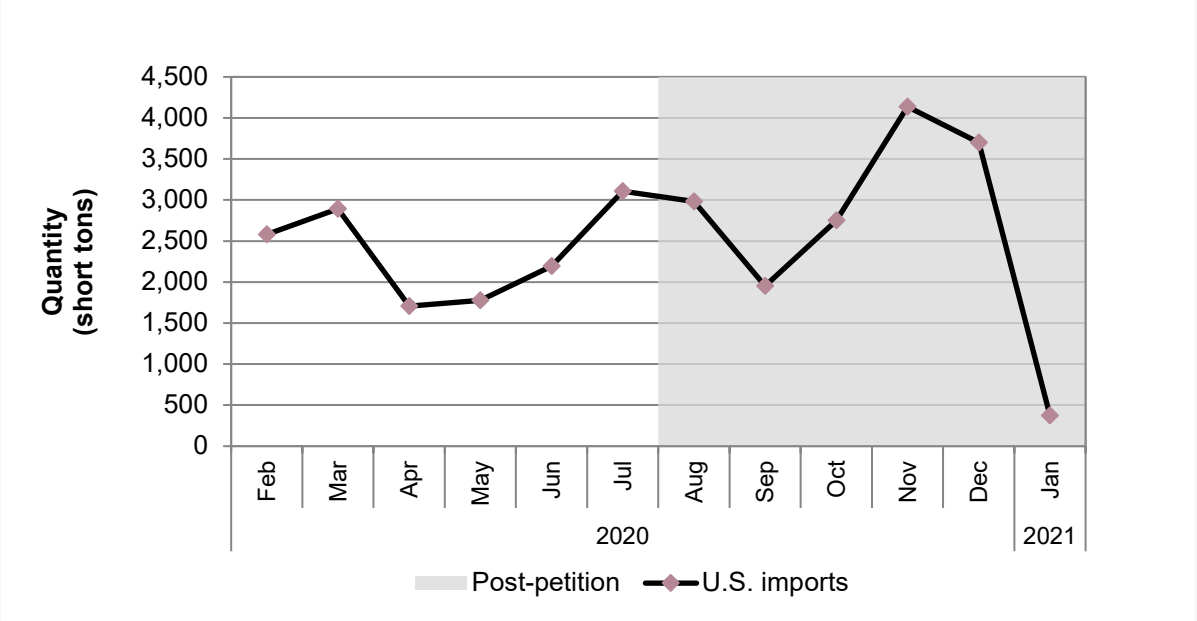
Table IV-5
Methionine: U.S. imports from Japan subject to Commerce's preliminary AD critical circumstances determination, February 2020 to January 2021

Month	Actual monthly quantity (short tons)	Outwardly cumulative subtotals (short tons)	Percentage change from comparable period (percent)
2020.--			
February	2,581	14,260	
March	2,893	11,680	
April	1,707	8,786	
May	1,777	7,079	
June	2,195	5,302	
July	3,106	3,106	
Petition file date: July 29, 2020			
August	2,981	2,981	▼(4.0)
September	1,951	4,932	▼(7.0)
October	2,752	7,684	▲8.5
November	4,137	11,821	▲34.5
December	3,699	15,520	▲32.9
2021.--			
January	374	15,893	▲11.5

Note: The percent increase or (decrease) is over the comparable pre-petition period.

Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600.

Figure IV-3
Methionine: U.S. imports from Japan subject to Commerce's preliminary AD critical circumstances determination, February 2020 to January 2021



Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600.

Table IV-6
Methionine: U.S. importers' inventories of imports from Japan subject to Commerce's preliminary AD critical circumstances determination, July 2020 to February 2021

Month	Sumitomo	Other importers (Japan)	Total
Month ending in.--			
July 31, 2020	***	***	***
August 31, 2020	***	***	***
September 30, 2020	***	***	***
October 31, 2020	***	***	***
November 30, 2020	***	***	***
December 31, 2020	***	***	***
January 31, 2021	***	***	***
February 28, 2021	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[9] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[10] By quantity, imports from France, Japan, and Spain accounted for 7.1 percent, 26.9 percent, and 63.8 percent of total imports of methionine, respectively, during the twelve months preceding the petitions. Table IV-7 presents the share of total U.S. imports, by quantity, attributable to France, Japan, Spain, and nonsubject sources during the most recent 12-month period preceding the petitions.

[9] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[10] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Table IV-7
Methionine: U.S. imports in the twelve-month period preceding the filing of the petitions, July 2019 through June 2020

Item	July 2019 through June 2020	
	Quantity (short tons)	Share quantity (percent)
U.S. imports from.--		
France	5,394	7.1
Japan	20,322	26.9
Spain	48,206	63.8
Subject sources	73,921	97.8
Nonsubject sources	1,658	2.2
All import sources	75,579	100.0

Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

Cumulation considerations

In assessing whether imports should be cumulated, the Commission determines whether U.S. imports from the subject countries compete with each other and with the domestic like product and has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility

Table IV-8 and figure IV-4 present data on U.S. producers' and U.S. importers' U.S. shipments of methionine by product type.[11] In 2020, the methionine hydroxy analog ("MHA") accounted for the vast majority of U.S. producers' total U.S. shipments (*** percent) and *** U.S. shipments of imports from Spain.[12] Most of U.S. producers' U.S. shipments and U.S. shipments of imports from Spain of the methionine hydroxy analog were in liquid form at the 88 percent activity level. DL methionine ("DLM") in solid form at the 99 percent activity level accounted for *** U.S. shipments of imports from France and the vast majority (*** percent) of U.S. shipments of imports from Japan in 2020. U.S. producers accounted for the vast majority of all U.S. shipments of all types of methionine in 2020.

Table IV-8
Methionine: U.S. producers' and U.S. importers' U.S. shipments by product type, 2020

Item	U.S. producers	U.S. importers						U.S. producers and U.S. importers
		France	Japan	Spain	Subject sources	Nonsubject sources	All import sources	
	Quantity (short tons)							
U.S. shipments.-- DLM, solid, 99% activity level	***	***	***	***	***	***	***	***
MHA, solid, 84% activity level	***	***	***	***	***	***	***	***
MHA, liquid, 88% activity level	***	***	***	***	***	***	***	***
Other product types	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Share across (percent)							
U.S. shipments.-- DLM, solid, 99% activity level	***	***	***	***	***	***	***	***
MHA, solid, 84% activity level	***	***	***	***	***	***	***	***
MHA, liquid, 88% activity level	***	***	***	***	***	***	***	***
Other product types	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Share down (percent)							
U.S. shipments.-- DLM, solid, 99% activity level	***	***	***	***	***	***	***	***
MHA, solid, 84% activity level	***	***	***	***	***	***	***	***
MHA, liquid, 88% activity level	***	***	***	***	***	***	***	***
Other product types	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

[11] See Part I for additional information on the different types of methionine. U.S. producers' and U.S. importers' U.S. shipments of methionine by product type during 2018-20 are presented in appendix D.

[12] As discussed in part III, ***.

Figure IV-4
Methionine: U.S. producers' and U.S. importers' U.S. shipments by product type, 2020

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Geographical markets

According to official U.S. import statistics, the majority of U.S. imports from France and Spain entered the United States in 2020 through ports located in the East while the majority of U.S. imports from Japan entered the United States in 2020 through ports located in the North.[13] Table IV-9 presents data on U.S. imports of methionine by border of entry in 2020.

[13] The top three ports of entry for U.S. imports from France classified under HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600 in 2020 were Savannah, Georgia, St. Louis, Missouri, and New York, New York. The top three ports of entry for U.S. imports from Japan classified under HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600 in 2020 were Chicago, Illinois, Minneapolis, Minnesota, and Los Angeles, California. The top three ports of entry for U.S. imports from Spain classified under HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600 were Savannah, Georgia, Houston-Galveston, Texas, and Norfolk, Virginia.

Table IV-9
Methionine: U.S. imports by border of entry, 2020

Item	Border of entry				
	East	North	South	West	All borders
	Quantity (short tons)				
U.S. imports from.--					
France	4,213	1,322	113	253	5,901
Japan	908	18,363	2,832	8,791	30,893
Spain	35,956	179	7,128	---	43,263
Subject sources	41,077	19,863	10,073	9,044	80,057
Nonsubject sources	78	3,297	2,008	409	5,792
All import sources	41,155	23,160	12,080	9,454	85,849
	Share across (percent)				
U.S. imports from.--					
France	71.4	22.4	1.9	4.3	100.0
Japan	2.9	59.4	9.2	28.5	100.0
Spain	83.1	0.4	16.5	---	100.0
Subject sources	51.3	24.8	12.6	11.3	100.0
Nonsubject sources	1.3	56.9	34.7	7.1	100.0
All import sources	47.9	27.0	14.1	11.0	100.0
	Share down (percent)				
U.S. imports from.--					
France	10.2	5.7	0.9	2.7	6.9
Japan	2.2	79.3	23.4	93.0	36.0
Spain	87.4	0.8	59.0	---	50.4
Subject sources	99.8	85.8	83.4	95.7	93.3
Nonsubject sources	0.2	14.2	16.6	4.3	6.7
All import sources	100.0	100.0	100.0	100.0	100.0

Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

Presence in the market

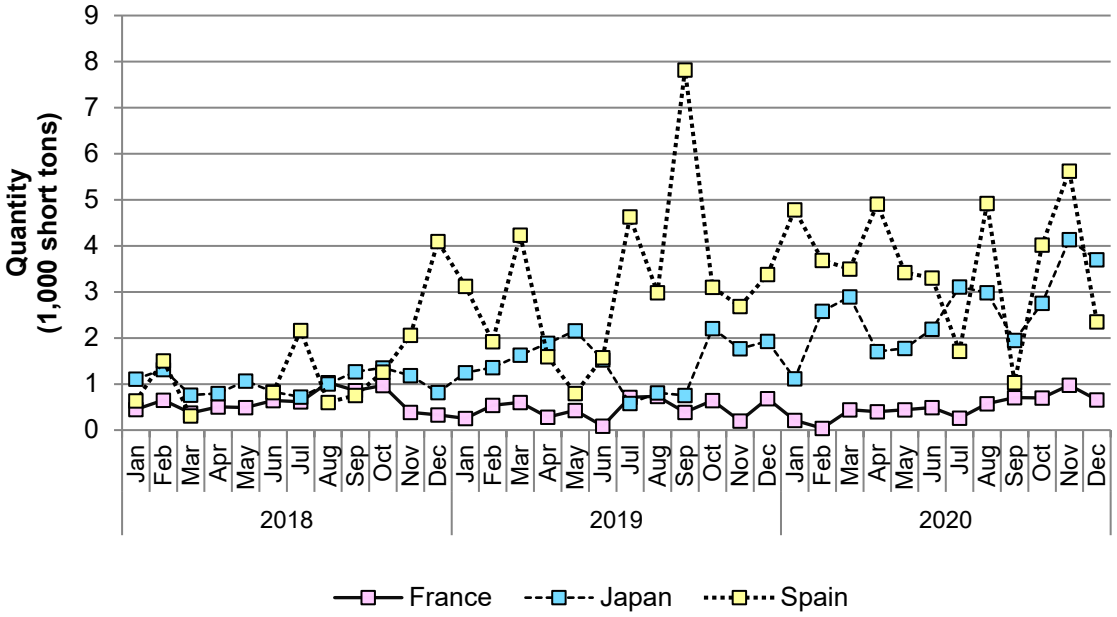
Tables IV-10 and figures IV-5 and IV-6 present monthly data for subject and nonsubject imports during January 2018-December 2020. U.S. imports of methionine from France and Japan were present in each month during January 2018-December 2020. U.S. imports from Spain were present in each month during the same period, except for April and May 2018, with peaks occurring without a clear pattern.

Table IV-10
Methionine: U.S. imports by month, January 2018 through December 2020

U.S. imports	France	Japan	Spain	Subject sources	China	All other sources	Nonsubject sources	All import sources
	Quantity (short tons)							
2018.--								
January	451	1,108	633	2,192	2,846	477	3,323	5,515
February	653	1,315	1,503	3,471	2,633	91	2,724	6,195
March	369	764	309	1,442	2,665	630	3,295	4,738
April	505	795	---	1,300	3,442	295	3,737	5,037
May	491	1,070	---	1,561	2,801	136	2,937	4,498
June	640	833	818	2,291	2,069	579	2,648	4,939
July	613	719	2,163	3,495	581	468	1,049	4,544
August	1,032	1,002	603	2,636	2,098	293	2,391	5,027
September	858	1,271	755	2,883	1,968	176	2,144	5,027
October	967	1,351	1,260	3,577	3,596	112	3,708	7,285
November	388	1,183	2,063	3,634	48	157	205	3,839
December	332	814	4,093	5,238	533	178	711	5,949
2019.--								
January	256	1,250	3,125	4,631	711	867	1,578	6,208
February	537	1,358	1,922	3,818	851	1,768	2,619	6,437
March	604	1,627	4,238	6,468	306	1,372	1,678	8,146
April	280	1,888	1,597	3,765	13	836	849	4,614
May	429	2,160	795	3,383	1,429	---	1,429	4,812
June	87	1,524	1,576	3,187	576	223	799	3,986
July	712	578	4,629	5,919	6	2	8	5,927
August	736	812	2,985	4,533	13	9	22	4,555
September	388	757	7,822	8,967	5	30	34	9,001
October	644	2,207	3,104	5,955	10	10	20	5,975
November	202	1,770	2,686	4,658	15	---	15	4,673
December	683	1,930	3,380	5,994	2	0	2	5,997
2020.--								
January	216	1,113	4,782	6,111	15	0	15	6,126
February	40	2,581	3,686	6,306	15	220	236	6,542
March	444	2,893	3,498	6,835	33	1	34	6,869
April	402	1,707	4,911	7,020	27	---	27	7,047
May	439	1,777	3,420	5,636	31	437	468	6,104
June	489	2,195	3,302	5,986	36	740	776	6,762
July	262	3,106	1,711	5,079	12	372	384	5,464
August	575	2,981	4,924	8,481	18	321	339	8,819
September	707	1,951	1,032	3,689	18	411	429	4,118
October	697	2,752	4,020	7,469	16	837	853	8,322
November	978	4,137	5,623	10,738	8	1,716	1,724	12,461
December	654	3,699	2,354	6,706	10	497	507	7,213

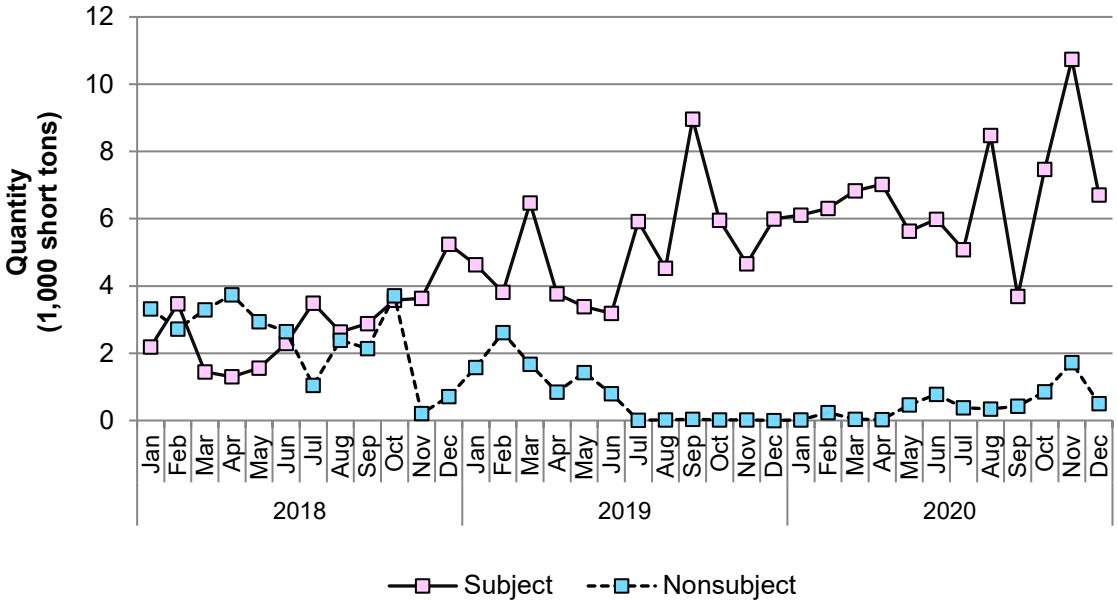
Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

Figure IV-5
Methionine: U.S. imports from individual subject sources, by month, January 2018 through December 2020



Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

Figure IV-6
Methionine: U.S. imports from aggregated subject and nonsubject sources, by month, January 2018 through December 2020



Source: Official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

Apparent U.S. consumption

Table IV-11 and figure IV-7 present data on apparent U.S. consumption for methionine.[14]

Table IV-11
Methionine: Apparent U.S. consumption, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.--			
France	7,298	5,557	5,901
Japan	12,225	17,861	30,893
Spain	14,198	37,860	43,263
Subject sources	33,722	61,278	80,057
China	25,280	3,936	240
All other sources	3,593	5,118	5,552
Nonsubject sources	28,873	9,054	5,792
All import sources	62,594	70,332	85,849
Apparent U.S. consumption	***	***	***
	Value (1,000 dollars)		
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.--			
France	17,102	11,553	11,474
Japan	26,680	31,962	52,135
Spain	27,540	62,666	62,651
Subject sources	71,322	106,181	126,259
China	54,128	10,183	3,429
All other sources	7,121	9,249	9,539
Nonsubject sources	61,249	19,432	12,968
All import sources	132,571	125,613	139,227
Apparent U.S. consumption	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

[14] Data for U.S. producers' U.S. shipments and U.S. imports of DLM and MHA during 2018-20 are presented in Appendix E. The poultry industry is a driver for methionine demand as it is a feed additive used primarily in poultry feed to increase the productivity of chicken meat and eggs. See e.g. respondent Sumitomo's postconference brief, p. 17 and respondent Adisseo's postconference brief, p. 4. See part II for additional information on demand factors.

Figure IV-7
Methionine: Apparent U.S. consumption, 2018-20

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

Apparent U.S. consumption, by quantity, increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018. The increase in apparent U.S. consumption during 2018-20 is a reflection of the increase in U.S. producers' U.S. shipments and increases in U.S. imports from Japan and Spain. However, on a percentage basis, the increase in U.S. imports from Japan and Spain were each greater than the increase in U.S. producers' U.S. shipments. Conversely, apparent U.S. consumption, by value, decreased in each year during 2018-20, ending *** percent lower in 2020 than in 2018. The decrease in the value of apparent U.S. consumption is driven by the value of U.S. producers' U.S. shipments, which decreased in each year during 2018-20.

U.S. market shares

Table IV-12 presents data on U.S. market shares for methionine.

Table IV-12
Methionine: Market shares, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
Apparent U.S. consumption	***	***	***
	Share of quantity (percent)		
U.S. producers' U.S. shipments	***	***	***
U.S. importers' U.S. shipments from.--			
France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
	Value (1,000 dollars)		
Apparent U.S. consumption	***	***	***
	Share of value (percent)		
U.S. producers' U.S. shipments	***	***	***
U.S. importers' U.S. shipments from.--			
France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

U.S. producers' market share, by quantity, decreased from *** percent in 2018 to *** percent in 2020. The market share of U.S. imports from France decreased from *** percent in 2018 to *** percent in 2019 and 2020. Conversely, the market share of U.S. imports from Japan increased from *** percent in 2018 to *** percent in 2020 and the market share of U.S. imports from Spain increased from *** percent in 2018 to *** percent in 2020. Overall, the market share of subject imports increased from *** percent in 2018 to *** percent in 2020. Conversely, the market share of nonsubject imports, by quantity, decreased from *** percent in 2018 to *** percent in 2020.[15]

[15] The decrease in the market share of nonsubject imports during 2018-20 largely reflects the decrease in the quantity of U.S. imports from China due to the imposition of the Section 301 duties in September 2018 (10 percent ad valorem) and the subsequent increase of those duties in May 2019 (25 percent ad valorem). According to the official U.S. import statistics, Malaysia is now the largest source of U.S. imports of methionine from nonsubject countries.

Part V: Pricing data

Factors affecting prices

Raw material costs

The main raw materials used in the production of methionine are acrolein (a petroleum-based product) and methyl mercaptan. In 2020, acrolein accounted for *** percent of U.S. producers' raw material costs, while methyl mercaptan accounted for *** percent. Raw material costs decreased from $*** per short ton (*** percent of the cost of goods sold) in 2018 to $*** per short ton (*** percent) in 2020, or by *** percent.[1]

Transportation costs to the U.S. market

Transportation costs for methionine shipped from subject countries to the United States averaged 8.2 percent for France, 0.1 percent for Japan, and 9.8 percent for Spain during 2020. These estimates were derived from official import data and represent the transportation and other charges on imports.[2]

U.S. inland transportation costs

*** and three of the four responding importers reported that they typically arrange transportation to their customers. U.S. producer Evonik reported inland transportation costs of *** percent while Novus reported *** percent. Importer Sumitomo reported that its U.S. inland transportation cost was *** percent, while Adisseo reported *** percent.[3]

[1] For further information regarding other cost factors in the production of methionine, see Part VI.

[2] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2020 and then dividing by the customs value based on the HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600.

[3] ***.

Pricing practices

Pricing methods

U.S. producers and importers reported setting prices using transaction-by-transaction negotiations and contracts (table V-1).

Table V-1
Methionine: U.S. producers' and importers' reported price setting methods, by number of responding firms

Method	U.S. producers	Importers
Transaction-by-transaction	***	***
Contract	***	***
Set price list	***	***
Other	***	***
Responding firms	***	***

Note: The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers reported selling most (and nearly equal shares) of methionine shipments under annual and short-term contracts, followed by long-term contracts, while a very small percentage of methionine shipments were sold through spot sales. In contrast, importers reported selling most of their methionine under long-term contracts, followed by spot sales and annual contracts (table V-2).

Table V-2
Methionine: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2020

Type of sale	U.S. producers	Importers
Long-term contracts	***	***
Annual contracts	***	***
Short-term contracts	***	***
Spot sales	***	***
Total	***	***

Note: Because of rounding, figures may not add to the totals shown.

Source: Compiled from data submitted in response to Commission questionnaires.

*** reported selling under short-term, annual, and long-term contracts. *** reported price renegotiation during the contract period, fixing quantity, and that sales contract provisions were not indexed to raw material costs for annual and long-term contracts. *** reported that *** short-term contracts typically fix both price and quantity, do not contain price renegotiation clauses, and do not index prices to raw material costs. The three responding importers reported price renegotiation during the contract period for annual and long-term contracts, while one responding importer reported that its short-term contracts do not typically allow for price renegotiation. One importer for short-term contracts and two importers for annual and long-term contracts reported their contracts typically only fix quantity, while one importer using short-term, annual, and long-term contracts reported typically fixing both price and quantity. One responding importer for short-term contracts and the three responding importers for annual and long-term contracts reported that sales contract provisions were not indexed to raw material costs. According to importer ***, most DLM users are smaller and do not have contracts, while MHA-Fa[4] customers have "meet-or-release" clauses allowing for price changes after six months. Contracts guarantee large-volume customers have uninterrupted supply during times of growth in demand, often up to a 5 percent increase of volume.

Meet-or-release clauses exist in the methionine market between suppliers and purchasers, for which a supplier must meet or beat a competing offer or be released out of its contract. U.S. importer *** reported that *** customers have meet-or-release clauses that allowed them to negotiate prices downward in 2018-2020 and allow for price changes after 6 months. Purchaser *** reported that it enacted the meet-or-release clause of its supply agreement with importer *** because it received a lower price from U.S. producer ***. U.S. producer Novus incorporated meet-or-release clauses in many of its contracts, where a quarterly price negotiation occurs inside of a typical annual or bi-annual contract and a purchaser must present documentation of a competing offer.[5] It also reported that customers *** competed with Novus on the basis of price.[6]

[4] MHA-Fa is liquid methionine hydroxy analog. Evonik, "Products: Methionine and Derivatives: MetAmino: MetAmino Hub: Best Performance", https://animal-nutrition.evonik.com/en/products/methionine-and-derivatives/dl-methionine/metamino-hub/best-performance, retrieved April 20, 2021.

[5] Hearing transcript, p. 31 (Hux) and petitioner posthearing brief, Exhibit 2, p. 1.

[6] Petitioner posthearing brief, Exhibit 2, p.2 and Attachments D and E.

During the preliminary investigations, petitioner Novus noted that prices are transparent in the contract negotiation phase, particularly during the "last call" phase where some purchasers allow Novus to meet competitors' prices.[7] Nineteen of 28 purchasers reported that they did not rely on published price information when negotiating spot or contract prices with methionine suppliers, while two of four importers reported that they did not rely upon indices. Purchasers that did rely on price information identified FeedInfo, Feedstuffs, MDC Feed Consulting, company publications, and industry/market intelligence as sources for prices. Importers identified FeedInfo, AgriStats, and global price trends as sources for prices.

Fifteen of 28 purchasers reported considering activity levels in comparing prices among sources of methionine. Reported activity level comparisons used in the market included liquid at "82 percent versus dry at 99 percent" (***), "dry at 99 percent versus liquid at 74 percent" (***), "liquid at 88 percent versus DLM at 99 percent" (***), "analog at 82 percent or less" (***), "DLM at 99 percent versus no MHA alternative" (***), and "liquid or MHA at 55 to 88 percent for DL" (***). When purchasers were asked if methionine products of different activity levels were comparable when controlling for different activity levels, four purchasers reported that they were fully comparable, six reported that they were mostly comparable, three reported that they were somewhat comparable, and four reported that they were not comparable at all. Novus stated that it guarantees an 88 percent activity level for its liquid methionine in the market.[8]

Ten of 28 purchasers reported purchasing product quarterly, eight purchase monthly, six purchase weekly, two purchase annually, and none purchased daily. *** reported that its purchases are irregular, *** reported that it purchases bi-weekly, *** reported that it has multiyear supply agreements, *** reported that market conditions can change its purchasing frequency, and *** reported that its purchases depend on its inventory. Thirteen of 28 purchasers reported that their purchasing frequency had changed since 2018. *** reported that its purchasing frequency decreased because it fed less birds in 2020 versus 2019, while *** cited decreased demand as a reason for its purchasing frequency having changed. Most purchasers contact up to between three and four suppliers before making a purchase; in total, the greatest number of purchasers contacted was six.

[7] Conference transcript, p. 23 (Galo).
[8] Hearing transcript, pp. 30 (Hux) and 37 (Galo).

Sales terms and discounts

U.S. producers and importers typically quote prices on a delivered basis. Producers reported offering quantity and total volume discounts, with *** reporting that it offers discounts based on ***. Most U.S. importers do not have formal discount policies. ***.

Price leadership

Purchasers reported that Adisseo, Evonik, and Novus and were price leaders. *** reported that Evonik was the DLM price leader while Novus was the liquid methionine price leader. *** reported that Evonik and Novus initiate price increases in the market or follow price increases quickly, try to stop price decreases by announcing price increases, and that other suppliers benchmark themselves against the two firms. *** reported that Novus is slow to raise prices and quick to lower them, that they do not follow through on public announcements to raise prices, and have offered price discounts and longer-term agreements to customers. *** reported that the market does not change without Evonik and Novus moving prices.

Price data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following methionine products shipped to unrelated U.S. customers during January 2018-December 2020.

Product 1.-- Methionine, whether DL-methionine or its hydroxy analog, 84% activity level, in dry form.

Product 2.-- Methionine, whether DL-methionine or its hydroxy analog, 88% activity level, in liquid form.

Product 3.-- Methionine, whether DL-methionine or its hydroxy analog, 99% activity level, in dry form.

Two U.S. producers and two importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[9] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of methionine and *** percent of U.S. shipments of subject imports from France, Japan, and Spain in 2020.[10] [11]

Price data for products 1-3 are presented in tables V-3 to V-5 and figures V-1 to V-3. For comparability purposes across products, prices are reported on a 100-percent equivalent activity level basis.

[9] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[10] Pricing coverage is based on U.S. shipments reported in questionnaires, which represent nearly the entire industry.

[11] Importers reported price data for product 3 imported from France, products 2 and 3 imported from Japan, and products 1 and 2 imported from Spain.

Table V-3
Methionine: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2018-December 2020

Period	United States		Spain		
	Price (dollars per STEAW)	Quantity (STEAW)	Price (dollars per STEAW)	Quantity (STEAW)	Margin (percent)
2018: Jan.-Mar.	***	***	***	***	***
Apr.-June	***	***	***	***	***
July-Sept.	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***
Apr.-June	***	***	***	***	***
July-Sept.	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***
Apr.-June	***	***	***	***	***
July-Sept.	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***

Note: Product 1: Methionine, whether DL-methionine or its hydroxy analog, 84% activity level, in dry form.
Note: Pricing data were collected in short ton 100 percent equivalent activity weight (STEAW).
Note: Only U.S. producer *** reported domestic pricing data for Product 1.
Note: ***.
Note: ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-4
Methionine: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2018-December 2020

Period	United States		Japan			Spain		
	Price (dollars per STEAW)	Quantity (STEAW)	Price (dollars per STEAW)	Quantity (STEAW)	Margin (percent)	Price (dollars per STEAW)	Quantity (STEAW)	Margin (percent)
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***

Note: Product 2: Methionine, whether DL-methionine or its hydroxy analog, 88% activity level, in liquid form.
Note: Pricing data were collected in short ton 100 percent equivalent activity weight (STEAW).
Note: Only U.S. producer *** reported domestic pricing data for Product 2.
Note: ***.
Note: ***

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-5
Methionine: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2018-December 2020

Period	United States		France			Japan		
	Price (dollars per STEAW)	Quantity (STEAW)	Price (dollars per STEAW)	Quantity (STEAW)	Margin (percent)	Price (dollars per STEAW)	Quantity (STEAW)	Margin (percent)
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***

Note: Product 3: Methionine, whether DL-methionine or its hydroxy analog, 99% activity level, in dry form.
Note: Pricing data were collected in short ton 100 percent equivalent activity weight (STEAW).
Note: Only U.S. producer *** reported domestic pricing data for Product 3.
Note: ***.
Note: ***.
Note: ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-1
Methionine: Weighted-average prices and quantities of domestic and imported product 1, by quarter, January 2018-December 2020

* * * * * * *

Note: Product 1: Methionine, whether DL-methionine or its hydroxy analog, 84% activity level, in dry form.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-2
Methionine: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2018-December 2020

* * * * * * *

Note: Product 2: Methionine, whether DL-methionine or its hydroxy analog, 88% activity level, in liquid form.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-3
Methionine: Weighted-average prices and quantities of domestic and imported product 3, by quarter, January 2018-December 2020

* * * * * * *

Note: Product 3: Methionine, whether DL-methionine or its hydroxy analog, 99% activity level, in dry form.

Source: Compiled from data submitted in response to Commission questionnaires.

Price trends

U.S. prices for product 1 were at their lowest during the third quarter of 2018, the same quarter that methionine imported from Spain began to be reported for product 1. U.S. prices increased for product 1 beginning in the last quarter of 2018 and outpaced price increases for methionine from Spain that began in the last half of 2019. For products 2 and 3, domestic prices were either stable or declining before increasing in the second half of 2020 while subject prices began increasing in early 2020. Table V-6 summarizes the price trends, by country and by product. As shown in the table, domestic price decreases ranged from *** percent during January 2018-December 2020 while price decreases for imports from France were *** percent, from Japan were *** percent, and from Spain were *** percent.

Table V-6
Methionine: Summary of weighted-average f.o.b. prices for products 1-3 from the United States and France, Japan, and Spain

Item	Number of quarters	Low price (dollars per STEAW)	High price (dollars per STEAW)	Change in price (percent)
Product 1:				
United States	***	***	***	***
Spain	***	***	***	***
Product 2:				
United States	***	***	***	***
Japan	***	***	***	***
Spain	***	***	***	***
Product 3:				
United States	***	***	***	***
France	***	***	***	***
Japan	***	***	***	***

Note: Percentage change from the first quarter in which data were available to the last quarter in which price data were available.
Note: Pricing data were collected in short ton 100 percent equivalent activity weight (STEAW).

Source: Compiled from data submitted in response to Commission questionnaires.

Price trends in published sources reveal historical trends on an annual basis. ***.[12] ***.[13] One industry publication, feedinfo.com, presents DLM prices that can be used by buyers and sellers as a reference point for worldwide methionine spot prices or contract negotiations.[14] Feedinfo.com indicates that European spot prices for DLM methionine ***.[15] One recent article noted that, after experiencing record-highs, prices for amino acids are showing a slight downward trend.[16]

Price comparisons

As shown in table V-7, prices for product imported from subject countries were below those for U.S.-produced product in *** instances (*** short tons); margins of underselling ranged from *** to *** percent. ***. In the remaining *** instances (*** short tons), prices for product from subject countries were between *** and *** percent above prices for the domestic product.

[12] ***.

[13] Ibid.

[14] Conference transcript, pp. 64-65 (Hux) and p. 128 (Harari).

[15] Adisseo prehearing brief, Exhibit 2, p. 1. There are 907.185 kilograms in one short ton.

[16] Byrne, Jane. Feednavigator.com. "Feed additive tracker: Amino acid prices easing, markets await lysine expansion projects". https://www.feednavigator.com/Article/2021/04/06/Feed-additive-tracker-Amino-acid-prices-easing-markets-await-lysine-expansion-projects. April 6, 2021.

Table V-7
Methionine: Instances of underselling/overselling and the range and average of margins, by country, January 2018-December 2020

Source	Underselling				
	Number of quarters	Quantity (STEAW)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Product 3	***	***	***	***	***
Total, underselling	***	***	***	***	***
France	***	***	***	***	***
Japan	***	***	***	***	***
Spain	***	***	***	***	***
Total, underselling	***	***	***	***	***
Source	**(Overselling)**				
	Number of quarters	Quantity (STEAW)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Product 3	***	***	***	***	***
Total, overselling	***	***	***	***	***
France	***	***	***	***	***
Japan	***	***	***	***	***
Spain	***	***	***	***	***
Total, overselling	***	***	***	***	***

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.
Note: Pricing data were collected in short ton 100 percent equivalent activity weight (STEAW).

Source**:** Compiled from data submitted in response to Commission questionnaires.

Lost sales and lost revenue

In the preliminary phase of these investigations, the Commission requested that U.S. producers of methionine report purchasers with which they experienced instances of lost sales or revenue due to competition from imports of methionine from France, Japan, or Spain during January 2017 to March 2020. Both U.S. producers submitted lost sales and lost revenue allegations. U.S. producer *** identified nine firms with which they lost sales or revenue (two consisting lost sales allegations and seven consisting of both lost sales and lost revenue allegations.[17] Japan was reported as the source in two of these combined lost sales and lost revenue allegations. Spain was reported to be the source in four allegations: two lost revenues and two of these combined lost sales and lost revenue allegations. One combined lost sales and lost revenue allegations was both for Spain and an unknown source, and two combined lost sales and lost revenue allegations were for an unknown source. Allegations covered 2017 through 2020.

In the final phase of these investigations, both U.S. producers reported that they had to reduce prices and roll back announced price increases and that they had lost sales.

Staff contacted 56 purchasers and received responses from 28.[18] Responding purchasers reported purchasing and importing *** short tons of DLM and *** short tons of MHA during January 2018-December 2020 (table V-8).[19]

[17] ***.

[18] Three purchasers submitted lost sales lost revenue survey responses in the preliminary phase, but did not submit purchaser questionnaire responses in the final phase: ***.

[19] Purchaser questionnaire responses at II-1.

Table V-8
Methionine: Purchasers' reported purchases and imports, 2018-20

Purchaser	Purchases and imports in 2018-20 (STEAW)			Change in domestic share (pp, 2018-20)	Change in subject countries share (pp, 2018-20)
	Domestic	Subject	All other		
	DLM				
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	48,675	19,235	10,692	9.9	10.0

Table continued on next page.

Table V-8—Continued
Methionine: Purchasers' reported purchases and imports, 2018-20

Purchaser	Purchases and imports in 2018-20 (STEAW)			Change in domestic share (pp, 2018-20)	Change in subject countries share (pp, 2018-20)
	Domestic	Subject	All other		
	MHA				
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	149,277	55,805	51,792	(1.4)	9.2

Table continued on next page.

Table V-8—Continued
Methionine: Purchasers' reported purchases and imports, 2018-20

Purchaser	Purchases and imports in 2018-20 (STEAW) Domestic	Subject	All other	Change in domestic share (pp, 2018-20)	Change in subject countries share (pp, 2018-20)
	All products				
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	197,952	75,040	62,484	1.5	9.4

Note: All other includes all other sources and unknown sources.
Note: Percentage points (pp) change: Change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

Source: Compiled from data submitted in response to Commission questionnaires.

Nine of 24 purchasers reported that, since 2018, they had purchased imported methionine from France instead of U.S.-produced product, 16 of 27 responding purchasers had purchased from Japan instead of U.S.-produced product, and 7 of 25 had purchased from Spain instead of U.S.-produced product. Four of these purchasers reported that prices for methionine imported from France were lower than U.S.-produced product, seven purchasers for methionine imported from Japan, and four purchasers for methionine imported from Spain.

Three purchasers reported that price was a primary reason for the decision to purchase methionine from both France and Spain instead of domestically produced product, and four purchasers reported the same for methionine from Japan. Two purchasers (***) estimated the quantity of methionine purchased from France rather than the domestic product at ***. Three purchasers (*** estimated the quantity of methionine purchased that was imported from Japan (*** short tons, respectively), and three (***) estimated the quantity of methionine purchased that was imported from Spain (*** short tons, respectively). *** reported that domestic prices were the same as methionine imported from Japan, but after-sale service was superior, while *** reported that availability of product was a primary reason for choosing subject imports, and *** reported that tank functionality and customer support and service were primary reasons for purchasing methionine imported from Japan (table V-9). Purchasers *** and *** reported being directed by their customers not to purchase from China and not purchasing from China due to quality and geo-political reasons, respectively, while *** reported purchasing from Japan due to the “best service at a competitive price”.

Table V-9
Methionine: Purchasers' responses to purchasing subject imports instead of domestic product

Purchaser	Purchased imports instead of domestic (Y/N)	Imports priced lower (Y/N)	If purchased imports instead of domestic, was price a primary reason		
			Y/N	If Yes, quantity purchased instead of domestic (short tons)	If No, non-price reason
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***

Table continued on next page.

Table V-9—Continued
Methionine: Purchasers' responses to purchasing subject imports instead of domestic product

Purchaser	Purchased imports instead of domestic (Y/N)	Imports priced lower (Y/N)	If purchased imports instead of domestic, was price a primary reason		
			Y/N	If Yes, quantity purchased instead of domestic (short tons)	If No, non-price reason
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	Yes--20; No--8	Yes--11; No--5	Yes--8; No--13	***	

Source: Compiled from data submitted in response to Commission questionnaires.

One purchaser reported that U.S. producers had reduced prices in order to compete with lower-priced imports from France, 10 reported that they had not and 15 reported that they did not know. Two purchasers reported that U.S. producers had reduced prices to compete with imports from Japan, 11 reported that they had not, and 14 reported that they did not know. Eight purchasers reported that U.S. producers had not reduced prices to compete with imports from Spain, none reported that they had, and 18 reported that they did not know. *** estimated the U.S. producer price reductions at 15 percent compared to methionine from France and 20 percent compared to methionine from Japan, both from 2019 through 2020.

Part VI: Financial experience of U.S. producers

Background

U.S. producers Evonik and Novus provided usable financial data on their methionine operations. Evonik provided its financial data on the basis of international financial reporting standards ("IFRS") while Novus provided its financial data on the basis of U.S. generally accepted accounting principles ("GAAP"). Both responding U.S. producers reported financial results on a calendar year basis.[1] [2]

Novus produces DL-hydroxy analogues under the trade names of MHA™ and MFP™ with an 84 percent activity level in dry form, and Alimet™ with an 88 percent activity level in liquid form, while Evonik produces DL-Methionine ("DLM") under the tradename MetAMINO™ with a 99 percent activity level in dry form.[3]

Operations on methionine

Figure VI-1 presents each responding firm's share of the total reported U.S. producer net sales quantity in 2020. Table VI-1 presents aggregated data on U.S. producers' operations in relation to methionine during 2018-20. Table VI-2 presents changes in the average unit value ("AUV") data for the data presented in table VI-1, while table VI-3 presents selected company-specific financial data.

[1] ***.

[2] Staff conducted a verification of the financial data, and selected elements of the trade data, of *** U.S. producer questionnaire. Data changes pursuant to verification are reflected in the trade, financial, and pricing sections of this report.

[3] Novus's products are shown on the firm's internet page, https://www.novusint.com/en-us/Products. Evonik's methionine product is shown on its internet site, https://animal-nutrition.evonik.com/en/products/methionine-and-derivatives/dl-methionine.

Figure VI-1
Methionine: Share of U.S. producers' net sales quantity, by firm, 2020

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-1
Methionine: Results of operations of U.S. producers, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	***	***	***
	Value (1,000 dollars)		
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	***	***	***
Cost of goods sold.-- Raw materials	***	***	***
Direct labor	***	***	***
Other factory costs	***	***	***
Total COGS	***	***	***
Gross profit	***	***	***
SG&A expense	***	***	***
Operating income or (loss)	***	***	***
Interest expense	***	***	***
All other expenses	***	***	***
All other income	***	***	***
Net income or (loss)	***	***	***
Depreciation/amortization	***	***	***
Cash flow	***	***	***
	Ratio to net sales (percent)		
Cost of goods sold.-- Raw materials	***	***	***
Direct labor	***	***	***
Other factory costs	***	***	***
Average COGS	***	***	***
Gross profit	***	***	***
SG&A expense	***	***	***
Operating income or (loss)	***	***	***
Net income or (loss)	***	***	***

Table continued on next page.

Table VI-1—Continued
Methionine: Results of operations of U.S. producers, 2018-20

Item	Calendar year		
	2018	2019	2020
	Ratio to total COGS (percent)		
Cost of goods sold.-- Raw materials	***	***	***
Direct labor	***	***	***
Other factory costs	***	***	***
Average COGS	***	***	***
	Unit value (dollars per short ton)		
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	***	***	***
Cost of goods sold.-- Raw materials	***	***	***
Direct labor	***	***	***
Other factory costs	***	***	***
Average COGS	***	***	***
Gross profit	***	***	***
SG&A expense	***	***	***
Operating income or (loss)	***	***	***
Net income or (loss)	***	***	***
	Number of firms reporting		
Operating losses	***	***	***
Net losses	***	***	***
Data	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-2
Methionine: Changes in AUVs between calendar years, 2018-20

Item	Between calendar years		
	2018-20	2018-19	2019-20
	Change in AUVs (percent)		
Commercial sales	▼***	▼***	▼***
Internal consumption	▼***	▼***	▼***
Total net sales	▼***	▼***	▼***
Cost of goods sold.-- Raw materials	▼***	▼***	▼***
Direct labor	▼***	▼***	▼***
Other factory costs	▼***	▼***	▼***
Average COGS	▼***	▼***	▼***
	Change in AUVs (dollars per short ton)		
Commercial sales	▼***	▼***	▼***
Internal consumption	▼***	▼***	▼***
Total net sales	▼***	▼***	▼***
Cost of goods sold.-- Raw materials	▼***	▼***	▼***
Direct labor	▼***	▼***	▼***
Other factory costs	▼***	▼***	▼***
Average COGS	▼***	▼***	▼***
Gross profit	▼***	▼***	▼***
SG&A expense	▼***	▼***	▼***
Operating income or (loss)	▼***	▼***	▼***
Net income or (loss)	▼***	▼***	▲***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-3
Methionine: Results of operations of U.S. producers, by firm, 2018-20

Item	Calendar year		
	2018	2019	2020
	Total net sales (short tons)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Total net sales (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Cost of goods sold (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Gross profit or (loss) (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	SG&A expenses (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Operating income or (loss) (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Net income or (loss) (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	COGS to net sales ratio (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***

Table continued on next page.

Table VI-3—Continued
Methionine: Results of operations of U.S. producers, by firm, 2018-20

Item	Calendar year		
	2018	2019	2020
	Gross profit or (loss) to net sales ratio (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	SG&A expense to net sales ratio (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Operating income or (loss) to net sales ratio (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Net income or (loss) to net sales ratio (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit net sales value (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit raw materials (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit direct labor (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit other factory costs (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***

Table continued on next page.

Table VI-3—Continued
Methionine: Results of operations of U.S. producers, by firm, 2018-20

Item	Calendar year		
	2018	2019	2020
	Unit COGS (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit gross profit or (loss) (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit SG&A expenses (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit operating income or (loss) (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Unit net income or (loss) (dollars per short ton)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Net sales

Total revenue primarily reflects commercial sales, but also includes a small amount of internal consumption reported by ***. Internal consumption accounted for *** and *** percent of total reported net sales quantity and value in 2020, respectively.[4]

As shown in table VI-1, total net sales quantity increased by *** percent from 2018 to 2019 and *** percent from 2019 to 2020 while total net sales value decreased by *** percent from 2018 to 2019 and *** percent from 2019 to 2020.[5] On an average per unit basis, net sales values declined from $*** in 2018 to $*** in 2019 and further declined to $*** in 2020. As shown in table VI-3, both U.S. producers reported *** and *** between 2018 and 2020. That is, U.S. producers sold *** methionine but *** during 2018-20.[6] Internal consumption followed the trend of commercial sales in quantity and value during 2018-20. On an average per unit basis, internal consumption values declined from $*** in 2018 to $*** in 2020.[7]

[4] *** transfers ***. Email from ***, April 5, 2021.

[5] ***.

[6] ***. Novus' and Evonik's U.S. producers' questionnaire responses, section III-9-f (preliminary phase).

[7] ***. Teleconference with ***, April 19, 2021.

Cost of goods sold and gross profit or loss

Raw material costs, direct labor, and other factory costs accounted for *** percent of total COGS, respectively, in 2020.

Raw material costs, the *** component of COGS, decreased by *** percent, from $*** to $*** during 2018-20 despite an increase in sales volume. On an average per unit basis, raw material costs continuously decreased from $*** in 2018 to $*** in 2019 and $*** in 2020. As a ratio to net sales, raw material costs increased overall, from *** percent in 2018 to *** percent in 2020 primarily reflecting the decline in revenue over the same period and ***. *** reported higher per unit raw material costs *** due to differences in level of integration (***) and production processes ***, as well as the type of methionine sold.[8] *** U.S. producers reported a decline in raw material costs during 2018-20, attributed to lower energy costs. ***, while *** to the price drop in propylene (a key material to the production of acrolein, which is a major component of methionine) between 2018 and 2020.[9]

*** producers were affected by weather-related events in 2020: *** raw material costs reportedly were affected by suspension of MMP production on three occasions in 2020. *** that it also was affected by weather-related events in 2020. [10]

[8] ***. U.S. producers' questionnaire response, section III-9c.

[9] Email from ***, April 4, 2021, and email from ***, April 6, 2021. See also *** posthearing brief, exh. 10, ***.

[10] A record 11 named storms made landfall in the United States in 2020, of which eight storms occurred along the Gulf Coast, according to NOAA (see, https://disasterphilanthropy.org/disaster/2020-atlantic-hurricane-season, retrieved June 1, 2021). According to safety rules, governing public safety and the nature of the toxic chemicals used to produce methionine, if a hurricane or a tropical storm is within 150 to 200 miles from a plant, that plant starts a shutdown procedure. If the storm does not make landfall, the plant may restart. The process of stopping and restarting production has an economic cost, affecting the costs of raw material inputs like MMP, hydrogen cyanide, methyl mercaptan, and

Both MHA (Novus) and DL-methionine (Evonik) are manufactured in a multistep synthesis. As described in Part I of this report, both firms use 3-methylthiopropionaldehyde (MMP), formed from reacting acrolein with methyl mercaptan, and hydrogen cyanide (HCN) as the basic starting materials. Novus produces MMP from purchased inputs (***), then reacts it with HCN to form liquid MHA at a methionine facility within *** Chocolate Bayou, TX plant.[11] Evonik uses the carbonate process at its plant in Theodore, Alabama, to produce dry DLM; the firm is backward integrated, producing acrolein, MMP, and HCN onsite. Evonik purchases methyl mercaptan from unrelated suppliers. Thereafter, MMP, HCN, carbon dioxide and ammonia are reacted to form an intermediate product, which is hydrolyzed, and converted to DLM, and then dried.

Table VI-4 presents details on specific raw material inputs as a share of total raw material costs in 2020. Acrolein accounted for the largest share of raw material costs at *** percent, followed by methyl mercaptan at *** percent and then by the reaction chemical hydrogen cyanide at *** percent. Other material inputs accounted for *** percent and included sulfuric acid, potassium hydroxide, and utilities.

propylene, as well as affecting other factory costs (fixed costs must be spread over a smaller production volume). However, it appears that any such impact was limited in duration.

***. Email from ***, April 27, 2021.

***. Email from ***, April 27, 2021.

[11] Novus detailed ***. Email from ***, April 5, 2021.

Table VI-4
Methionine: Raw materials by type, 2020

Raw materials	Calendar year 2020		
	Value (1,000 dollars)	Unit value (dollars per short ton)	Share of value (percent)
Acrolein	***	***	***
Methyl mercaptan	***	***	***
Reaction chemicals	***	***	***
Other material inputs	***	***	***
Total, raw materials	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Other factory costs, the *** share of total COGS decreased by *** percent from $*** in 2018 to $*** in 2020. On an average per unit basis, other factory costs decreased from $*** in 2018 to $*** in 2019 and $*** in 2020. As a ratio to net sales, other factory costs fluctuated within a narrow range of *** and *** percent during 2018-20. While *** U.S. producers reported a *** in other factory costs during 2018-20, *** reported a *** of *** percent from $*** in 2018 to $*** in 2020, which accounted for nearly all of the decrease in other factory costs reported by both producers together. On an average per unit basis, *** other factory costs declined from $*** in 2018 to $*** in 2019 and $*** in 2020. [12] In contrast, the value of *** other factory costs decreased slightly by *** percent from $*** in 2018 to $*** in 2020. The average unit value of its other factory costs declined from $*** in 2018 to $*** in 2019 and $*** in 2020 ***, but ***. Because ***.

While the two U.S. producers differed in terms of the level of material input integration, the production of methionine was generally described as capital intensive with a corresponding

[12] ***. Email from ***, April 5, 2021.

incentive to maintain high capacity utilization. As previously discussed in part III of this report, U.S. producers' capacity utilization decreased from *** percent in 2018 to *** percent in 2020. *** capacity utilization declined from *** percent in 2018 to *** percent in 2020, (***), while that of *** increased from *** percent to *** percent during the same period. Other factory costs are composed of both variable and fixed costs, and are impacted by production volume and corresponding capacity utilization. In this case, the ***. Hence, per unit fixed costs would have remained relatively the same while *** benefited from ***. Moreover, sales reflect current production costs as well as the fully-absorbed costs in inventory. Between 2019 and 2020, Novus ***.[13]

Direct labor costs, the *** share of total COGS, decreased by *** percent from 2018 to 2020. On an average per unit basis, direct labor costs decreased from $*** in 2018 to $*** in 2020. As a ratio to net sales, direct labor costs increased from *** percent in 2018 to *** percent in 2020. *** U.S. producers reported a *** in their direct labor costs during 2018-20, ***.[14]

Overall total COGS declined by *** percent from 2018 to 2020 primarily due to the decrease in raw material and other factory costs during the same period. *** U.S. producers reported a *** in total COGS during 2018-20, with ***. On an average per unit basis, COGS declined from $*** in 2018 to $*** in 2020. The COGS to net sales ratio increased from *** percent in 2018 to *** percent in 2020, driven by ***

[13] See also *** posthearing brief, exh. 10, ***.
[14] *** postconference brief, pp. 3-4.

***. Conversely, ***.[15]

As seen in table VI-1, total gross profit declined from 2018 ($***) to 2020 ($***). *** reported an *** in gross profits from $*** in 2018 to $*** in 2020, while *** reported a *** from $*** in 2018 to a *** in 2020.[16]

SG&A expenses and operating income or loss

U.S. producers' selling, general, and administrative ("SG&A") expenses decreased by *** percent from 2018 ($***) to 2019 ($***) and increased by *** percent between 2019 and 2020 ($***). The corresponding SG&A expense ratio (total SG&A expenses divided by total sales value) declined from *** percent in 2018 to *** percent in 2019 before increasing to *** percent in 2020. *** SG&A expense ratio *** percent in 2018 to *** percent in 2020, while that of *** percent in 2018 to *** percent in 2020, *** in SG&A expenses in 2018 and 2019.[17]

As presented in table VI-1, U.S. producers' operating income *** from $*** in 2018 to operating *** of $*** in 2019 and *** in 2020. *** reported a *** in its operating income from $*** in 2018 to a *** in 2019 and a further *** in 2020; while ***

[15] As noted earlier, ***. Email from ***, April 5, 2021.

[16] In its response to the effects of COVID-19 on financial performance, *** was the only firm to report that ***. U.S. producers' questionnaire response, section III.9d.

[17] ***. U.S. producers' questionnaire, section III-10, and emails from ***, April 4 and 8, 2021. ***.

reported a *** operating income *** from $*** in 2018 to $*** in 2020, ***. As a ratio to net sales, operating income *** from a *** *** percent in 2018 to a *** of *** percent and *** percent in 2019 and 2020 respectively.[18]

All other expenses and net income or loss

U.S producers' total interest expense increased by *** percent from $*** in 2018 to $*** in 2020. The totality of interest expenses was reported by ***. All other expenses irregularly increased from $*** in 2018 to $*** in 2019 and decreased to $*** in 2020. ***.[19] Other income increased from $*** in 2018 to $*** in 2019 before decreasing to $*** in 2020. *** reported other income throughout the period for which data was collected, while *** reported $*** in other income in 2019 only, making it the major contributor to the *** percent increase in 2019. [20] [21]

[18] If ***.

[19] ***. Email from ***, April 8, 2021. See *** posthearing brief, pp. 38-39 and exh. 3 for a review of the firm's ***.

[20] ***. Email of April 1, 2021, and conference call and email from ***, April 6, 2021.

[21] ***. Email from ***, April 7, 2021. ***. Teleconference with ***, April 19, 2021.

Data of the two firms together show a *** in 2018, a *** in 2019, and a *** in 2020. The *** are primarily attributable to ***.[22]

Variance analysis

A variance analysis for the operations of the two U.S. producers of methionine is presented in table VI-5.[23] The information for this variance analysis is derived from table VI-1. The data in this table indicate that the reduction in operating income between 2018 and 2020 ($***) was primarily due to an unfavorable price variance (unit sales values declined) that was greater than a favorable net cost/expense variance (unit costs and expenses declined).[24]

[22] If ***.

[23] The Commission's variance analysis is calculated in three parts: Sales variance, COGS variance, and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances.

[24] Variance analyses of the two reporting firms are similar, except that ***. Operating income of ***.

Table VI-5
Methionine: Variance analysis for U.S. producers, between calendar years, 2018-20

Item	Between calendar years		
	2018-20	2018-19	2019-20
	Value (1,000 dollars)		
Net sales: Price variance	***	***	***
Volume variance	***	***	***
Net sales variance	***	***	***
COGS: Cost variance	***	***	***
Volume variance	***	***	***
COGS variance	***	***	***
Gross profit variance	***	***	***
SG&A expenses: Cost/expense variance	***	***	***
Volume variance	***	***	***
Total SG&A expense variance	***	***	***
Operating income variance	***	***	***
Summarized (at the operating income level) as: Price variance	***	***	***
Net cost/expense variance	***	***	***
Net volume variance	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Capital expenditures and research and development expenses

Table VI-6 presents capital expenditures, and research and development ("R&D") expenses of U.S. producers, by firm. Table VI-7 provides U.S. producers' narrative responses regarding the nature and focus of their capital expenditures and R&D expenses. Total capital expenditures decreased by *** percent from $*** in 2018 to $*** in 2019, and further declined by *** percent to $*** in 2020. ***.[25] R&D expenses also decreased by *** percent between 2018 ($***) and

[25] *** reported that it invested $*** to $*** on average each year from 2000 to 2020. These were investments made to update ***. *** posthearing brief, exh. 10.

2019 ($***), and further declined by *** percent from 2019 to 2020 ($***).[26] [27]

Table VI-6
Methionine: Capital expenditures and R&D expenses for U.S. producers, by firm, 2018-20

Item	Calendar year		
	2018	2019	2020
	Capital expenditures (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	R&D expenses (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-7
Methionine: Firms' narrative responses relating to capital expenditures and R&D expenses, since January 1, 2018

Firm	Nature and focus of capital expenditures
***	***
***	***
	Nature and focus of R&D expenses
***	***
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[26] ***. Email from ***, March 31, 2021.
[27] ***. *** posthearing brief, p.12.

Assets and return on assets

Table VI-8 presents data on the U.S. producers' total assets and their return on assets ("ROA").[28] Table VI-9 presents the firms' narrative responses on the nature of assets reported. The U.S. producers' total net assets decreased by *** percent from $*** in 2018 to $*** in 2020.[29] The calculated ROA declined from *** percent in 2018 to *** percent in 2020.

Table VI-8
Methionine: Value of assets used in production, warehousing, and sales, and ROA for U.S. producers by firm, 2018-20

Firm	Calendar years		
	2018	2019	2020
	Total net assets (1,000 dollars)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***
	Operating ROA (percent)		
Evonik	***	***	***
Novus	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-9
Methionine: Narrative descriptions of U.S. producers' assets, since January 1, 2018

Firm	Narratives
***	***
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[28] ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value for the subject product.

[29] See *** posthearing brief, p. 36, and exh. 9, 10, and 11 for a ***.

Capital and investment

The Commission requested U.S. producers of methionine to describe any actual or potential negative effects of imports of methionine from France, Japan, and Spain on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-10 presents the number of firms reporting an impact in each category and table VI-11 provides the U.S. producers' narrative responses.

Table VI-10
Methionine: Actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2018

Item	No	Yes
Negative effects on investment	***	***
Cancellation, postponement, or rejection of expansion projects		***
Denial or rejection of investment proposal		***
Reduction in the size of capital investments		***
Return on specific investments negatively impacted		***
Other		***
Negative effects on growth and development	***	***
Rejection of bank loans		***
Lowering of credit rating		***
Problem related to the issue of stocks or bonds		***
Ability to service debt		***
Other		***
Anticipated negative effects of imports	***	***

Note: ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-11
Methionine: Narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2018

Item / Firm	Narrative
Cancellation, postponement, or rejection of expansion projects:	
***	***
Denial or rejection of investment proposal:	
***	***
Reduction in the size of capital investments:	
***	***
Return on specific investments negatively impacted:	
***	***
Other effects on growth and development:	
***	***
Anticipated effects of imports:	
***	***
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part VII: Threat considerations and information on nonsubject countries

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the dumping was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

The industry in France

The Commission issued foreign producers or exporters questionnaires to one firm, Adisseo France, who is believed to produce and/or export methionine from France.[3] Adisseo France provided a usable response to the Commission's questionnaire. Adisseo France's exports to the United States accounted for *** percent of U.S. imports of methionine from France in 2020. According to estimates provided by Adisseo France, its production of methionine in France accounts for approximately *** percent of overall production of methionine in France. Table VII-1 presents information on the Adisseo France's methionine operations.

Table VII-1
Methionine: Summary data for French producer Adisseo France, 2020

Firm	Production (short tons)	Share of reported production (percent)	Exports to the United States (short tons)	Share of reported exports to the United States (percent)	Total shipments (short tons)	Share of firm's total shipments exported to the United States (percent)
Adisseo France	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

In December 2019, Adisseo France reported the conclusion of the Polar Project, which was a 110 million Euro investment project aimed to increase the production capacity of liquid methionine in Europe.[4] The three-year operational construction phase concluded with the activation of a new effluent treatment and a new unloading station for methyl mercaptan ("MSH") wagons on the Saint Clair du Rhône site.[5] On December 20, 2019, Adisseo declared a force majeure in France due to the national rail strikes reducing its ability to source raw materials and ship its product.[6] The force majeure was lifted in February 2020.[7]

---

[3] This firm was identified through a review of information submitted in the petitions and presented in third-party sources.

[4] Adisseo Sustainability Report, 2019.

[5] Ibid.

[6] Adisseo noted that ***. Adisseo USA's U.S. importer questionnaire, section III-18.

[7] *Adisseo Declares Force Majeure for Some Methionine Products in France*, December 20, 2019, https://marketing.feedinfo.com/adisseo-declares-force-majeure-for-some-methionine-products-in-france/,

(*continued*...)

Operations on methionine

Table VII-2 presents information on the Adisseo France's operations in France.

Table VII-2
Methionine: Data for French producer Adisseo France, 2018-20 and projection calendar years 2021 and 2022

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2018	2019	2020	2021	2022
	Quantity (short tons)				
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***
	Ratios and shares (percent)				
Capacity utilization	***	***	***	***	***
Inventories/production	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

retrieved August 27, 2020 and "Adisseo Lifts Force Majeure for Some Methionine Products in France, " February 20, 2020, https://marketing.feedinfo.com/adisseo-lifts-force-majeure-for-some-methionine-products-in-france/, retrieved August 27, 2020.

After decreasing by *** percent from 2018 to 2019, Adisseo France's production capacity increased by *** percent from 2019 to 2020, ending *** percent higher in 2020 than in 2018.[8] It is projected to be *** percent lower in 2021 than in 2020, but *** percent higher in 2022 than in 2021, essentially returning to its 2020 production capacity.[9] Adisseo France's production also fluctuated year to year, decreasing by *** percent from 2018 to 2019, but then increasing by *** percent from 2019 to 2020, ending *** percent lower in 2020 than in 2018.[10] It is projected to be *** percent lower in 2021 than in 2020, but *** percent higher in 2022 than in 2021.

As a result of its production capacity increasing while its production decreased during 2018-20, Adisseo France's capacity utilization decreased from *** percent in 2018 to *** percent in 2020. Its capacity utilization is projected to be *** percent in 2021 and *** percent in 2022.

Adisseo France's home market shipments increased by *** percent during 2018-20, with nearly all of the increase occurring from 2019 to 2020. Its home market shipments are projected to be *** percent lower in 2021 than in 2020, but *** percent higher in 2022 than in 2021.

Export shipments accounted for the majority of Adisseo France's total shipments (*** percent in 2018, *** percent in 2019, and *** percent in 2020). Export shipments to the United States accounted for a minority share of Adisseo France's total exports (no more than *** percent in any year during 2018-20). Fluctuating year to year, Adisseo France's exports to the United States decreased by *** percent from 2018 to 2019, but then increased by *** percent from 2019 to 2020, ending *** percent lower in 2020 than in 2018. Adisseo France is projected ***.

[8] According to Adisseo France, ***. Email from ***, April 14, 2021.
[9] In its response to the Commission's questionnaire, Adisseo based its 2021 projections on ***.
[10] Adisseo France noted that the decrease in production ***. Email from ***, April 14, 2021.

Alternative products

***.

Exports of methionine and organo-compounds

Table VII-3 presents data for exports of methionine and organo-compounds from France in descending order of quantity for 2020. The leading exports for methionine and organo-compounds from France, by quantity, in 2020 were Belgium, Netherlands, Germany, and the United States, accounting for 24.8 percent, 18.4 percent, 11.1 percent, and 8.3 percent, respectively.

Table VII-3
Methionine and organo-compounds: Exports from France by destination market, 2018-20

Destination market	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
United States	4,020	5,152	4,841
Belgium	15,622	16,887	14,477
Netherlands	10,870	10,318	10,723
Germany	6,501	6,286	6,459
Italy	6,354	7,281	3,872
China	2,118	2,094	1,876
Spain	112,691	4,368	1,129
Romania	966	774	1,037
Switzerland	157	1,238	882
All other destination markets	21,257	20,107	12,991
All destination markets	180,555	74,506	58,287
	Value (1,000 dollars)		
United States	19,126	19,834	21,647
Belgium	19,593	20,972	17,675
Netherlands	27,466	25,138	19,351
Germany	19,781	18,082	19,283
Italy	16,443	16,427	11,169
China	6,718	7,724	7,140
Spain	140,530	14,161	8,955
Romania	1,887	1,247	1,708
Switzerland	1,571	14,473	13,896
All other destination markets	61,095	54,244	45,115
All destination markets	314,209	192,302	165,941

Table continued on next page.

Table VII-3—Continued
Methionine and organo-compounds: Exports from France by destination market, 2018-20

Destination market	Calendar year		
	2018	2019	2020
	Unit value (dollars per short ton)		
United States	4,758	3,850	4,471
Belgium	1,254	1,242	1,221
Netherlands	2,527	2,436	1,805
Germany	3,043	2,876	2,985
Italy	2,588	2,256	2,884
China	3,172	3,688	3,806
Spain	1,247	3,242	7,934
Romania	1,954	1,611	1,647
Switzerland	10,035	11,692	15,758
All other destination markets	2,874	2,698	3,473
All destination markets	1,740	2,581	2,847
	Share of quantity (percent)		
United States	2.2	6.9	8.3
Belgium	8.7	22.7	24.8
Netherlands	6.0	13.8	18.4
Germany	3.6	8.4	11.1
Italy	3.5	9.8	6.6
China	1.2	2.8	3.2
Spain	62.4	5.9	1.9
Romania	0.5	1.0	1.8
Switzerland	0.1	1.7	1.5
All other destination markets	11.8	27.0	22.3
All destination markets	100.0	100.0	100.0

Note: United States is shown at the top, all remaining top export destinations shown in descending order of 2020 data, by quantity. HS subheadings 2930.40 and 2930.90 contain products outside the scope of these investigations.

Source: Official exports statistics under HS subheadings 2930.40 and 2930.90, as reported by Eurostat in the Global Trade Atlas database, accessed April 9, 2020.

The industry in Japan

The Commission issued foreign producers or exporters questionnaires to one firm, Sumitomo Chemical, who is believed to produce and/or export methionine from Japan.[11] Sumitomo Chemical provided a usable response to the Commission's questionnaire. Sumitomo Chemical's exports to the United States accounted for *** percent of U.S. imports of methionine from Japan in 2020. According to estimates provided by Sumitomo Chemical, its production of methionine in Japan accounts for approximately *** percent of overall production of methionine in Japan. Table VII-4 presents information on the Sumitomo Chemical's methionine operations.

Table VII-4
Methionine: Summary data for Japanese producer Sumitomo Chemical, 2020

Firm	Production (short tons)	Share of reported production (percent)	Exports to the United States (short tons)	Share of reported exports to the United States (percent)	Total shipments (short tons)	Share of firm's total shipments exported to the United States (percent)
Sumitomo	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

Table VII-5 presents Sumitomo Chemical's reported changes in operations since January 1, 2018. In October 2018, Sumitomo Chemical expanded the methionine production capacity of its facility at Ehime, Japan from approximately 150,000 metric tons per year to approximately 250,000 metric tons per year.[12] In September 2019, Sumitomo Chemical idled production at one of its oldest methionine facilities in Ehime due to high maintenance costs and lower efficiency.[13]

[11] This firm was identified through a review of information submitted in the petitions and presented in third-party sources.

[12] *Feed Additive Methionine Logistics Operations Certified by Government as "Comprehensive Efficiency Plan*, https://www.sumitomo-chem.co.jp/english/news/detail/20190415e.html, retrieved August 19, 2020.

[13] *Sumitomo Boosts Methionine Production Efficiency*, https://www.powderbulksolids.com/wire-cloth/sumitomo-boosts-methionine-production-efficiency, retrieved August 21, 2020.

Table VII-5
Methionine: Reported changes in operations by Japanese producer Sumitomo, since January 1, 2018

Item / Firm	Reported changed in operations
Plant closings:	
***	***
Expansions:	
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on methionine

Table VII-6 presents information on Sumitomo Chemical's methionine operations in Japan. Sumitomo Chemical's production capacity fluctuated year to year, increasing by *** percent from 2018 to 2019, but then decreasing by *** percent from 2019 to 2020, ending *** percent higher in 2020 than in 2018.[14] It is projected to *** in 2021 and 2022.[15] Sumitomo Chemical's production increased by *** percent during 2018-20, with *** of the increase occurring from 2018 to 2019. It is projected to be *** percent higher in 2021 than in 2020 and *** from 2021 to 2022. As a result of its production increasing at a higher rate than its production capacity, Sumitomo Chemical's capacity utilization increased from *** percent in 2018 to *** percent in 2020. It is projected to be *** percent in 2021 and 2022.

Sumitomo Chemical's home market shipments accounted for a small share of its total shipments during 2018-20 (no more than *** percent in any year). Fluctuating year to year, Sumitomo Chemical's home market shipments increased by *** percent from 2018 to 2019, but then decreased by *** percent from 2019 to 2020, ending *** percent lower in 2020 than in 2018. It is projected to be *** percent higher in 2021 than in 2020 and *** from 2021 to 2022.

[14] Sumitomo Chemical notes that ***. Sumitomo Chemical's response to the Foreign Producers' Questionnaire Revision Request of April 9, 2021, p. 1.

[15] In its response to the Commission's questionnaire, Sumitomo based its projections on ***.

Table VII-6
Methionine: Data for Japanese producer Sumitomo Chemical, 2018-20 and projection calendar years 2021 and 2022

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2018	2019	2020	2021	2022
	Quantity (short tons)				
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***
	Ratios and shares (percent)				
Capacity utilization	***	***	***	***	***
Inventories/production	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Export shipments accounted for the vast majority of Sumitomo Chemical's total shipments during 2018-20 (at least *** percent in any year). Export shipments to the United States accounted for a minority, but an irregularly increasing share, of Sumitomo Chemical's total export shipments during 2018-20, reaching *** percent in 2020. Sumitomo Chemical's export shipments to the United States increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018. Sumitomo Chemical is projected to ***.[16]

Alternative products

***.

Exports of methionine and organo-compounds

Table VII-7 presents data for exports of methionine and organo-compounds from Japan in descending order of quantity for 2020. The leading export markets for methionine and organo-compounds from Japan in 2020, by quantity, were the United States, China, Belgium, and Brazil, accounting for 12.0 percent, 11.7 percent, 11.4 percent, and 5.8 percent of total exports from Japan, respectively.

[16] ***. Sumitomo Chemical America's response to staff questions/requests on U.S. Importers' questionnaire, March 29, 2021, p. 1.

Table VII-7
Methionine and organo-compounds: Exports from Japan by destination market, 2018-20

Destination market	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
United States	15,695	21,681	32,534
China	45,500	49,439	31,953
Belgium	12,682	27,976	30,983
Brazil	6,973	15,690	15,884
India	9,527	12,680	13,436
Indonesia	11,048	16,161	12,811
South Korea	10,827	13,179	12,449
Vietnam	6,964	14,193	12,404
Thailand	7,931	12,299	9,275
All other destination markets	57,650	93,925	100,486
All destination markets	184,797	277,224	272,216
	Value (1,000 dollars)		
United States	72,696	86,278	96,884
China	147,685	148,180	126,460
Belgium	28,361	55,654	66,438
Brazil	15,428	26,495	25,122
India	24,797	29,866	30,108
Indonesia	22,076	26,164	21,629
South Korea	68,623	68,200	62,727
Vietnam	27,756	41,921	41,834
Thailand	39,858	45,579	38,251
All other destination markets	167,787	208,115	220,363
All destination markets	615,069	736,453	729,815

Table continued on next page.

Table VII-7—Continued
Methionine and organo-compounds: Exports from Japan by destination market, 2018-20

Destination market	Calendar year		
	2018	2019	2020
	Unit value (dollars per short ton)		
United States	4,632	3,979	2,978
China	3,246	2,997	3,958
Belgium	2,236	1,989	2,144
Brazil	2,212	1,689	1,582
India	2,603	2,355	2,241
Indonesia	1,998	1,619	1,688
South Korea	6,338	5,175	5,039
Vietnam	3,986	2,954	3,373
Thailand	5,026	3,706	4,124
All other destination markets	2,910	2,216	2,193
All destination markets	3,328	2,657	2,681
	Share of quantity (percent)		
United States	8.5	7.8	12.0
China	24.6	17.8	11.7
Belgium	6.9	10.1	11.4
Brazil	3.8	5.7	5.8
India	5.2	4.6	4.9
Indonesia	6.0	5.8	4.7
South Korea	5.9	4.8	4.6
Vietnam	3.8	5.1	4.6
Thailand	4.3	4.4	3.4
All other destination markets	31.2	33.9	36.9
All destination markets	100.0	100.0	100.0

Note: United States is shown at the top, all remaining top export destinations shown in descending order of 2020 data, by quantity. HS subheadings 2930.40 and 2930.90 contain products outside the scope of these investigations.

Source: Official exports statistics under HS subheadings 2930.40 and 2930.90, as reported by Japan Ministry of Finance in the Global Trade Atlas database, accessed April 9, 2020.

The industry in Spain

The Commission issued foreign producers or exporters questionnaires to one firm, Adisseo España, who is believed to produce and/or export methionine from Spain.[17] Adisseo España provided a usable response to the Commission's questionnaire. Adisseo España's exports to the United States accounted for *** percent of U.S. imports of methionine from Spain in 2020. According to estimates provided by Adisseo España, its production of methionine accounts for approximately *** percent of overall production of methionine in Spain. Table VII-8 presents information on the Adisseo España's methionine operations.

Table VII-8
Methionine: Summary data for Spanish producer Adisseo España, 2020

Firm	Production (short tons)	Share of reported production (percent)	Exports to the United States (short tons)	Share of reported exports to the United States (percent)	Total shipments (short tons)	Share of firm's total shipments exported to the United States (percent)
Adisseo España	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

Table VII-9 presents Adisseo España's reported changes in operations since January 1, 2018. In 2019, Adisseo announced the completion of a new ADRY+ production unit at the its plant in Burgos, Spain.[18] Adisseo states that ADRY+ is a strategic project that will expand the market for its Rhodimet® AT88 liquid methionine, as well as consolidate the long-term future of the Burgos facility.[19] According to Adisseo, Rhodimet® AT88 is a calcium salt of Rhodimet® enriched with AT88 to deliver the benefits of this product (the same efficacity value › 88%) to customers whose process cannot use the liquid form of methionine.[20]

[17] This firm was identified through a review of information submitted in the petitions and presented in third-party sources.

[18] *ADRY+: A New Type of Methionine Is Born*, https://www.adisseo.com/en/sites/adisseo-burgos-spain/, retrieved August 21, 2020.

[19] Ibid.

[20] Ibid.

Table VII-9
Methionine: Reported changes in operations by Spanish producer Adisseo España, since January 1, 2018

Item / Firm	Reported changed in operations
Plant openings:	
***	***
Expansions:	
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on methionine

Table VII-10 presents information on Adisseo España's methionine operations in Spain. Adisseo España's production capacity increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018.[21] It is projected to be *** percent lower in 2021 than in 2020, but *** percent higher in 2022 than in 2021.[22] Adisseo España's production increased by *** percent during 2018-20, with the vast majority of the increase occurring from 2019 to 2020. It is projected to *** in 2021 and *** percent higher in 2022 than in 2021. As a result of its production increasing at a higher rate than its production capacity, Adisseo España's capacity utilization increased irregularly from *** percent in 2018 to *** percent in 2020. It is projected to be *** percent in 2021 and 2022.

Adisseo España's home market shipments accounted for a minority share of its total shipments during 2018-20 (no more than *** percent in any year). Fluctuating year to year, Adisseo España's home market shipments increased by *** percent from 2018 to 2019, but then decreased by *** percent from 2019 to 2020, ending *** percent higher in 2020 than in 2018. It is projected to be *** percent higher in 2021 than in 2020 and *** percent higher in 2022 than in 2021.

[21] According to Adisseo España, the increase in its production capacity ***. Email from ***, April 14, 2021.

[22] In its response to the Commission's questionnaire, Adisseo España notes that ***.

Table VII-10
Methionine: Data for Spanish producer Adisseo España, 2018-20 and projection calendar years 2021 and 2022

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2018	2019	2020	2021	2022
	Quantity (short tons)				
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***
	Ratios and shares (percent)				
Capacity utilization	***	***	***	***	***
Inventories/production	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Export shipments accounted for the vast majority of Adisseo España's total shipments during 2018-20 (at least *** percent in each year). Export shipments to the United States accounted for a minority, but increasing, share of Adisseo España's total export shipments during 2018-20. Adisseo España's export shipments to the United States increased by *** percent from 2018 to 2020, with the vast majority of the increase occurring from 2018 to 2019.[23] Adisseo España's export shipments to the United States are projected to be *** percent lower in 2021 than in 2020 and *** from 2021 to 2022.

Alternative products

***.

Exports of methionine and organo-compounds

Table VII-11 presents data for exports of methionine and organo-compounds from Spain in descending order of quantity for 2020. The leading export markets for methionine and organo-compounds from Spain in 2020, by quantity, were the United States, India, France, and Italy, accounting for 20.7 percent, 13.1 percent, 8.2 percent, and 7.4 percent respectively.

[23] ***. Email from ***, April 5, 2021.

Table VII-11
Methionine and organo-compounds: Exports from Spain by destination market, 2018-20

Destination market	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
United States	915	651	679
India	26	190	430
France	1,341	651	271
Italy	735	750	245
Portugal	320	351	235
Belgium	331	18	206
Japan	170	185	162
Hungary	272	159	159
Tunisia	55	73	88
All other destination markets	1,717	3,082	812
All destination markets	5,883	6,109	3,287
	Value (1,000 dollars)		
United States	5,290	3,437	5,332
India	449	2,416	5,220
France	5,542	3,204	2,659
Italy	9,781	7,259	8,140
Portugal	708	1,308	1,919
Belgium	817	193	332
Japan	4,739	4,980	4,469
Hungary	1,301	756	720
Tunisia	467	549	626
All other destination markets	15,961	19,625	12,509
All destination markets	45,056	43,727	41,927

Table continued on next page.

Table VII-11—Continued
Methionine and organo-compounds: Exports from Spain by destination market, 2018-20

Destination market	Calendar year		
	2018	2019	2020
	Unit value (dollars per short ton)		
United States	5,782	5,275	7,852
India	16,987	12,744	12,143
France	4,131	4,919	9,807
Italy	13,303	9,684	33,263
Portugal	2,215	3,732	8,171
Belgium	2,472	10,965	1,609
Japan	27,918	26,891	27,579
Hungary	4,777	4,761	4,538
Tunisia	8,474	7,550	7,104
All other destination markets	9,294	6,367	15,398
All destination markets	7,659	7,158	12,755
	Share of quantity (percent)		
United States	15.6	10.7	20.7
India	0.4	3.1	13.1
France	22.8	10.7	8.2
Italy	12.5	12.3	7.4
Portugal	5.4	5.7	7.1
Belgium	5.6	0.3	6.3
Japan	2.9	3.0	4.9
Hungary	4.6	2.6	4.8
Tunisia	0.9	1.2	2.7
All other destination markets	29.2	50.5	24.7
All destination markets	100.0	100.0	100.0

Note: United States is shown at the top, all remaining top export destinations shown in descending order of 2020 data, by quantity. HS subheadings 2930.40 and 2930.90 contain products outside the scope of these investigations.

Source: Official exports statistics under HS subheadings 2930.40 and 2930.90, as reported by Eurostat in the Global Trade Atlas database, accessed April 9, 2020.

Subject countries combined

Table VII-12 presents summary data on methionine operations of the reporting producers in the subject countries. The collective annual production capacity for the responding foreign producers in the subject countries increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018. Production capacity for the responding producers in the subject countries is projected to be *** percent lower in 2021 than in 2020, but *** percent higher in 2022 than in 2021. Responding producers' production in the subject countries also increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018. Responding foreign producers' production in the subject countries is projected to be *** percent lower in 2021 than in 2020, but *** percent higher in 2022 than in 2021. Responding producers' capacity utilization increased irregularly from *** percent in 2018 to *** percent in 2020. It is projected to be *** percent in 2021 and *** percent in 2022.

Responding foreign producers' collective home market shipments increased irregularly by *** percent during 2018-20. It is projected to be *** percent higher in 2021 than in 2020 and *** percent higher in 2022 than in 2021. Responding foreign producers' collective exports to the United States increased in each year during 2018-20, ending *** percent higher in 2020 than in 2018. It is projected to be *** percent lower in 2021 than in 2020 and *** percent lower in 2022 than in 2021.

Table VII-12
Methionine: Data on the industry in subject countries, 2018-20 and projection calendar years 2021 and 2022

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2018	2019	2020	2021	2022
	Quantity (short tons)				
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***
	Ratios and shares (percent)				
Capacity utilization	***	***	***	***	***
Inventories/production	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Total home market shipments	***	***	***	***	***
Export shipments to:					
United States	***	***	***	***	***
All other markets	***	***	***	***	***
Total exports	***	***	***	***	***
Total shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. inventories of imported merchandise

Table VII-13 presents data on U.S. importers' reported end-of-period inventories of methionine.

Table VII-13
Methionine: U.S. importers' end-of-period inventories by source, 2018-20

Item	Calendar year		
	2018	2019	2020
	Inventories (short tons); Ratios (percent)		
Imports from France: Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***
Imports from Japan: Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***
Imports from Spain: Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***
Imports from subject sources: Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***
Imports from nonsubject sources: Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***
Imports from all import sources: Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Responding U.S. importers' end-of-period inventories of imports from France, Japan, and Spain each increased during 2018-20 by *** percent, *** percent, and *** percent, respectively. Overall, end-of-period inventories of subject imports *** from 2018 to 2020. The ratios of US. importers' end-of-period inventories of subject imports to their U.S. imports and U.S. shipments of subject imports never exceeded *** percent in any year during 2018-20.

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of methionine from France, Japan, Spain, or nonsubject sources after December 31, 2020. The majority of arranged imports during January-December 2021 reported by responding U.S. importers are from Spain. Table VII-14 presents U.S. importers' arranged imports after December 31, 2020.

Table VII-14
Methionine: Arranged imports, January 2021 to December 2021

Item	Period				
	Jan-Mar 2021	Apr-Jun 2021	Jul-Sept 2021	Oct-Dec 2021	Total
	Quantity (short tons)				
Arranged U.S. imports from.--					
France	***	***	***	***	***
Japan	***	***	***	***	***
Spain	***	***	***	***	***
Subject sources	***	***	***	***	***
All other sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Antidumping or countervailing duty orders in third-country markets

On April 10, 2019, the Ministry of Commerce of the People's Republic of China ("MOFCOM") announced an antidumping investigation on imports of methionine from Singapore, Japan, and Malaysia.[24] On April 3, 2020, MOFCOM announced it would extend the period of investigation by six months until October 10, 2020; on October 9, 2020, it terminated the investigation.[25]

Information on nonsubject countries

Methionine manufacturing capacity worldwide increased significantly in recent years, particularly in Asia (the overall increase was reportedly spurred by increasing demand for methionine in Asia, Eastern Europe, South America, and other world regions).[26] Tables VII-15 and VII-16 list capacity and production levels in some of the major producing nonsubject countries.

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[24] Ministry of Commerce, People's Republic of China (MOFCOM), MOFCOM Announcement No. 16 of 2019 on Filing Anti-dumping Investigation against Imports of Methionine Originating in Singapore, Malaysia and Japan," April 11, 2019, found at http://english.mofcom.gov.cn/article/policyrelease/buwei/201904/20190402854006.shtml.

[25] Evonik, "MOFCOM, China Expands the Investigation Period of Methionine Anti-Dumping Case by Six Months," Press Release, April 3, 2020, found at https://animal-nutrition.evonik.com/en/mofcom-china-expands-the-investigation-period-of-methionine-anti-dumping-case-by-six-months-127761.html; FeedInfo, "Interview: Evonik Discusses Concentration of its Global Methionine Hubs," October 29, 2020, found at https://www.feedinfo.com/our-content/interview-evonik-discusses-concentration-of-its-global-methionine-hubs/209435; DHH, "International Trade and Customs Affairs Newsletter November 2020," found at http://www.deheng.com/a/PUBLICATIONS/DHH%20Research/20201112/1562.html#:~:text=On%20October%209%2C%202020%2C%20the,from%20Singapore%2C%20Malaysia%20and%20Japan.

[26] Prescient & Strategic Intelligence, Methionine Market Research Report: by Form (Powder, Liquid), by Application (Animal Feed Additives, Pharmaceuticals, Food Processing, Aquaculture), Type (DL-Methionine, L-Methionine, Methionine Hydroxy Analog) – Global Market Size, Share, Development, Growth, and Demand Forecast, 2013–2023, found at https://www.psmarketresearch.com/market-analysis/methionine-market. ***. This market research report indicates that Asia Pacific is "the fastest growing region" for methionine, estimating the market will grow by 10.3 percent during 2018-23. It adds that of all the forms, liquid methionine is expected to see the largest growth, estimating a compound annual growth rate of 32.2 percent.

Table VII-15
Methionine: Production capacity in nonsubject countries, 2019

Country	DLM	MHA	L-Methionine (feed grade)
		Quantity (1,000 short tons)	
China	***	***	N/A
Malaysia	N/A	N/A	***
Singapore	331	N/A	N/A
Belgium	***	N/A	N/A
Germany	***	N/A	N/A

Note: These data reflect capacity estimates at different points in time in 2019 versus the annual data in Part IV of this report.

Source: ***; Singapore data: Evonik, "Evonik Commissions Second Complex for MetAMINO® Production in Singapore," press release, June 18, 2019, found at https://corporate.evonik.com/en/evonik-commissions-second-complex-for-metamino-production-in-singapore-113765.html.

Table VII-16
Methionine: Production in nonsubject countries, 2014-18

Country	2014	2015	2016	2017	2018
			Quantity (1,000 short tons)		
China	***	***	***	***	***
Japan	***	***	***	***	***
Malaysia	***	***	***	***	***
Singapore	***	***	***	***	***
Western Europe	***	***	***	***	***

Note: As noted for each country, some of the data reflect adjustments to present the data as one form rather than two forms.

Source: ***.

Separately, Evonik announced on November 12, 2019, that it had declared force majeure for its methionine production in Belgium because of problems with its HCN supply.[27] It reportedly resumed production on November 26, 2019.[28] On October 13, 2020, Evonik announced that it will consolidate its methionine production in three worldwide hubs—Mobile, Alabama, USA; Antwerp, Belgium; and Singapore—to enable economies of scale and to focus on use of the world-class, cost-efficient production facilities at each site.[29] The company announced at the same time that it would stop production of methionine at a smaller methionine production facility in Wesseling, Germany, and will invest in upgrading production of the methionine intermediate methyl mercaptan-propionaldehyde ("MMP") at the site for supply to its Antwerp methionine production site.[30]

Table VII-17 presents data for global exports of methionine and organo-compounds in descending order of quantity for 2020. The leading exporters of methionine and organo-compounds, by quantity, in 2020, were China, the United States, Japan, and Malaysia accounting for 31.5 percent, 16.4 percent, 15.9 percent, and 10.1 percent, respectively.

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[27] Evonik, "Evonik Declares Force Majeure for Its Methionine Production in Antwerp," press release, November 12, 2019, found at https://animal-nutrition.evonik.com/en/evonik-declares-force-majeure-for-its-methionine-production-in-antwerp-119787.html.

[28] Jane Byrne, "Production Resumes at Evonik Methionine Plants in Antwerp," FeedNavigator.com, November 26, 2019, found at https://www.feednavigator.com/Article/2019/11/26/Production-resumes-at-Evonik-methionine-plants#:~:text=Production%20resumes%20at%20Evonik%20methionine%20plants%20in%20Antwerp&text=Evonik%20says%20the%20force%20majeure,hydrocyanic%20acid%20(HCN)%20supply.

[29] Evonik, "Evonik to Concentrate MetAMINO® Production at its Three, World-Scale, Best-in-Class Hubs," press release, October 13, 2020, found at https://corporate.evonik.com/en/investor-relations/evonik-to-concentrate-metamino-production-at-its-three-world-scale-best-in-class-hubs-145041.html; FeedInfo, "Interview: Evonik Discusses Concentration of its Global Methionine Hubs," October 29, 2020, found at https://www.feedinfo.com/our-content/interview-evonik-discusses-concentration-of-its-global-methionine-hubs/209435.

[30] Evonik, "Evonik to Concentrate MetAMINO® Production at its Three, World-Scale, Best-in-Class Hubs," press release, October 13, 2020, found at https://corporate.evonik.com/en/investor-relations/evonik-to-concentrate-metamino-production-at-its-three-world-scale-best-in-class-hubs-145041.html; FeedInfo, "Interview: Evonik Discusses Concentration of its Global Methionine Hubs," October 29, 2020, found at https://www.feedinfo.com/our-content/interview-evonik-discusses-concentration-of-its-global-methionine-hubs/209435

Table VII-17
Methionine and organo-compounds: Global exports by exporter, 2018-20

Exporter	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
United States	254,928	254,877	281,274
China	499,900	503,117	539,519
Japan	184,797	277,224	272,216
Malaysia	142,621	180,304	172,269
Belgium	399,170	131,695	116,136
Germany	111,314	71,211	90,587
France	180,555	74,506	58,287
Netherlands	39,321	40,044	37,068
India	8,274	12,263	23,023
South Korea	20,261	20,825	22,048
Russia	22,992	19,902	18,611
Italy	10,561	10,189	10,537
All other exporters	168,209	83,038	69,709
All reporting exporters	2,042,903	1,679,195	1,711,284
	Value (1,000 dollars)		
United States	663,510	615,787	602,763
China	1,789,781	1,824,756	1,923,074
Japan	615,069	736,453	729,815
Malaysia	274,384	304,715	301,206
Belgium	734,856	330,772	294,743
Germany	380,596	323,879	331,912
France	314,209	192,302	165,941
Netherlands	139,520	143,340	135,754
India	101,599	133,073	190,890
South Korea	93,155	97,355	96,710
Russia	46,002	37,748	37,387
Italy	95,869	92,181	92,951
All other exporters	657,175	519,648	545,418
All reporting exporters	5,905,725	5,352,010	5,448,564

Table continued on next page.

Table VII-17—Continued
Methionine and organo-compounds: Global exports by exporter, 2018-20

Exporter	Calendar year		
	2018	2019	2020
	Unit value (dollars per short ton)		
United States	2,603	2,416	2,143
China	3,580	3,627	3,564
Japan	3,328	2,657	2,681
Malaysia	1,924	1,690	1,748
Belgium	1,841	2,512	2,538
Germany	3,419	4,548	3,664
France	1,740	2,581	2,847
Netherlands	3,548	3,580	3,662
India	12,279	10,852	8,291
South Korea	4,598	4,675	4,386
Russia	2,001	1,897	2,009
Italy	9,078	9,047	8,821
All other exporters	3,907	6,258	7,824
All reporting exporters	2,891	3,187	3,184
	Share of quantity (percent)		
United States	12.5	15.2	16.4
China	24.5	30.0	31.5
Japan	9.0	16.5	15.9
Malaysia	7.0	10.7	10.1
Belgium	19.5	7.8	6.8
Germany	5.4	4.2	5.3
France	8.8	4.4	3.4
Netherlands	1.9	2.4	2.2
India	0.4	0.7	1.3
South Korea	1.0	1.2	1.3
Russia	1.1	1.2	1.1
Italy	0.5	0.6	0.6
All other exporters	8.2	4.9	4.1
All reporting exporters	100.0	100.0	100.0

Note: United States is shown at the top, all remaining top exporters shown in descending order of 2020 data, by quantity. HS subheadings 2930.40 and 2930.90 contain products outside the scope of these investigations.

Source: Official exports statistics under HS subheading 2930.40 and 2930.90 as reported by UN Comtrade in the Global Trade Atlas database, accessed April 9, 2021.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, Federal Register notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
85 FR 47243, August 4, 2020	*Methionine From France, Japan, and Spain; Institution of Anti-Dumping Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.govinfo.gov/content/pkg/FR-2020-08-04/pdf/2020-16923.pdf
85 FR 52324, August 25, 2020	*Methionine From France, Japan, and Spain: Initiation of Less-Than-Fair-Value Investigations*	https://www.govinfo.gov/content/pkg/FR-2020-08-25/pdf/2020-18592.pdf
85 FR 58385, September 18, 2020	*Methionine From France, Japan, and Spain; Determinations*	https://www.govinfo.gov/content/pkg/FR-2020-09-18/pdf/2020-20588.pdf
86 FR 12614, March 4, 2021	*Methionine From Spain: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Negative Determination of Critical Circumstances, Postponement of Final Determination, and Extension of Provisional Measures*	https://www.govinfo.gov/content/pkg/FR-2021-03-04/pdf/2021-04416.pdf
86 FR 12625, March 4, 2021	*Methionine From Japan: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Affirmative Determination of Critical Circumstances and Postponement of Final Determination and Extension of Provisional Measures*	https://www.govinfo.gov/content/pkg/FR-2021-03-04/pdf/2021-04417.pdf

Citation	Title	Link
86 FR 12627, March 4, 2021	*Methionine From France: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Partial Affirmative Determination of Critical Circumstances*	https://www.govinfo.gov/content/pkg/FR-2021-03-04/pdf/2021-04415.pdf
86 FR 13585, March 9, 2021	*Methionine From France, Japan, and Spain; Scheduling of the Final Phase of Antidumping Duty Investigations*	https://www.govinfo.gov/content/pkg/FR-2021-03-09/pdf/2021-04860.pdf
86 FR 26697 May 17, 2021	*Methionine From France: Final Determination of Sales at Less Than Fair Value and Final Partial Determination of Critical Circumstances*	https://www.govinfo.gov/content/pkg/FR-2021-05-17/pdf/2021-10264.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared in the United States International Trade Commission's hearing via video conference:

Subject: Methionine from France, Japan, and Spain

Inv. Nos.: 731-TA-1534-1536 (Final)

Date and Time: May 11, 2021 - 9:30 a.m.

OPENING REMARKS:

In Support of Imposition (**Christopher T. Cloutier**, Schagrin Associates)
In Opposition to Imposition (**Christine M. Streatfeild**, Baker & McKenzie LLP)

In Support of the Imposition of Antidumping Duty Orders:

Schagrin Associates
Washington, DC
on behalf of

Novus International, Inc.

Dan Meagher, President and Chief Executive Officer, Novus International, Inc.

Jeff Klopfenstein, Senior Consultant, Novus International, Inc.

Ed Galo, Chief Commercial Officer, Novus International, Inc.

Jared Hux, Director, Methionine Business, Novus International, Inc.

Randy Khalaf, Chief Financial Officer, Novus International, Inc.

Christopher T. Cloutier)
) – OF COUNSEL
Elizabeth J. Drake)

In Opposition to the Imposition of
Antidumping Duty Orders:

Baker & McKenzie LLP
Washington, DC
on behalf of

Sumitomo Chemical Company, Ltd.
Sumitomo Chemical America, Inc.
("Sumitomo Chemical")

Dr. Fumiharu Ishige, General Manager, Business Planning and Administration Department, Sumitomo Chemical

Scott Mitchell, President, Sumitomo Chemical

Dan Barnes, General Manager - North America, Sumitomo Chemical

Ted Williams, Chief Operations Officer, D&D Ingredient Distributors, Inc.

Christine M. Streatfeild)
) – OF COUNSEL
Kevin M. O'Brien)

Steptoe & Johnson LLP
Washington, DC
on behalf of

Adisseo France S.A.S.
Adisseo Espana S.A.
Adisseo USA, Inc.
Allen Harim Foods LLC

Guy Harari, Senior Global Director and President, Adisseo USA, Inc.

Frank Chmitelin, Executive Vice President of Sales, Adisseo France S.A.S.

Dennis Cross, Senior Manager of Purchasing, Allen Harim Foods LLC

Amy Batal, Corporate Nutritionist, Sanderson Farms, Inc.

Kristin H. Mowry, Counsel to Sanderson Farms, Inc., Mowry & Grimson, PLLC

Jim Dougan, Vice President, Economic Consulting Services, LLC

In Opposition to the Imposition of
Antidumping Duty Orders (continued):

Jerrie V. Mirga, Vice President, Economic Consulting Services, LLC

Eric C. Emerson)
) – OF COUNSEL
Luke M. Tillman)

INTERESTED PARTY IN OPPOSITION:

Pet Food Institute
Washington, DC

Peter Tabor, Vice President, Regulatory and International Affairs

REBUTTAL/CLOSING REMARKS:

In Support of Imposition (**Elizabeth J. Drake**, Schagrin Associates)
In Opposition to Imposition (**Eric C. Emerson**, Steptoe & Johnson LLP)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
Methionine: Summary data concerning the U.S. market, 2018-20
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Comparison years		
	2018	2019	2020	2018-20	2018-19	2019-20
U.S. consumption quantity:						
Amount	***	***	***	▲***	▲***	▲***
Producers' share (fn1)	***	***	***	▼***	▼***	▼***
Importers' share (fn1):						
France	***	***	***	▼***	▼***	▼***
Japan	***	***	***	▲***	▲***	▲***
Spain	***	***	***	▲***	▲***	▲***
Subject sources	***	***	***	▲***	▲***	▲***
China	***	***	***	▼***	▼***	▼***
All other sources	***	***	***	▲***	▲***	▲***
Nonsubject sources	***	***	***	▼***	▼***	▼***
All import sources	***	***	***	▲***	▲***	▲***
U.S. consumption value:						
Amount	***	***	***	▼***	▼***	▼***
Producers' share (fn1)	***	***	***	▼***	▼***	▼***
Importers' share (fn1):						
France	***	***	***	▼***	▼***	▲***
Japan	***	***	***	▲***	▲***	▲***
Spain	***	***	***	▲***	▲***	▲***
Subject sources	***	***	***	▲***	▲***	▲***
China	***	***	***	▼***	▼***	▼***
All other sources	***	***	***	▲***	▲***	▲***
Nonsubject sources	***	***	***	▼***	▼***	▼***
All import sources	***	***	***	▲***	▲***	▲***
U.S. imports from:						
France:						
Quantity	7,298	5,557	5,901	▼(19.1)	▼(23.9)	▲6.2
Value	17,102	11,553	11,474	▼(32.9)	▼(32.4)	▼(0.7)
Unit value	$2,343	$2,079	$1,944	▼(17.0)	▼(11.3)	▼(6.5)
Ending inventory quantity	***	***	***	▲***	▼***	▲***
Japan:						
Quantity	12,225	17,861	30,893	▲152.7	▲46.1	▲73.0
Value	26,680	31,962	52,135	▲95.4	▲19.8	▲63.1
Unit value	$2,182	$1,789	$1,688	▼(22.7)	▼(18.0)	▼(5.7)
Ending inventory quantity	***	***	***	▲***	▲***	▲***
Spain:						
Quantity	14,198	37,860	43,263	▲204.7	▲166.7	▲14.3
Value	27,540	62,666	62,651	▲127.5	▲127.5	▼(0.0)
Unit value	$1,940	$1,655	$1,448	▼(25.3)	▼(14.7)	▼(12.5)
Ending inventory quantity	***	***	***	▲***	▼***	▲***

Table continued.

Table C-1--Continued
Methionine: Summary data concerning the U.S. market, 2018-20
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Comparison years		
	2018	2019	2020	2018-20	2018-19	2019-20
Subject sources:						
Quantity	33,722	61,278	80,057	▲137.4	▲81.7	▲30.6
Value	71,322	106,181	126,259	▲77.0	▲48.9	▲18.9
Unit value	$2,115	$1,733	$1,577	▼(25.4)	▼(18.1)	▼(9.0)
Ending inventory quantity	***	***	***	▲***	▲***	▲***
China:						
Quantity	25,280	3,936	240	▼(99.1)	▼(84.4)	▼(93.9)
Value	54,128	10,183	3,429	▼(93.7)	▼(81.2)	▼(66.3)
Unit value	$2,141	$2,587	$14,296	▲567.7	▲20.8	▲452.6
All other sources:						
Quantity	3,593	5,118	5,552	▲54.5	▲42.4	▲8.5
Value	7,121	9,249	9,539	▲34.0	▲29.9	▲3.1
Unit value	$1,982	$1,807	$1,718	▼(13.3)	▼(8.8)	▼(4.9)
Nonsubject sources:						
Quantity	28,873	9,054	5,792	▼(79.9)	▼(68.6)	▼(36.0)
Value	61,249	19,432	12,968	▼(78.8)	▼(68.3)	▼(33.3)
Unit value	$2,121	$2,146	$2,239	▲5.5	▲1.2	▲4.3
Ending inventory quantity	***	***	***	▼***	▼***	▼***
All import sources:						
Quantity	62,594	70,332	85,849	▲37.2	▲12.4	▲22.1
Value	132,571	125,613	139,227	▲5.0	▼(5.2)	▲10.8
Unit value	$2,118	$1,786	$1,622	▼(23.4)	▼(15.7)	▼(9.2)
Ending inventory quantity	***	***	***	▲***	▲***	▲***
U.S. producers':						
Average capacity quantity	***	***	***	***	***	***
Production quantity	***	***	***	▼***	▼***	▼***
Capacity utilization (fn1)	***	***	***	▼***	▼***	▼***
U.S. shipments:						
Quantity	***	***	***	▲***	▲***	▲***
Value	***	***	***	▼***	▼***	▼***
Unit value	***	***	***	▼***	▼***	▼***
Export shipments:						
Quantity	***	***	***	▲***	▲***	▲***
Value	***	***	***	▼***	▼***	▼***
Unit value	***	***	***	▼***	▼***	▼***
Ending inventory quantity	***	***	***	▼***	▼***	▼***
Inventories/total shipments (fn1)	***	***	***	▼***	▼***	▼***

Table continued.

Table C-1--Continued
Methionine: Summary data concerning the U.S. market, 2018-20
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Comparison years		
	2018	2019	2020	2018-20	2018-19	2019-20
U.S. producers'--Continued:						
Production workers	***	***	***	▼***	▼***	▼***
Hours worked (1,000s)	***	***	***	▼***	▼***	▼***
Wages paid ($1,000)	***	***	***	▼***	▼***	▼***
Hourly wages (dollars per hour)	***	***	***	▲***	▲***	▼***
Productivity (short tons per 1,000 hours)	***	***	***	▲***	▲***	▲***
Unit labor costs	***	***	***	▼***	▲***	▼***
Net sales:						
Quantity	***	***	***	▲***	▲***	▲***
Value	***	***	***	▼***	▼***	▼***
Unit value	***	***	***	▼***	▼***	▼***
Cost of goods sold (COGS)	***	***	***	▼***	▼***	▼***
Gross profit or (loss) (fn2)	***	***	***	▼***	▼***	▼***
SG&A expenses	***	***	***	▼***	▼***	▲***
Operating income or (loss) (fn2)	***	***	***	▼***	▼***	▼***
Net income or (loss) (fn2)	***	***	***	▼***	▼***	▲***
Unit COGS	***	***	***	▼***	▼***	▼***
Unit SG&A expenses	***	***	***	▼***	▼***	▼***
Unit operating income or (loss) (fn2)	***	***	***	▼***	▼***	▼***
Unit net income or (loss) (fn2)	***	***	***	▼***	▼***	▲***
COGS/sales (fn1)	***	***	***	▲***	▲***	▼***
Operating income or (loss)/sales (fn1)	***	***	***	▼***	▼***	▼***
Net income or (loss)/sales (fn1)	***	***	***	▼***	▼***	▲***
Capital expenditures	***	***	***	▼***	▼***	▼***
Research and development expenses	***	***	***	▼***	▼***	▼***
Net assets	***	***	***	▼***	▼***	▼***

Note.--Shares and ratios shown as “0.0” percent represent non-zero values less than “0.05” percent (if positive) and greater than “(0.05)” percent (if negative). Zeroes, null values, and undefined calculations are suppressed and shown as “---“. Period changes preceded by a “▲” represent an increase, while period changes preceded by a “▼” represent a decrease.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits; The directional change in profitability provided when one or both comparison values represent a loss.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 2930.40.0000 and 2930.90.4600, accessed April 6, 2021.

APPENDIX D

METHIONINE PURCHASERS BY METHIONINE TYPE, SOURCE, AND FIRM TYPE

Table D-1
Methionine: Purchasers by methionine type, source, and firm type

Purchaser	Type Purchased	Firm Type	Source(s)	2020 Supplier(s)
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***

Table continued on next page.

Table D-1—Continued.
Methionine: Purchasers by methionine type, source, and firm type

Purchaser	Type Purchased	Firm Type	Source(s)	2020 Supplier(s)
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX E

U.S. PRODUCERS' AND U.S. IMPORTERS' U.S. SHIPMENTS BY PRODUCT TYPE

Table E-1
Methionine: U.S. producers' U.S. shipments by product type, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. producers' U.S. shipments.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Value (1,000 dollars)		
U.S. producers' U.S. shipments.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Unit value (dollars per short ton)		
U.S. producers' U.S. shipments.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Share of quantity (percent)		
U.S. producers' U.S. shipments.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0
	Share of value (percent)		
U.S. producers' U.S. shipments.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-2
Methionine: U.S. importers' U.S. shipments by product type, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. shipments of imports from France.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Value (1,000 dollars)		
U.S. shipments of imports from France.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Unit value (dollars per short ton)		
U.S. shipments of imports from France.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Share of quantity (percent)		
U.S. shipments of imports from France.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments of imports from France.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0

Table continued on next page.

Table E-2—Continued
Methionine: U.S. importers' U.S. shipments by product type, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. shipments of imports from Japan.— DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Value (1,000 dollars)		
U.S. shipments of imports from Japan.— DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Unit value (dollars per short ton)		
U.S. shipments of imports from Japan.— DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Share of quantity (percent)		
U.S. shipments of imports from Japan.— DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments of imports from Japan.— DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0

Table continued on next page.

Table E-2—Continued
Methionine: U.S. importers' U.S. shipments by product type, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. shipments of imports from Spain.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Value (1,000 dollars)		
U U.S. shipments of imports from Spain.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Unit value (dollars per short ton)		
U.S. shipments of imports from Spain.— DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Share of quantity (percent)		
U.S. shipments of imports from Spain.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments of imports from Spain.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0

Table continued on next page.

Table E-2—Continued
Methionine: U.S. importers' U.S. shipments by product type, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. shipments of imports from subject sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Value (1,000 dollars)		
U.S. shipments of imports from subject sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Unit value (dollars per short ton)		
U.S. shipments of imports from subject sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Share of quantity (percent)		
U.S. shipments of imports from subject sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments of imports from subject sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0

Table continued on next page.

Table E-2—Continued
Methionine: U.S. importers' U.S. shipments by product type, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. shipments of imports from nonsubject sources.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Value (1,000 dollars)		
U.S. shipments of imports from nonsubject sources.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Unit value (dollars per short ton)		
U.S. shipments of imports from nonsubject sources.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Share of quantity (percent)		
U.S. shipments of imports from nonsubject sources.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments of imports from nonsubject sources.-- DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0

Table continued on next page.

Table E-2—Continued
Methionine: U.S. importers' U.S. shipments by product type, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
U.S. shipments of imports from all import sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Value (1,000 dollars)		
U.S. shipments of imports from all import sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Unit value (dollars per short ton)		
U.S. shipments of imports from all import sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	***	***	***
	Share of quantity (percent)		
U.S. shipments of imports from all import sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments of imports from all import sources.--DLM, solid, 99 activity level	***	***	***
MHA, solid, 84 activity level	***	***	***
MHA, liquid, 88 activity level	***	***	***
Other	***	***	***
All product types	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX F

U.S. PRODUCERS' U.S. SHIPMENTS AND U.S. IMPORTS OF DL-METHIONINE AND METHIONINE HYDROXY ANALOG

Table F-1
Methionine: U.S. producers' U.S. shipments and U.S. imports of DL-methionine, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
DL-methionine.—			
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.—			
France	7,298	5,557	5,689
Japan	8,223	14,338	24,401
Spain	16	---	22
Subject sources	15,537	19,894	30,112
Subject sources less Spain	15,521	19,894	30,090
China	5,083	2,417	227
All other sources	3,593	5,118	5,552
Nonsubject sources	8,677	7,535	5,779
Nonsubject sources plus Spain	8,693	7,535	5,801
All import sources	24,214	27,429	35,891
All sources	***	***	***
	Value (1,000 dollars)		
DL-methionine.—			
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.—			
France	17,102	11,553	11,102
Japan	19,270	26,805	42,978
Spain	28	---	35
Subject sources	36,400	38,358	54,116
Subject sources less Spain	36,372	38,358	54,081
China	11,257	5,014	1,400
All other sources	7,121	9,249	9,539
Nonsubject sources	18,378	14,263	10,940
Nonsubject sources plus Spain	18,406	14,263	10,975
All import sources	54,779	52,621	65,055
All sources	***	***	***

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Table F-1—Continued
Methionine: U.S. producers' U.S. shipments and U.S. imports of DL-methionine, 2018-20

Item	Calendar year		
	2018	2019	2020
	Unit value (dollars per short ton)		
DL-methionine.—			
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.—			
France	2,343	2,079	1,952
Japan	2,343	1,870	1,761
Spain	1,760	---	1,597
Subject sources	2,343	1,928	1,797
Subject sources less Spain	2,343	1,928	1,797
China	2,215	2,074	6,179
All other sources	1,982	1,807	1,718
Nonsubject sources	2,118	1,893	1,893
Nonsubject sources plus Spain	2,117	1,893	1,892
All import sources	2,262	1,918	1,813
All sources	***	***	***
	Share of quantity (percent)		
DL-methionine.—			
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.—			
France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less Spain	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus Spain	***	***	***
All import sources	***	***	***
All sources	100.0	100.0	100.0

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Table F-1—Continued
Methionine: U.S. producers' U.S. shipments and U.S. imports of DL-methionine, 2018-20

Item	Calendar year		
	2018	2019	2020
	Share of value (percent)		
DL-methionine.— U.S. producers' U.S. shipments	***	***	***
U.S. imports from.— France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less Spain	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus Spain	***	***	***
All import sources	***	***	***
All sources	100.0	100.0	100.0
	Ratio to overall apparent consumption quantity (percent)		
DL-methionine.— U.S. producers' U.S. shipments	***	***	***
U.S. imports from.— France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less Spain	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus Spain	***	***	***
All import sources	***	***	***
All sources	***	***	***

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Table F-1—Continued
Methionine: U.S. producers' U.S. shipments and U.S. imports of DL-methionine, 2018-20

Item	Calendar year		
	2018	2019	2020
	Ratio to overall apparent consumption value (percent)		
DL-methionine.—			
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.—			
France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less Spain	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus Spain	***	***	***
All import sources	***	***	***
All sources	***	***	***

Note: Based on official U.S. import statistics, there were no U.S. imports of DL-methionine from Spain in the twelve-month period preceding the filing the petitions, which is below the 3 percent negligibility threshold. Accordingly, the subtotals for subject and nonsubject sources in this table are shown with and without U.S. imports from Spain.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting number 2930.40.0000, accessed April 6, 2021.

Table F-2
Methionine: U.S. producers' U.S. shipments and U.S. imports of methionine hydroxy analog, 2018-20

Item	Calendar year		
	2018	2019	2020
	Quantity (short tons)		
Methionine hydroxy analog.-- U.S. producers' U.S. shipments	***	***	***
U.S. imports from.— France	---	---	212
Japan	4,002	3,524	6,492
Spain	14,183	37,860	43,241
Subject sources	18,184	41,384	49,944
Subject sources less France	18,184	41,384	49,732
China	20,196	1,519	13
All other sources	---	---	---
Nonsubject sources	20,196	1,519	13
Nonsubject sources plus France	20,196	1,519	226
All import sources	38,381	42,903	49,958
All sources	***	***	***
	Value (1,000 dollars)		
Methionine hydroxy analog.-- U.S. producers' U.S. shipments	***	***	***
U.S. imports from.-- France	---	---	371
Japan	7,410	5,157	9,157
Spain	27,512	62,666	62,615
Subject sources	34,922	67,823	72,143
Subject sources less France	34,922	67,823	71,772
China	42,870	5,169	2,029
All other sources	---	---	---
Nonsubject sources	42,870	5,169	2,029
Nonsubject sources plus France	42,870	5,169	2,400
All import sources	77,792	72,992	74,172
All sources	***	***	***

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Table F-2—Continued
Methionine: U.S. producers' U.S. shipments and U.S. imports of methionine hydroxy analog, 2018-20

Item	Calendar year		
	2018	2019	2020
	Unit value (dollars per short ton)		
Methionine hydroxy analog.-- U.S. producers' U.S. shipments	***	***	***
U.S. imports from.-- France	---	---	1,749
Japan	1,852	1,464	1,411
Spain	1,940	1,655	1,448
Subject sources	1,920	1,639	1,444
Subject sources less France	1,920	1,639	1,443
China	2,123	3,403	153,044
All other sources	---	---	---
Nonsubject sources	2,123	3,403	153,044
Nonsubject sources plus France	2,123	3,403	10,641
All import sources	2,027	1,701	1,485
All sources	***	***	***
	Share of quantity (percent)		
Methionine hydroxy analog.-- U.S. producers' U.S. shipments	***	***	***
U.S. imports from.-- France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less France	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus France	***	***	***
All import sources	***	***	***
All sources	100.0	100.0	100.0

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Table F-2—Continued
Methionine: U.S. producers' U.S. shipments and U.S. imports of methionine hydroxy analog, 2018-20

Item	Calendar year		
	2018	2019	2020
	Share of value (percent)		
Methionine hydroxy analog.-- U.S. producers' U.S. shipments	***	***	***
U.S. imports from.-- France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less France	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus France	***	***	***
All import sources	***	***	***
All sources	100.0	100.0	100.0
	Ratio to overall apparent consumption quantity (percent)		
Methionine hydroxy analog.-- U.S. producers' U.S. shipments	***	***	***
U.S. imports from.— France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less France	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus France	***	***	***
All import sources	***	***	***
All sources	***	***	***

Table continued on next page.

Table F-2—Continued
Methionine: U.S. producers' U.S. shipments and U.S. imports of methionine hydroxy analog, 2018-20

Item	Calendar year		
	2018	2019	2020
	Ratio to overall apparent consumption value (percent)		
Methionine hydroxy analog.-- U.S. producers' U.S. shipments	***	***	***
U.S. imports from.-- France	***	***	***
Japan	***	***	***
Spain	***	***	***
Subject sources	***	***	***
Subject sources less France	***	***	***
China	***	***	***
All other sources	***	***	***
Nonsubject sources	***	***	***
Nonsubject sources plus France	***	***	***
All import sources	***	***	***
All sources	***	***	***

Note: Based on official U.S. import statistics, U.S. imports of methionine hydroxy analog from France accounted for 0.1 percent of total U.S. imports in the twelve-month period preceding the filing the petitions, which is below the 3 percent negligibility threshold. Accordingly, the subtotals for subject and nonsubject sources in this table are shown with and without U.S. imports from France.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting number 2930.90.4600, accessed April 6, 2021.