

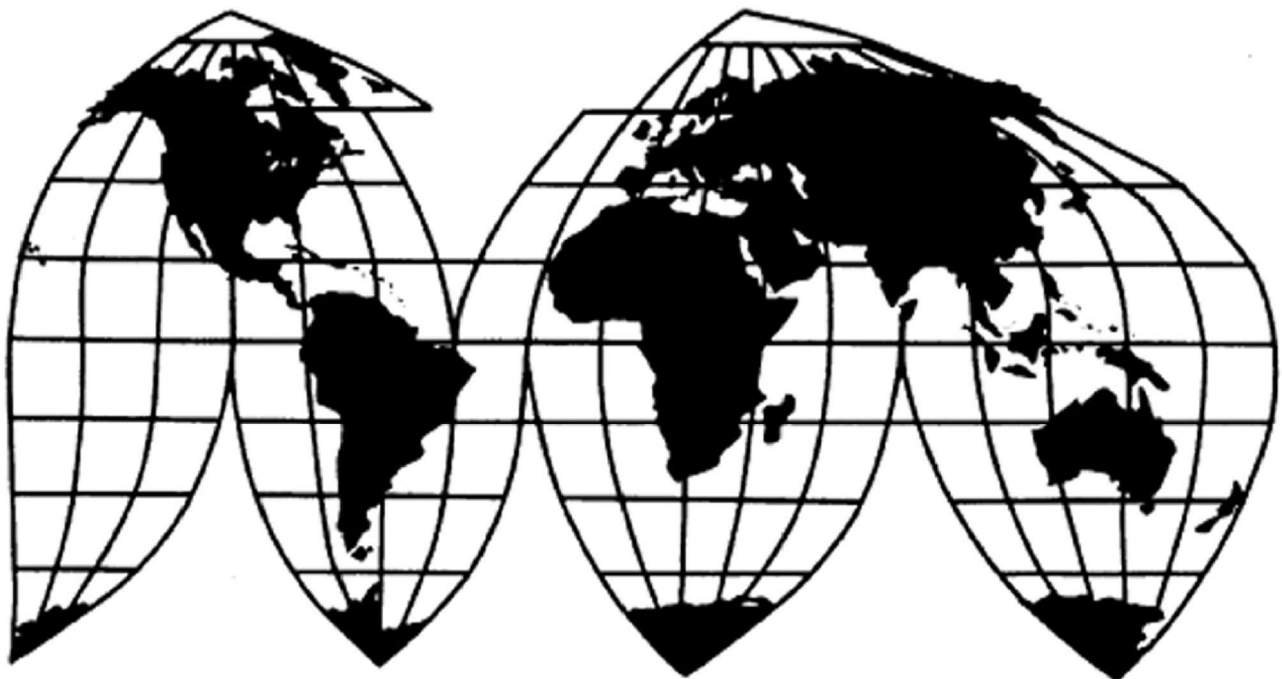
Glycine from China, India, Japan, and Thailand

Investigation Nos. 701-TA-603-604 and 731-TA-1413-1415 (Review)

Publication 5564

November 2024

U.S. International Trade Commission



U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-603-604 and 731-TA-1413-1415 (Review)

Glycine from China, India, Japan, and Thailand

DETERMINATIONS

On the basis of the record¹ developed in the subject five-year reviews, the United States International Trade Commission (“Commission”) determines, pursuant to the Tariff Act of 1930 (“the Act”), that revocation of the antidumping duty orders on glycine from India, Japan, and Thailand, and the countervailing duty orders on glycine from China and India would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission instituted these reviews on May 1, 2024 (89 FR 35237) and determined on August 5, 2024, that it would conduct expedited reviews (89 FR 76507, September 18, 2024).

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

Views of the Commission

Based on the record in these five-year reviews, we determine under section 751(c) of the Tariff Act of 1930, as amended (“the Tariff Act”), that revocation of the antidumping duty orders on glycine from India, Japan, and Thailand and the countervailing duty orders on glycine from China and India would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

Original Investigations. In March 2018, GEO Specialty Chemicals, Inc., (“GEO”), and Chattem Chemicals, Inc. (“Chattem”), domestic producers of glycine, filed antidumping duty petitions concerning glycine from India, Japan, and Thailand and countervailing duty petitions concerning glycine from China, India, and Thailand.¹ In June 2019, the Commission determined that a domestic industry was materially injured by reason of less than fair value (“LTFV”) imports of glycine from India and Japan, and by imports of glycine that were subsidized by the governments of China and India.² On June 21, 2019, the Department of Commerce (“Commerce”) issued antidumping duty orders for India and Japan and countervailing duty orders for India and China.³ With respect to the Thailand investigations, as a result of Commerce reaching a final negative countervailing duty determination, the Commission

¹ *Glycine from China, India, and Japan*, Inv. Nos. 701-TA-603-604 and 731-TA-1413-1414 (Final), USITC Pub. 4900 (June 2018) (“*Original Determination*”) at 3.

² *Original Determination*, USITC Pub. 4900 at 1. Although the petitions for the investigations of glycine from China, India, Japan, and Thailand were filed on the same day, March 28, 2018, the investigation schedules became staggered into two stages when Commerce postponed its final antidumping and countervailing duty determinations regarding Thailand, thereby necessitating earlier final determinations in the antidumping duty investigations involving glycine from India and Japan, and countervailing duty investigations involving glycine from China and India. *Id.* Commerce extended the investigations beyond the original postponed schedule due to allegations of evasion by means of transshipment through Thailand. See Memorandum of Postponement of the Final Determinations in the Less-Than-Fair-Value and Countervailing Duty Investigations of Glycine from Thailand, Cases A-549-837 and C-549-838, April 24, 2019.

³ *Glycine from India and Japan: Amended Final Affirmative Antidumping Duty Determination and Antidumping Duty Orders*, 84 Fed. Reg. 29170 (June 21, 2019); *Glycine from India and the People's Republic of China: Countervailing Duty Orders*, 84 Fed. Reg. 29173 (June 21, 2019). On July 25, 2019, Commerce published a correction to the final affirmative CVD determination and order for China. *Glycine from the People's Republic of China: Notice of Correction to Final Affirmative Countervailing Duty Determination and Countervailing Duty Order*, 84 Fed. Reg. 35854 (July 25, 2019).

terminated the countervailing duty investigation for Thailand.⁴ Commerce made an affirmative determination in its antidumping duty investigation, however, and in October 2019, the Commission determined that the domestic industry was materially injured by reason of LTFV imports from Thailand.⁵ On October 18, 2019, Commerce issued an antidumping duty order for Thailand.⁶

Current Reviews. On May 1, 2024, the Commission instituted these first five-year reviews of the antidumping duty orders on imports of glycine from India, Japan, and Thailand and countervailing duty orders on glycine from China and India.⁷ Two domestic producers of glycine, Deer Park Glycine, LLC (“DPG”), a subsidiary of GEO, and Chattem (“domestic interested parties”), responded to the notice of institution.⁸ No respondent interested party responded to the notice of institution or participated in these reviews.⁹ On August 5, 2024, the Commission determined that the domestic interested party group response was adequate for all reviews and that the respondent interested party group responses were inadequate for all reviews. Finding no other circumstances that would warrant conducting full reviews, the Commission determined to conduct expedited reviews of the orders.¹⁰ Domestic interested parties subsequently submitted final comments pursuant to Commission rule 207.62(d)(1).¹¹

U.S. industry data are based on the information submitted by the domestic interested parties in their response to the notice of institution, which are estimated to account for ***

⁴ *Glycine from Thailand: Final Negative Countervailing Duty Determination and Final Negative Critical Circumstances Determination*, 84 Fed. Reg. 38007 (Aug. 5, 2019); *Glycine from Thailand; Termination of Investigation*, 84 Fed. Reg. 43618 (Aug. 21, 2019).

⁵ *Glycine from Thailand: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances in Part*, 84 Fed. Reg. 37998 (Aug. 5, 2019); *Glycine from Thailand*, 84 Fed. Reg. 55172 (Oct. 15, 2019). *Glycine from Thailand*, Inv. No. 731-TA-1415 (Final), USITC Pub. 4977 (Oct. 2019) (“*Thailand Determinations*”) at 3. Commissioners Randolph J. Stayin and Amy A. Karpel did not participate in this investigation. The Commission also found that imports subject to Commerce’s affirmative critical circumstances determination were not likely to undermine seriously the remedial effect of the antidumping duty order on Thailand. *Id.* at 26-28.

⁶ *Glycine from Thailand: Antidumping Duty Order*, 84 Fed. Reg. 55912 (Oct. 18, 2019).

⁷ *Glycine from China, India, Japan, and Thailand; Institution of a Five-Year Review*, 89 Fed. Reg. 35237 (May 1, 2024).

⁸ Domestic Interested Parties’ Response to the Notice of Institution, EDIS Doc. 822554 (May 30, 2024) (“Domestic Interested Parties’ Response”).

⁹ Confidential Report, INV-WW-086, Jul 23, 2024 (“CR”) at I-2; *Glycine from China, India, Japan, and Thailand*, Inv. No. 701-TA-603-604 and 731-TA-1413-1415 (Review), USITC Pub. 5564 (November 2024) (“PR”) at I-2.

¹⁰ Explanation of Commission Determination on Adequacy, EDIS Doc. 829359 (Aug. 13, 2024); *Glycine from China, India, Japan, and Thailand; Scheduling of Expedited Five-Year Reviews*, 89 Fed. Reg. 76507 (Sept. 18, 2024).

¹¹ Domestic Interested Parties’ Final Comments, EDIS Doc. 839090 (Oct. 31, 2024).

percent of production of glycine in the United States during 2023.¹² U.S. import data and related information are based on data submitted in the original investigations and Commerce's official import statistics.¹³ Foreign industry data and related information are based on information from the original investigations, information submitted by the domestic interested parties in their response to the notice of institution, and publicly available information compiled by the Commission.¹⁴ No U.S. purchasers of glycine responded to the Commission's adequacy phase questionnaire.¹⁵

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."¹⁶ 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 under this subtitle."¹⁷ The Commission's practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.¹⁸

Commerce has defined the imported merchandise within the scope of the orders under review as follows:

The merchandise covered by these *Orders* is glycine at any purity level or grade. This includes glycine of all purity levels, which covers all forms of crude or technical glycine including, but not

¹² CR/PR at Table I-2.

¹³ See CR/PR at I-11, Table I-6.

¹⁴ CR/PR at I-15 to I-21, Tables I-8 to I-12.

¹⁵ CR/PR at D-3.

¹⁶ 19 U.S.C. § 1677(4)(A).

¹⁷ 19 U.S.C. § 1677(10); see, e.g., *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *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); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); see also S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

¹⁸ See, e.g., *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

limited to, sodium glycinate, glycine slurry and any other forms of amino acetic acid or glycine. Subject merchandise also includes glycine and precursors of dried crystalline glycine that are processed in a third country, including, but not limited to, refining or any other processing that would not otherwise remove the merchandise from the scope of these *Orders* if performed in the country of manufacture of the in-scope glycine or precursors of dried crystalline glycine. Glycine has the Chemical Abstracts Service (CAS) registry number of 56– 40–6.

Glycine and glycine slurry are classified under Harmonized Tariff Schedule of the United States (HTSUS) subheading 2922.49.43.00. Sodium glycinate is classified in the HTSUS under 2922.49.80.00. While the HTSUS subheadings and CAS registry number are provided for convenience and customs purposes, the written description of the scope of these *Orders* is dispositive.¹⁹

Glycine is an organic chemical and a nonessential amino acid that is produced naturally by humans and other organisms as a building block for proteins.²⁰ Commercial production of glycine uses traditional methods of chemical synthesis.²¹ Glycine is most commonly sold in its dry form as a white, free-flowing powder.²² It is used as a sweetener and flavor enhancer in food, beverages, and pharmaceuticals, and is also used in personal care products and pet care products.²³ Glycine is most commonly sold in two grades: United States Pharmacopeial Convention (“USP”) grade, which is typically used for pharmaceutical and food applications, and technical grade, which is used for industrial applications.²⁴ Some applications, including some pharmaceutical applications and semiconductor manufacturing, require glycine with higher

¹⁹ *Glycine from India, Japan, and Thailand: Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders*, 89 Fed. Reg. 74206 (Sept. 12, 2024), and accompanying Issues and Decision Memorandum, Case Nos. A-533-883, A-549-837, A-588-878 (Sept. 5, 2024) at 3; *Glycine from India and the People’s Republic of China: Final Results of the Expedited First Sunset Reviews of the Countervailing Duty Orders*, 89 Fed. Reg. 74898, (Sept. 13, 2024), and accompanying Issues and Decision Memorandum, Case Nos. C-533-884, C-570-081 (Sept. 5, 2024) at 2.

²⁰ CR/PR at I-6.

²¹ CR/PR at I-6.

²² CR/PR at I-6.

²³ CR/PR at I-7.

²⁴ CR/PR at I-6 to I-7.

purity.²⁵ USP-grade glycine, technical-grade glycine, and higher-purity glycine are all chemically identical, but differ by the kinds and amounts of impurities in the product.²⁶

Original Investigations. In the original investigations, the Commission defined a single domestic like product that was coextensive with the scope of the investigations.²⁷ It found that all grades of glycine were encompassed in a single domestic like product, stating that they had common physical characteristics and end uses, shared common channels of distribution, and generally shared common production processes, facilities, and employees.²⁸ The Commission further found, based on its semi-finished like product analysis, that sodium glycinate and glycine slurry were not distinct domestic like products from glycine, given the dedication of those products to the production of glycine, the absence of a separate market for those upstream products, and the relatively small cost of converting sodium glycinate and slurry into glycine.²⁹

Current Reviews. In these first five-year reviews, the record does not contain any new information suggesting that the pertinent product characteristics and uses of glycine have changed since the original investigations.³⁰ The domestic interested parties agree with the definition of the domestic like product from the original investigations.³¹ Accordingly, we define the domestic like product as consisting of all glycine, coextensive with the scope.

B. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry 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.”³² In defining the domestic industry, the Commission’s general practice has been

²⁵ CR/PR at I-7.

²⁶ CR/PR at I-6.

²⁷ *Original Determinations*, USITC Pub. 4900 at 10-11; *Thailand Original Determination*, USITC Pub. 4977 at 4.

²⁸ *Original Determinations*, USITC Pub. 4900 at 10-11; *Thailand Original Determination*, USITC Pub. 4977 at 4.

²⁹ *Original Determinations*, USITC Pub. 4900 at 11; *Thailand Original Determination*, USITC Pub. 4977 at 4.

³⁰ See CR/PR at I-6 to I-7.

³¹ Domestic Interested Parties’ Response at 14.

³² 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. See 19 U.S.C. § 1677.

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.

The Original Investigations. The original investigations presented no domestic industry or related parties issues.³³ The Commission defined the domestic industry as consisting of the two known U.S. producers of glycine, GEO and Chattem.³⁴

The Current Reviews. In these first five-year reviews, the domestic interested parties agree with the definition of the domestic industry from the original investigations.³⁵ There is no indication on the record that there are related party or other domestic industry issues in these reviews.³⁶ Accordingly, consistent with our definition of the domestic like product, we define the domestic industry as all U.S. producers of glycine.

III. Cumulation

A. Legal Standard

With respect to five-year reviews, section 752(a) of the Tariff Act provides as follows: the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.³⁷

Cumulation therefore is discretionary in five-year reviews, unlike original investigations, which are governed by section 771(7)(G)(i) of the Tariff Act.³⁸ The Commission may exercise its

³³ *Original Determinations*, USITC Pub. 4900 at 11; *Thailand Original Determination*, USITC Pub. 4977 at 4.

³⁴ *Original Determinations*, USITC Pub. 4900 at 11; *Thailand Original Determination*, USITC Pub. 4977 at 4.

³⁵ Domestic Interested Parties' Response at 14.

³⁶ See Domestic Interested Parties' Response at 13 (stating that DPG and Chattem are not related to any exporter or importer of the subject merchandise).

³⁷ 19 U.S.C. § 1675a(a)(7).

³⁸ 19 U.S.C. § 1677(7)(G)(i); see also, e.g., *Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding

discretion to cumulate, however, only if the reviews are initiated on the same day, the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market, and imports from each such subject country are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. Our focus in five-year reviews is not only on present conditions of competition, but also on likely conditions of competition in the reasonably foreseeable future.

The statutory threshold for cumulation is satisfied in these reviews because all reviews were initiated on the same day, May 1, 2024.³⁹

B. Prior Proceedings and Party Arguments

Original Investigations. The Commission found that subject imports from China, India, Japan, and Thailand were sufficiently fungible with each other and with the domestic like product, that imports from each subject country and the domestic like product were sold in similar geographic markets, and they were all simultaneously present in the U.S. market throughout the period of investigation.⁴⁰ The Commission found that there was an overlap in channels of distribution in sales to end users between subject imports from Japan, subject imports from India, subject imports from Thailand, and the domestic like product. There was also an overlap in channels of distribution in sales to distributors between subject imports from China, subject imports from India, subject imports from Thailand, and the domestic like product.⁴¹ The record indicated that there was only limited overlap between subject imports from Japan and subject imports from China, but the Commission noted that there was a common purchaser of subject imports from China and Japan, and found that there were not clear distinctions between distributors and end users, with some purchasers operating in both capacities.⁴² Accordingly, taking these considerations as a whole, the Commission found a

whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337-38 (Ct. Int'l Trade 2008).

³⁹ CR/PR at Table I-1; *Glycine from China, India, Japan, and Thailand; Institution of a Five-Year Review*, 89 Fed. Reg. 35237 (May 1, 2024).

⁴⁰ *Original Investigations*, USITC Pub. 4900 at 15-18; *Thailand Original Determination*, USITC Pub. 4977 at 9-10.

⁴¹ *Original Investigations*, USITC Pub. 4900 at 17-18; *Thailand Original Determination*, USITC Pub. 4977 at 10.

⁴² *Original Investigations*, USITC Pub. 4900 at 17-18; *Thailand Original Determination*, USITC Pub. 4977 at 10.

reasonable overlap of competition between and among the domestic like product and imports from each subject country and, therefore, considered subject imports from all sources on a cumulated basis.⁴³

Current Reviews. Domestic interested parties argue that the Commission should exercise its discretion to cumulate subject imports from all four countries in these reviews.⁴⁴ They assert that there is no basis to conclude that subject imports from any of the subject countries would be likely to have no discernible adverse impact on the domestic industry.⁴⁵

C. Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.⁴⁶ Neither the statute nor the Uruguay Round Agreements Act (“URAA”) Statement of Administrative Action (“SAA”) provides specific guidance on what factors the Commission is to consider in determining that imports “are likely to have no discernible adverse impact” on the domestic industry.⁴⁷ With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. Our analysis for each of the subject countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

Based on the record in these reviews, we do not find that imports from each subject country would be likely to have no discernible adverse impact on the domestic industry in the event of revocation, for the reasons discussed below.

China. In the original investigations, subject imports from China increased from 104,000 pounds in 2015, accounting for *** percent of apparent U.S. consumption, to 526,000 pounds in 2016, accounting for *** percent of apparent U.S. consumption, and to 734,000 pounds in 2017, accounting for *** percent of apparent U.S. consumption.⁴⁸ In the current period of review, subject imports from China increased from 134,000 pounds in 2018 to 316,000 pounds

⁴³ *Original Investigations*, USITC Pub. 4900 at 18 (cumulating subject imports from China, India, and Japan as subject imports from Thailand were not eligible for cumulation based on Commerce’s negative preliminary determinations); *Thailand Original Determination*, USITC Pub. 4977 at 10 (cumulating subject imports from all four countries).

⁴⁴ Domestic Interested Parties’ Response at 2.

⁴⁵ Domestic Interested Parties’ Response at 3.

⁴⁶ 19 U.S.C. § 1675a(a)(7).

⁴⁷ SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).

⁴⁸ CR/PR at Table I-7.

in 2019, decreased to 274,000 pounds in 2020, increased to 1.2 million pounds in 2021 and 2022, and decreased to 840,000 pounds in 2023.⁴⁹ Subject imports from China accounted for approximately *** percent of apparent U.S. consumption in 2023.⁵⁰

The record of the current reviews contains limited information concerning the glycine industry in China because no producer in China responded either to the Commission's notice of institution in these reviews or to the foreign producers' questionnaire in the original investigations.⁵¹ Available GTA data in the original investigations indicated that, globally, Chinese producers exported approximately 537.4 million pounds of amino acids and esters, a category that included glycine and out-of-scope products, in 2017.⁵² Further, the available information indicated that there were more than *** glycine producers in China with a total production capacity of at least *** pounds in 2016.⁵³ In these reviews, domestic interested parties identified two possible producers of glycine in China.⁵⁴ The record indicates that the Chinese glycine industry had production capacity of approximately *** billion pounds in 2023.⁵⁵ Domestic interested parties argue that the Chinese glycine industry has significant overcapacity, has maintained a presence in the U.S. glycine market, and is export oriented.⁵⁶

Global Trade Atlas ("GTA") data indicate that China was the world's largest exporter of glycine and other amino acids, a category including glycine and out-of-scope products, in every year of the period of review ("POR").⁵⁷ Chinese exports were 994.5 million pounds in 2023.⁵⁸ These data also indicate that the United States was one of the top two destination markets for exports of such merchandise from China throughout the period of review.⁵⁹

⁴⁹ CR/PR at Table I-6. Subject imports from China are likely understated and imports from Indonesia overstated in 2021 and 2022 as U.S. Customs and Border Protection determined in an Enforce and Protect Act investigation in 2022 that Chinese-origin glycine was transhipped through Indonesia. *Id.* at Table I-6 Note.

⁵⁰ CR/PR at Table I-7.

⁵¹ CR/PR at I-2; *Original Determination*, USITC Pub. 4900 at VII-3.

⁵² *Original Determination*, USITC Pub. 4900 at Table VII-20.

⁵³ Original Confidential Report, INV-RR-044, EDIS Doc. 823740 (June 14, 2024) ("Original Confidential Report") at VII-3 and Table VII-1.

⁵⁴ CR/PR at I-15. Additional information submitted by the domestic interested parties indicates that there are potentially *** active producers of glycine, of various grades, in China. Domestic Interested Parties' Response, Exh. D at 7; Domestic Interested Parties' Supplemental Response, EDIS Doc. 823851 at 23-24.

⁵⁵ Domestic Interested Parties' Response, Exh. D at 7 (the capacities for tech grade and other glycine in Table 2.1.1-1 increased from *** tons in 2017 to *** tons in 2023).

⁵⁶ Domestic Interested Parties' Response at 8, 12.

⁵⁷ CR/PR at Table I-12.

⁵⁸ CR/PR at Table I-12.

⁵⁹ CR/PR at Table I-8.

In the original investigations, subject imports from China oversold the domestic like product in two of two quarterly comparisons at an average margin of *** percent.⁶⁰ No product-specific pricing data were obtained in these expedited reviews.

In light of the foregoing, including the significant and increasing volume of subject imports from China in the original investigations, the industry's large production capacity, the continued presence of subject imports from China in the U.S. market while under the disciplining effect of the order, and the available export data, we do not find that subject imports from China would likely have no discernible adverse impact on the domestic industry if the pertinent order were revoked.

India. In the original investigations, subject imports from India increased from 2.9 million pounds in 2015, accounting for *** percent of apparent U.S. consumption, to 4.3 million pounds in 2016, accounting for *** percent of apparent U.S. consumption, and decreased to 3.9 million pounds in 2017, accounting for *** percent of apparent U.S. consumption.⁶¹ In the current period of review, subject imports from India increased from 1.1 million pounds in 2018 to 5.2 million pounds in 2019, and to 6.9 million pounds in 2020, decreased to 6.5 million pounds in 2021, increased to 12.8 million pounds in 2022, and decreased to 6.9 million pounds in 2023.⁶² Subject imports from India accounted for approximately *** percent of apparent U.S. consumption in 2023.⁶³

The record of the current reviews contains limited information concerning the glycine industry in India because no producer in India responded to the Commission's notice of institution.⁶⁴ In the original investigations, four responding producers in India reported that in 2017 they had capacity of *** pounds, production of *** pounds, and a capacity utilization rate of *** percent, yielding excess capacity of *** pounds. They reported exporting *** percent of their total shipments.⁶⁵ In these reviews, domestic interested parties identified three possible producers of glycine in India.⁶⁶

⁶⁰ Original Confidential Report at Table V-7a.

⁶¹ CR/PR at Table I-7.

⁶² CR/PR at Table I-6.

⁶³ CR/PR at Table I-7.

⁶⁴ CR/PR at I-2.

⁶⁵ Original Confidential Report at Table VII-5. In the original investigations, the Commission received responses from four Indian producers accounting for approximately *** percent of U.S. imports of glycine from India in 2017. Foreign producer respondents from India did not provide estimates of firms' percentage of overall production of glycine in India. Original Confidential Report at VII-7 n.9.

⁶⁶ CR/PR at I-16; Domestic Interested Parties' Supplemental Response at 23.

GTA data indicate that India was the world's eighth largest exporter of glycine and other amino acids, a category including glycine and out-of-scope products, in 2023; Indian exports were 21.2 million pounds in 2023.⁶⁷ These data also indicate that the United States was the top destination market for exports of such merchandise from India throughout the period of review.⁶⁸ The variability in Indian producers' exports to the United States in the period of review shows their ability to increase shipments rapidly in response to favorable market conditions.⁶⁹

In the original investigations, subject imports from India undersold the domestic like product in *** of *** quarterly comparisons, with an average margin of underselling of *** percent.⁷⁰ No product-specific pricing data concerning glycine from India were obtained in these expedited reviews.

In light of the foregoing, including the significant volume of subject imports from India in the original investigations, the continued presence of subject imports from India in the U.S. market while under the disciplining effect of the orders, the available information about the glycine industry in India, and the underselling by subject imports from India during the original investigations, we do not find that subject imports from India would likely have no discernible adverse impact on the domestic industry if the pertinent orders were revoked.

Japan. In the original investigations, subject imports from Japan decreased from 6.0 million pounds in 2015, accounting for *** percent of apparent U.S. consumption, to 4.6 million pounds in 2016, accounting for *** percent of apparent U.S. consumption, and increased to 5.3 million pounds in 2017, accounting for *** percent of apparent U.S. consumption.⁷¹ In the current period of review, subject imports from Japan decreased from 3.6 million pounds in 2018 to 3.5 million pounds in 2019, increased to 5.3 million pounds in 2020, and then decreased to 4.4 million pounds in 2021, 4.2 pounds in 2022, and 3.9 pounds in 2023.⁷² Subject imports from Japan accounted for approximately *** percent of apparent U.S. consumption in 2023.⁷³

⁶⁷ CR/PR at Table I-9.

⁶⁸ CR/PR at Table I-9.

⁶⁹ CR/PR at Table I-9. For example, Indian exporters increased exports to the United States from 11.2 million pounds in 2021 to 18.0 million pounds in 2022. Additionally, Indian exports of glycine and other amino acids to the United Arab Emirates increased from 472,000 pounds in 2022 to 1.0 million pounds in 2023. *Id.*

⁷⁰ Original Confidential Report at Table V-7a.

⁷¹ CR/PR at Table I-7.

⁷² CR/PR at Table I-6.

⁷³ CR/PR at Table I-7.

The record of the current reviews contains limited information concerning the glycine industry in Japan because no producer in Japan responded to the Commission's notice of institution.⁷⁴ In the original investigations, three responding Japanese producers reported that in 2017 they had capacity of *** pounds, production of *** pounds, and a capacity utilization rate of *** percent, yielding excess capacity of *** pounds. They reported exporting *** percent of their total shipments.⁷⁵ In these reviews, domestic interested parties identified five possible producers of glycine in Japan.⁷⁶

GTA data indicate that Japan was the world's ninth largest exporter of glycine and other amino acids, a category including glycine and out-of-scope products, in 2023; Japanese exports were 17.8 million pounds in 2023.⁷⁷ These data also indicate that the United States was the top destination market for exports of such merchandise from Japan throughout the period of review.⁷⁸

In the original investigations, subject imports from Japan undersold the domestic like product in 31 of 38 quarterly comparisons, with an average margin of underselling of *** percent.⁷⁹ No product-specific pricing data concerning glycine from Japan were obtained in these expedited reviews.

In light of the foregoing, including the significant volume of subject imports from Japan in the original investigations, the continued presence of subject imports from Japan in the U.S. market while under the disciplining effect of the order, the available information about the glycine industry in Japan, and the underselling by subject imports from Japan during the original investigations, we do not find that subject imports from Japan would likely have no discernible adverse impact on the domestic industry if the pertinent order were revoked.

Thailand. In the original investigations, subject imports from Thailand decreased from 3.9 million pounds in 2015, accounting for *** percent of apparent U.S. consumption, to 1.4 million pounds in 2016, accounting for *** percent of apparent U.S. consumption, and increased to 2.7 million pounds in 2017, accounting for *** percent of apparent U.S. consumption.⁸⁰ In the current period of review, subject imports from Thailand decreased from

⁷⁴ CR/PR at I-2.

⁷⁵ Original Confidential Report at Table VII-10. In the original investigations, the Commission received responses from three Japanese producers accounting for approximately *** percent of glycine production in Japan in 2017 and *** percent of reported U.S. imports of glycine from Japan that same year. Original Confidential Report at VII-15.

⁷⁶ CR/PR at I-18; Domestic Interested Parties' Supplemental Response at 22-23.

⁷⁷ CR/PR at Table I-12.

⁷⁸ CR/PR at Table I-10.

⁷⁹ Original Confidential Report at Table V-7a.

⁸⁰ CR/PR at Table I-7.

6.0 million pounds in 2018 to 867,000 pounds in 2019, and there were no imports from Thailand from 2020 to 2023.⁸¹ Because there were no subject imports from Thailand in 2023, it did not account for any apparent U.S. consumption that year.⁸²

The record of the current reviews contains limited information concerning the glycine industry in Thailand because no producer in Thailand responded to the Commission's notice of institution.⁸³ In the original investigations, one responding Thai producer reported that in 2017 it had capacity of *** pounds, production of *** pounds, and a capacity utilization rate of *** percent, yielding excess capacity of *** pounds, and exported *** percent of its total shipments.⁸⁴ In these reviews, domestic interested parties identified two possible producers of glycine in Thailand.⁸⁵ Domestic interested parties contend that because Thai producers ceased exports of glycine to the United States in 2019, the Thai industry must have significant excess capacity of glycine.⁸⁶

GTA data indicate that Thai producers exported 1.9 million pounds of glycine and other amino acids, a category including glycine and out-of-scope products, to all destinations in 2023.⁸⁷ These data also indicate that China and Cambodia were the top destination markets for exports of such merchandise from Thailand throughout the period of review, and that the volumes of exports varied among export destinations during the period of review.⁸⁸

In the original investigations, subject imports from Thailand undersold the domestic like product in *** of *** quarterly comparisons, with an average margin of underselling of *** percent.⁸⁹ No product-specific pricing data concerning glycine from Thailand were obtained in these expedited reviews.

⁸¹ CR/PR at Table I-6.

⁸² CR/PR at Table I-7.

⁸³ CR/PR at I-2.

⁸⁴ Thailand Confidential Report, INV-RR-089, EDIS Doc. 823741 (June 14, 2024) ("Thailand Confidential Report") at Table VII-14. In the original investigations, the Commission received a response from one Thai producer accounting for all glycine production in Thailand in 2017 and all U.S. imports of glycine Thailand that same year. *Original Determinations*, USITC Pub. 4900 at VII-14.

⁸⁵ CR/PR at I-19; Domestic Interested Parties' Supplemental Response at 23.

⁸⁶ Domestic Interested Parties' Response at 12; CR/PR at Table I-6.

⁸⁷ CR/PR at Table I-11.

⁸⁸ CR/PR at Table I-11. The year-to-year fluctuations in the export data show, for example, that Thailand exported zero pounds to Indonesia in 2018 but exported 176,000 pounds to this market the following year, while it exported 60,000 pounds to Malaysia in 2018 and then exported 397,000 pounds the following year, and it exported 566,000 pounds to China in 2019 and then exported 2.2 million pounds to this market in 2020. *Id.*

⁸⁹ Original Confidential Report at Table V-7a.

In light of the foregoing, including the significant volume of subject imports from Thailand in the original investigations, the underselling by subject imports from Thailand in the original investigations, and the available information about the glycine industry in Thailand, including the industry's ability to switch export destinations, we do not find that subject imports from Thailand would likely have no discernible adverse impact on the domestic industry if the pertinent order were revoked.

D. Likelihood of a Reasonable Overlap of Competition

The Commission generally has considered four factors intended to provide a framework for determining whether subject imports compete with each other and with the domestic like product.⁹⁰ Only a "reasonable overlap" of competition is required.⁹¹ In five-year reviews, the relevant inquiry is whether there likely would be competition even if none currently exists because the subject imports are absent from the U.S. market.⁹²

Fungibility. In the original investigations, the Commission observed that U.S. shipments of the domestic like product and of the subject imports from China, India, Japan, and Thailand were *** of USP grade glycine.⁹³ Responding U.S. producers and importers generally reported

⁹⁰ The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are as follows: (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 geographical markets of 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 subject imports are simultaneously present in the market with one another and the domestic like product. *See, e.g., Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

⁹¹ *See Mukand Ltd. v. United States*, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); *Wieland Werke*, 718 F. Supp. at 52 ("Completely overlapping markets are not required."); *United States Steel Group v. United States*, 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), *aff'd*, 96 F.3d 1352 (Fed. Cir. 1996). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. *See, e.g., Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812-13 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999), *aff'd sub nom., Ranchers-Cattlemen Action Legal Foundation v. United States*, 74 F. Supp. 2d 1353 (Ct. Int'l Trade 1999); *Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan*, Inv. Nos. 731-TA-761-62 (Final), USITC Pub. 3098 at 13-15 (Apr. 1998).

⁹² *See generally, Cheflene Corp. v. United States*, 219 F. Supp. 2d 1313, 1314 (Ct. Int'l Trade 2002).

⁹³ *Original Determinations*, USITC Pub. 4900 at 18; *Thailand Original Determination*, USITC Pub. 4977 at 9-10. The Commission rejected Japanese Respondents' argument that shipments of specialty products from Japan such as dual-certified glycine for pharmaceutical intravenous ("IV") solutions limit the fungibility and competitive overlap, as dual-certified glycine pharmaceutical IV solutions for

that the domestic like product and subject imports from China, India, Japan, and Thailand were always or frequently interchangeable, although responding purchasers reported somewhat more limited interchangeability between subject imports from China and the other four sources of product.⁹⁴ In purchasers' comparisons of subject imports and the domestic like product, majorities of responding purchasers reported that subject imports from Japan, India, Thailand, and China were "comparable" to the domestic like product with respect a majority of factors.⁹⁵

In these reviews, there is no new information in the record to indicate that the degree of fungibility between and among subject imports from China, India, Japan, and Thailand and the domestic like product has changed since the original investigations.

Channels of Distribution. In the original investigations, the Commission found there was substantial overlap in channels of distribution between subject imports from Japan, India, and Thailand, and the domestic like product. Although overlap between subject imports from Japan and subject imports from China was more limited, one purchaser, ***, reported purchasing subject imports from China, India, and Japan during the period of investigation ("POI"), supporting a reasonable overlap in competition among these sources.⁹⁶

In these reviews, there is no new information in the record to indicate that if the orders were revoked, the channels of distribution used by the domestic industry and subject imports from China, India, Japan, and Thailand would differ from those observed by the Commission in the original investigations.

Geographic Overlap. In the original investigations, the domestic like product and subject imports from India, Japan, and Thailand were sold in every region of the continental United States, and subject imports from China were sold only in the Northeast region.⁹⁷ On this basis, the Commission found that there was a reasonable geographical overlap among these sources.

accounted for *** percent of U.S. shipments of Japanese product in 2017. *Original Determinations*, USITC Pub. 4900 at 15-16; *Original Confidential Views*, EDIS Doc. 823738 (June 14, 2024) ("Original Confidential Views") at 21-22; *Thailand Original Determination*, USITC Pub. 4977 at 7-8; *Thailand Confidential Views*, EDIS Doc 823739 (June 14, 2024) ("Original Confidential Views") at 9-10.

⁹⁴ *Original Determinations*, USITC Pub. 4900 at 18; *Thailand Original Determination*, USITC Pub. 4977 at 9-10.

⁹⁵ *Original Determinations*, USITC Pub. 4900 at 16-17; *Thailand Original Determination*, USITC Pub. 4977 at 8.

⁹⁶ *Original Determinations*, USITC Pub. 4900 at 17-18; *Original Confidential Views* at 24-27; *Thailand Original Determination*, USITC Pub. 4977 at 9-10; *Thailand Confidential Views* at 11-13. The Commission noted that some purchasers reported that they functioned both as distributors and end users. *Id.*

⁹⁷ *Original Determinations*, USITC Pub. 4900 at 17-18; *Thailand Original Determination*, USITC Pub. 4977 at 9-10.

In these reviews, subject imports from China, India, and Japan entered through all borders of entry in all years from 2018 through 2023.⁹⁸ Imports of glycine from Thailand entered through the east and west borders in 2018 and 2019.⁹⁹ Thus, the record indicates that subject imports from each country continued to geographically overlap during the period of review.

Simultaneous Presence in Market. In the original investigations, subject imports from Japan were present in the U.S. market in all 45 months of the period of investigation, subject imports from India were present in the U.S. market in 44 of 45 months, subject imports from Thailand were present in the U.S. market in 41 of 45 months, and subject imports from China were present in the U.S. market in 27 of 45 months, including in each year during the POI.¹⁰⁰

In these reviews, subject imports from China, India, and Japan were present in the U.S. market every month of the 72-month period of review. Subject imports from Thailand were reported in 17 of the 24 months between 2018 and 2019.¹⁰¹

Conclusion. The record in these expedited reviews indicates that subject imports from China, India, Japan, and Thailand remain fungible with each other and the domestic like product. The record also indicates that subject imports from China, India, Japan, and Thailand overlapped with each other and the domestic like product in terms of channels of distribution and geographic markets and were simultaneously present in the U.S. market. In light of these considerations, and in the absence of any contrary argument, we find that there would likely be a reasonable overlap of competition between and among subject imports of glycine from China, India, Japan, and Thailand and the domestic like product, if the orders were revoked.

E. Likely Conditions of Competition

We next consider whether subject imports of glycine from China, India, Japan, and Thailand are likely to compete under different conditions of competition in the U.S. market. In determining whether to exercise our discretion to cumulate subject imports, we assess whether subject imports from each group of subject countries for which we have found there is a likely reasonable overlap of competition are likely to compete under similar conditions in the U.S. market in the event of revocation.

⁹⁸ CR/PR at I-13.

⁹⁹ CR/PR at I-13.

¹⁰⁰ *Original Determinations*, USITC Pub. 4900 at 17-18; *Thailand Original Determination*, USITC Pub. 4977 at 9.

¹⁰¹ CR/PR at I-13.

The record in these five-year reviews contains limited current information about the glycine industries in China, India, Japan, and Thailand and the U.S. market for glycine. There is no information in the record to suggest that subject imports from China, India, Japan, and Thailand are likely to compete under different conditions of competition if the orders were revoked. The available information shows that the United States is a key export market as it was the first or second largest export market for glycine and other amino acids from most of the subject countries throughout the POR, and subject imports from each country have remained in the U.S. market throughout the period of review, with the exception of Thailand.¹⁰² Based on the information available, and in the absence of any argument to the contrary, we find that imports from China, India, Japan, and Thailand are likely to compete under similar conditions of competition in the event of revocation of the orders.

F. Conclusion

In sum, we determine that subject imports of glycine from China, India, Japan, and Thailand, considered individually, are not likely to have no discernible adverse impact on the domestic industry if the corresponding orders were revoked. We also find a likely reasonable overlap of competition between and among subject imports from China, India, Japan, and Thailand and the domestic like product if the orders were revoked. Finally, we find that imports from each subject country would be likely to compete under similar conditions of competition if the orders were revoked. We therefore exercise our discretion to cumulate subject imports of China, India, Japan, and Thailand for purposes of our material injury analysis in these reviews.

IV. Revocation of the Antidumping and Countervailing Duty Orders Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order “would be likely

¹⁰² CR/PR at I-13, Tables I-8 to I-11. U.S. imports of glycine from Thailand ceased after 2019. *Id.* at Table I-6.

to lead to continuation or recurrence of material injury within a reasonably foreseeable time.”¹⁰³ The SAA states that “under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports.”¹⁰⁴ Thus, the likelihood standard is prospective in nature.¹⁰⁵ The U.S. Court of International Trade (“CIT”) has found that “likely,” as used in the five-year review provisions of the Act, means “probable,” and the Commission applies that standard in five-year reviews.¹⁰⁶

The statute states that “the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time.”¹⁰⁷ According to the SAA, a “‘reasonably foreseeable time’ will vary from case-to-case, but normally will exceed the ‘imminent’ timeframe applicable in a threat of injury analysis in original investigations.”¹⁰⁸

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute

¹⁰³ 19 U.S.C. § 1675a(a).

¹⁰⁴ SAA at 883-84. The SAA states that “{t}he likelihood of injury standard applies regardless of the nature of the Commission’s original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed.” *Id.* at 883.

¹⁰⁵ While the SAA states that “a separate determination regarding current material injury is not necessary,” it indicates that “the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked.” SAA at 884.

¹⁰⁶ See *NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int’l Trade 2003) (“‘likely’ means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)”), *aff’d mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) (“more likely than not” standard is “consistent with the court’s opinion;” “the court has not interpreted ‘likely’ to imply any particular degree of ‘certainty’”); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) (“standard is based on a likelihood of continuation or recurrence of injury, not a certainty”); *Usinor v. United States*, 26 CIT 767, 794 (2002) (“‘likely’ is tantamount to ‘probable,’ not merely ‘possible’”).

¹⁰⁷ 19 U.S.C. § 1675a(a)(5).

¹⁰⁸ SAA at 887. Among the factors that the Commission should consider in this regard are “the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities.” *Id.*

provides that the Commission is to “consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated.”¹⁰⁹ It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).¹¹⁰ The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission’s determination.¹¹¹

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.¹¹² In doing so, the Commission must consider “all relevant economic factors,” including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) 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.¹¹³

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by subject imports as compared to the domestic like product and whether subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.¹¹⁴

¹⁰⁹ 19 U.S.C. § 1675a(a)(1).

¹¹⁰ 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings with respect to the orders. See Issues and Decision Memorandum, Case Nos. A-533-883, A-549-837, A-588-878 (Sept. 5, 2024) at 4-5.

¹¹¹ 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

¹¹² 19 U.S.C. § 1675a(a)(2).

¹¹³ 19 U.S.C. § 1675a(a)(2)(A-D).

¹¹⁴ See 19 U.S.C. § 1675a(a)(3). The SAA states that “{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.¹¹⁵ All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.¹¹⁶

No respondent interested party participated in these expedited reviews. The record, therefore, contains limited new information with respect to the glycine industries in China, India, Japan, and Thailand. There also is limited information on the glycine market in the United States during the POR. Accordingly, for our determinations, we rely as appropriate on the facts available from the original investigations and the limited new information on the record of these reviews.

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors “within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”¹¹⁷ The following conditions of competition inform our determinations.

termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices.” SAA at 886.

¹¹⁵ 19 U.S.C. § 1675a(a)(4).

¹¹⁶ The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, 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 may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.” SAA at 885.

¹¹⁷ 19 U.S.C. § 1675a(a)(4).

1. Demand Conditions

Original Investigations. In the original investigations, the Commission noted that demand for glycine depends on the demand for U.S.-produced downstream products in which it is used, including nutritional supplements, personal care products, pet food/livestock feed, electronic/metal cleaners, industrial mixtures and slurries, and pharmaceutical products.¹¹⁸ The Commission observed that USP-grade glycine is required for products made for human or animal consumption, while technical-grade glycine is used in industrial applications.¹¹⁹ The Commission found that glycine accounted for a small share of the cost of most of the end-use products in which it is used.¹²⁰ Apparent U.S. consumption declined by *** percent from 2015 to 2017, decreasing from *** units in 2015 to *** pounds in 2016, and increasing to *** pounds in 2017.¹²¹

There is no new information indicating that the factors influencing demand have changed since the original investigations. Domestic interested parties do not indicate there were any changes in demand since the original investigations.¹²² In 2023, apparent U.S. consumption of glycine was *** pounds.¹²³

2. Supply Conditions

Original Investigations. The domestic industry was the second-largest supplier of glycine to the U.S. market during the period of investigation.¹²⁴ Its share of apparent U.S. consumption by quantity increased from *** percent in 2015 to *** percent in 2016, and then declined to *** percent in 2017.¹²⁵ The domestic industry's capacity increased from ***

¹¹⁸ *Original Determinations*, USITC Pub. 4900 at 22; *Thailand Original Determination*, USITC Pub. 4977 at 13.

¹¹⁹ *Original Determinations*, USITC Pub. 4900 at 22; *Thailand Original Determination*, USITC Pub. 4977 at 13.

¹²⁰ *Original Determinations*, USITC Pub. 4900 at 22; *Thailand Original Determination*, USITC Pub. 4977 at 13.

¹²¹ *Original Determinations*, USITC Pub. 4900 at 22; *Thailand Original Determination*, USITC Pub. 4977 at 13; CR/PR at Table I-7.

¹²² See generally Domestic Interested Parties' Response.

¹²³ CR/PR at Table I-7.

¹²⁴ *Original Determinations*, USITC Pub. 4900 at 22-23; *Thailand Original Determination*, USITC Pub. 4977 at 14.

¹²⁵ Original Confidential Views at 33; Thailand Confidential Views at 20. The domestic industry's share of the U.S. market was higher in interim 2018, at *** percent, than in interim 2017, at *** percent. Original Confidential Views at 33; Thailand Confidential Views at 20.

pounds in 2015 to *** pounds in 2016 and 2017.¹²⁶ The domestic industry's capacity utilization ranged from *** to *** percent over the period of investigation.¹²⁷

Cumulated subject imports were the largest supplier of glycine to the U.S. market during the period of investigation.¹²⁸ Their share of apparent U.S. consumption by quantity decreased from *** percent in 2015 to *** percent in 2016, and then increased to *** percent in 2017.¹²⁹

Nonsubject imports were the smallest source of supply of glycine to the U.S. market over the period of investigation.¹³⁰ Their share of apparent U.S. consumption by quantity ranged between *** percent during the period of investigation.¹³¹

Current Reviews. The domestic industry was the second largest source of glycine in the U.S. market in 2023, accounting for *** percent of apparent U.S. consumption by quantity that year.¹³² Domestic interested parties identified themselves as the only currently operating U.S. producers of glycine.¹³³ During the POR, GEO was acquired by CPS Performance Materials, a unit of Arsenal Capital Partners in September 2019.¹³⁴ Domestic producers' capacity *** during the period of review, from *** pounds in 2017 to *** pounds in 2023.¹³⁵

Cumulated subject imports were the largest supplier of glycine to the U.S. market during the period of review, accounting for *** percent of apparent U.S. consumption by quantity in 2023.¹³⁶

Nonsubject imports were the smallest source of glycine in the U.S. market in 2023, accounting for *** percent of apparent U.S. consumption by quantity that year.¹³⁷ Malaysia, Indonesia, and Germany were the three largest sources of nonsubject imports during the

¹²⁶ Original Confidential Views at 44-45; Thailand Confidential Views at 31; CR/PR at Table I-5.

¹²⁷ Original Confidential Views at 32 n.107; Thailand Confidential Views at 19 n.63; CR/PR at Table I-5.

¹²⁸ Original Confidential Views at 34; Thailand Confidential Views at 20; CR/PR at Table I-13.

¹²⁹ Original Confidential Views at 34; Thailand Confidential Views at 20; CR/PR at Table I-13. Cumulated subject imports' share of the U.S. market was higher in interim 2018, at *** percent, than in interim 2017, at *** percent. Original Confidential Views at 34; Thailand Confidential Views at 20.

¹³⁰ Original Confidential Views at 33; Thailand Confidential Views at 20; CR/PR at Table I-13.

¹³¹ Original Confidential Views at 33; Thailand Confidential Views at 20; CR/PR at Table I-13. Nonsubject imports' share of the U.S. market was *** percent in interim 2018, compared to *** percent in interim 2017. Original Confidential Views at 33; Thailand Confidential Views at 20.

¹³² CR/PR at Table I-7.

¹³³ Domestic Interested Parties' Response at 13.

¹³⁴ CR/PR at Table I-4.

¹³⁵ CR/PR at Table I-5.

¹³⁶ CR/PR at Table I-7.

¹³⁷ CR/PR at Table I-7.

period of review.¹³⁸ An antidumping duty order has covered nonsubject imports from China since 1994.¹³⁹

3. Substitutability and Other Conditions

Original Investigations. The Commission found that there was a high degree of substitutability between subject imports and domestically produced glycine and that price was an important factor in purchasing decisions.¹⁴⁰ It observed that a *** of U.S. shipments of both the domestic like product and cumulated subject imports were of USP-grade glycine, and that a substantial percentage of both were of FDA-certified glycine. Responding U.S. producers and importers generally reported that the domestic like product and subject imports from China, India, Japan, and Thailand were always or frequently interchangeable, although U.S. purchasers reported some limitation on the interchangeability of subject imports from China with the domestic like product.¹⁴¹

The Commission observed that glycine could be produced using two production methods – the hydrogen cyanide (“HCN”) process, which uses hazardous chemical HCN as its primary feedstock, and monochloroacetic acid process, which utilizes monochloroacetic acid and liquid ammonia as the key feedstocks.¹⁴² Raw materials accounted for *** percent of the total cost of goods sold (“COGS”) in 2017, but different production methods employed different raw material inputs, and the two U.S. producers ***.¹⁴³ The Commission also observed that the domestic like product and cumulated subject imports were sold *** through annual contracts, and GEO generally negotiated annual contracts in the fourth quarter of each year to apply in the following calendar year.¹⁴⁴

Current Review. The record in these reviews contains no new information to indicate that the degree of substitutability between the domestic like product and subject imports or the importance of price in purchasing decisions has changed since the original investigations. No party suggests that the degree of substitutability or the importance of price has changed

¹³⁸ CR/PR at Table I-6.

¹³⁹ CR/PR at Table I-3.

¹⁴⁰ *Original Determinations*, USITC Pub. 4900 at 24-25; *Thailand Original Determination*, USITC Pub. 4977 at 14-15.

¹⁴¹ *Original Determinations*, USITC Pub. 4900 at 24; Original Confidential Views at 34; *Thailand Original Determination*, USITC Pub. 4977 at 15; Thailand Confidential Views at 21.

¹⁴² *Original Determinations*, USITC Pub. 4900 at 25; Original Confidential Views at 36; *Thailand Original Determination*, USITC Pub. 4977 at 16; Thailand Confidential Views at 22.

¹⁴³ *Original Determinations*, USITC Pub. 4900 at 25; Original Confidential Views at 36; *Thailand Original Determination*, USITC Pub. 4977 at 16; Thailand Confidential Views at 22.

¹⁴⁴ *Original Determinations*, USITC Pub. 4900 at 25; *Thailand Original Determination*, USITC Pub. 4977 at 16.

since the original investigations.¹⁴⁵ Accordingly, we continue to find a high degree of substitutability between subject imports and domestically produced glycine, and that price is an important factor in purchasing decisions for glycine.

In September 2018, glycine originating in China imported under HTSUS subheading 2922.49.43 became subject to an additional 10 percent *ad valorem* duty under section 301 of the Trade Act of 1974 (“section 301”). In May 2019, this additional duty increased to 25 percent *ad valorem*.¹⁴⁶ Glycine is imported into the U.S. market at a column 1-general duty rate of 4.2 percent *ad valorem*.¹⁴⁷

C. Likely Volume of Subject Imports

Original Investigations. In the original investigations, the Commission found that the volume of cumulated subject imports decreased from 12.9 million pounds in 2015 to 10.8 million pounds in 2016, before increasing to 12.7 million pounds in 2017.¹⁴⁸ Cumulated subject imports as a share of apparent U.S. consumption decreased from *** percent in 2015 to *** percent in 2016, and increased to *** percent in 2017, a level *** percentage points higher than at the beginning of the period of investigation.¹⁴⁹ Additionally, the Commission found that cumulated subject imports as a share of U.S. production increased from *** percent in 2015 to *** percent in 2017.¹⁵⁰ The Commission concluded that the volume of cumulated subject imports was significant in absolute terms and relative to U.S. production and consumption.¹⁵¹

Current Reviews. The record indicates that subject imports maintained a presence in the U.S. market throughout the period of review, while under the disciplining effect of the orders. Cumulated subject imports declined from 10.8 million pounds in 2018 to 9.9 million pounds in 2019, increased to 12.5 million pounds in 2020, decreased to 12.2 million pounds in 2021, increased to 18.1 million pounds in 2022, and decreased to 11.6 million pounds in

¹⁴⁵ See generally Domestic Interested Parties’ Response.

¹⁴⁶ CR/PR at I-5-6.

¹⁴⁷ CR/PR at I-5.

¹⁴⁸ *Original Determinations*, USITC Pub. 4900 at 25; *Thailand Original Determination*, USITC Pub. 4977 at 16.

¹⁴⁹ *Original Determinations*, USITC Pub. 4900 at 25; Original Confidential Views at 37; *Thailand Original Determination*, USITC Pub. 4977 at 16; Thailand Confidential Views at 23.

¹⁵⁰ *Original Determinations*, USITC Pub. 4900 at 26; Original Confidential Views at 37; *Thailand Original Determination*, USITC Pub. 4977 at 16; Thailand Confidential Views at 23.

¹⁵¹ *Original Determinations*, USITC Pub. 4900 at 26; *Thailand Original Determination*, USITC Pub. 4977 at 16.

2023.¹⁵² Subject imports accounted for *** percent of apparent U.S. consumption by quantity in 2023, compared to *** percent in 2017.¹⁵³

The record in these reviews contains limited information on the glycine industries in China, India, Japan, and Thailand. The available information indicates that subject producers have the ability and incentive to export subject merchandise to the U.S. market at significant volumes if the orders were revoked. Domestic interested parties provided a list of 9 possible producers and 70 possible exporters of glycine in China, India, Japan, and Thailand.¹⁵⁴ The record also contains information from the Production and Market of Glycine in China 2023 (“China Report”).¹⁵⁵ The China Report indicates that the Chinese industry has increased its glycine capacity from *** pounds of capacity in 2017, the last year of the POI, to *** pounds in 2023.¹⁵⁶ Additionally, the China Report indicates that many subject producers have expanded their capacity during the period of review.¹⁵⁷ The China Report also indicates that Chinese producers have approximately *** pounds of excess glycine capacity.¹⁵⁸ Domestic interested parties assert that producers in the other subject countries also have underutilized capacity.¹⁵⁹

The information available also indicates that the Chinese, Indian, Japanese, and Thai industries are large exporters. According to GTA data, China was the leading global exporter, and India and Japan within the top ten largest global exporters, of glycine and other amino acids under HS subheading 2922.49, including glycine and out-of-scope products, throughout the period of review.¹⁶⁰ These data also indicate that in 2023 exports of such merchandise were 994.5 million pounds from China, 21.2 million pounds from India, 17.8 million pounds from Japan, and 1.9 million pounds from Thailand.¹⁶¹

¹⁵² CR/PR at Table I-6.

¹⁵³ CR/PR at Table I-7.

¹⁵⁴ Domestic Interested Parties’ Supplemental Response at 13.

¹⁵⁵ Domestic Interested Parties’ Response, Exh. D.

¹⁵⁶ Domestic Interested Parties’ Response, Exh. D at 7 (the capacities for tech grade and other glycine in Table 2.1.1-1 increased from *** tons in 2017 to *** tons in 2023).

¹⁵⁷ *** expanded its production of tech-grade glycine by *** tons and its food-grade glycine by *** tons in 2018; *** built new production lines expanding its capacity by *** tons in 2019; *** capacity expanded to *** tons in 2019; *** built a *** ton glycine project in 2019; *** expanded its glycine capacity by *** tons in 2020; *** expanded its production by *** tons in 2021; and *** completed a *** tons tech-grade glycine expansion in 2023. See Domestic Interested Parties’ Response, Exh. D at 7.

¹⁵⁸ Domestic Interested Parties’ Response at 12, Exh. D at 7 (subtracting the output of tech grade, food grade, feed grade, and pharmaceutical grade glycine from the capacity for tech grade and other glycine in Table 2.1.1-1 equaled *** tons of excess glycine capacity).

¹⁵⁹ Domestic Interested Parties’ Response at 12.

¹⁶⁰ CR/PR at Table I-12.

¹⁶¹ CR/PR at Tables I-11 and I-12.

The record also indicates that the U.S. market remains attractive to subject producers. Cumulated subject imports maintained a substantial presence in the U.S. market during the period of review, accounting for *** percent of apparent U.S. consumption in 2023,¹⁶² indicating that producers in the subject countries remain interested in supplying the U.S. market and have extensive distribution networks and a sizable customer base in the United States. According to GTA data, in 2023, the United States was the largest destination market, by quantity, for Indian and Japanese exports of glycine and other amino acids under HS subheading 2922.49, which includes glycine and out-of-scope products, and the second largest destination for exports of such merchandise from China.¹⁶³

Given the foregoing, including the significant volume and market share of cumulated subject imports during the original investigations, the continued presence of cumulated subject imports in the U.S. market during the period of review while under the disciplining effect of the orders, the available information about the glycine industries in the subject countries, and the available information reflecting the attractiveness of the U.S. market, we find that the volume of cumulated subject imports would likely be significant, both in absolute terms and relative to consumption in the United States, if the orders were revoked.¹⁶⁴

D. Likely Price Effects

Original Investigations. The Commission noted its findings that there was a high degree of substitutability between domestic glycine and subject imports and that price was an important factor in purchasing decisions.¹⁶⁵ Quarterly pricing data indicated that subject imports undersold the domestic like product in 61 out of 84 quarterly comparisons, or 72.6

¹⁶² CR/PR at Table I-7.

¹⁶³ CR/PR at Tables I-8 to I-10. CBP reached affirmative determinations in 2022 that imports of glycine from China were being transshipped through Indonesia to the United States, indicating that Chinese producers and exporters remain interested in supplying the U.S. market. CR/PR at Table I-6 Note.

¹⁶⁴ Subject imports from China are currently subject to a 25 percent *ad valorem* duty under Section 301, but no firms indicated that this duty would prevent subject imports from entering the U.S. market at significant levels if the orders were revoked. *See generally* Domestic Interested Parties' Response. Indeed, subject imports from China increased 526.8 percent from 2018 to 2023 and accounted for *** percent of apparent U.S. consumption in 2023, notwithstanding the additional duty. CR/PR at Tables I-6 & I-7.

The record of these expedited reviews contains no information concerning inventories or product shifting of subject merchandise.

¹⁶⁵ *Original Determinations*, USITC Pub. 4900 at 27; *Original Confidential Views* at 39; *Thailand Original Determination*, USITC Pub. 4977 at 17; *Thailand Confidential Views* at 25.

percent of the comparisons, at margins ranging between *** percent and *** percent.¹⁶⁶ The volume of subject imports involved in quarters with underselling (*** pounds) was substantially larger than the volume involved in quarters with overselling (*** pounds).¹⁶⁷ The Commission also noted that 18 responding purchasers reported purchasing lower-priced subject imports rather than the domestic like product, and that price was a primary reason for purchasing *** pounds of subject imports rather than the domestic like product.¹⁶⁸

The Commission observed that pricing product 2 (USP-grade glycine) accounted for a clear majority (*** percent) of U.S. shipments of both cumulated subject imports and the domestic like product and found the data for pricing product 2 particularly illustrative in its analysis of pricing trends.¹⁶⁹ Because the domestic industry made most of its sales through annual contracts, which were negotiated in the fourth quarter and applied in the following calendar year, the Commission found that the reduction in the domestic industry's prices for Product 2 in 2017 continued to affect the industry's prices for Product 2 in interim 2018.¹⁷⁰ The Commission found that the decline in the domestic industry's prices during the POI was attributable to the significant volume of cumulated subject imports that significantly undersold the domestic like product, and not attributable to changes in apparent U.S. consumption or the domestic industry's cost of goods sold ("COGS").¹⁷¹

The Commission therefore found subject import underselling to be significant and that the low-priced cumulated subject imports depressed prices of the domestic like product to a significant degree.¹⁷²

¹⁶⁶ *Original Determinations*, USITC Pub. 4900 at 27; *Original Confidential Views* at 39; *Thailand Original Determination*, USITC Pub. 4977 at 17; *Thailand Confidential Views* at 25.

¹⁶⁷ *Original Determinations*, USITC Pub. 4900 at 27; *Original Confidential Views* at 39; *Thailand Original Determination*, USITC Pub. 4977 at 17-18; *Thailand Confidential Views* at 25.

¹⁶⁸ *Original Determinations*, USITC Pub. 4900 at 28 n.138; *Original Confidential Views* at 40 n.138; *Thailand Original Determination*, USITC Pub. 4977 at 18-19; *Thailand Confidential Views* at 27.

¹⁶⁹ *Original Determinations*, USITC Pub. 4900 at 28; *Original Confidential Views* at 41; *Thailand Original Determination*, USITC Pub. 4977 at 19; *Thailand Confidential Views* at 28. The Commission also noted that *** percent of the quantity of cumulated subject imports of pricing product 2 covered by the Commission's pricing data was sold during quarters in which the average price of these imports was less than that of the comparable domestic product. *Confidential Views* at 40-41; *Confidential Thailand Views* at 25-26.

¹⁷⁰ *Original Determinations*, USITC Pub. 4900 at 28; *Original Confidential Views* at 41; *Thailand Original Determination*, USITC Pub. 4977 at 19; *Thailand Confidential Views* at 28.

¹⁷¹ *Original Determinations*, USITC Pub. 4900 at 29; *Thailand Original Determination*, USITC Pub. 4977 at 19.

¹⁷² *Original Determinations*, USITC Pub. 4900 at 29; *Thailand Original Determination*, USITC Pub. 4977 at 20.

Current Reviews. As discussed in section IV.B.3 above, we have found that there is a high degree of substitutability between domestically produced glycine and subject imports, and that price is an important factor in purchasing decisions for glycine.

The record in these expedited reviews does not contain new product-specific pricing information. Based on the available information, including the high degree of substitutability between the domestic like product and subject imports and the importance of price in purchasing decisions, we find that, if the orders were revoked, significant volumes of subject imports would likely undersell the domestic like product to a significant degree, as they did in the original investigations.¹⁷³ Absent the discipline of the orders, the significant volumes of low-priced subject imports would likely take sales and market share from domestic producers and/or force the domestic industry to cut prices or forego price increases necessary to cover any increase in costs, thereby depressing or suppressing prices for the domestic like product. Consequently, we find that if the orders were revoked, subject imports would likely have significant price effects.

E. Likely Impact

Original Investigations. The Commission found that the domestic industry experienced substantial declines between 2015 and 2017 in production, capacity utilization, net sales quantity, U.S. shipments, productivity, revenues, gross profits, operating income, and net income, while its ratio of COGS to net sales increased.¹⁷⁴ While the domestic industry's production and sales quantity indicators (production, capacity utilization, net sales quantity, U.S. shipments, and market share) were higher in interim 2018 than in interim 2017, its revenues were lower, its ratio of COGS to net sales was higher, and its financial performance in interim 2018 was worse than in interim 2017.¹⁷⁵

¹⁷³ As reviewed above in section III.C., in the original investigations, imports of glycine from India undersold the domestic product in *** of *** quarterly comparisons, with an average margin of underselling of *** percent; imports from Japan undersold the domestic product in *** of *** comparisons, with an average margin of underselling of *** percent imports; imports from Thailand undersold the domestic product in *** of *** comparisons, with an average margin of underselling of *** percent; and imports of glycine from China undersold the domestic product in *** of *** quarterly comparisons. Original Confidential Report at Table V-7b; Thailand Confidential Report at Table V-7b.

¹⁷⁴ *Original Determinations*, USITC Pub. 4900 at 30; *Thailand Original Determination*, USITC Pub. 4977 at 21.

¹⁷⁵ *Original Determinations*, USITC Pub. 4900 at 30; *Thailand Original Determination*, USITC Pub. 4977 at 21.

The Commission found that the significant volume of cumulated subject imports that significantly undersold and depressed prices for the domestic like product to a significant degree, resulting in the domestic industry achieving lower revenues than it would have otherwise, particularly in 2017, when revenues declined in light of falling prices for USP-grade glycine, the predominant grade of domestically produced glycine.¹⁷⁶ The Commission found further that the domestic industry's revenues declined by more than its COGS between 2015 and 2017, leading to a decline in its financial performance in 2017.¹⁷⁷ Its lower revenues in conjunction with higher COGS in interim 2018 as compared to interim 2017 led to a further deterioration in the industry's financial performance in interim 2018.¹⁷⁸ Consequently, the Commission found that cumulated subject imports had a significant impact on the domestic industry.¹⁷⁹

The Commission considered the role of nonsubject imports and concluded that nonsubject imports' relatively small and overall declining presence in the market did not explain the decline in the domestic industry's prices and revenues.¹⁸⁰

*Current Reviews.*¹⁸¹ The record in these expedited reviews contains limited information concerning the domestic industry's performance since the original investigations. The information available indicates that the domestic industry's performance was stronger in 2023

¹⁷⁶ *Original Determinations*, USITC Pub. 4900 at 32; *Thailand Original Determination*, USITC Pub. 4977 at 22-23.

¹⁷⁷ *Original Determinations*, USITC Pub. 4900 at 32; *Thailand Original Determination*, USITC Pub. 4977 at 22-23.

¹⁷⁸ *Original Determinations*, USITC Pub. 4900 at 32; *Thailand Original Determination*, USITC Pub. 4977 at 22-23.

¹⁷⁹ *Original Determinations*, USITC Pub. 4900 at 32; *Thailand Original Determination*, USITC Pub. 4977 at 22-23.

¹⁸⁰ *Original Determinations*, USITC Pub. 4900 at 33; *Thailand Original Determination*, USITC Pub. 4977 at 23. The Commission found that the decline in the domestic industry's prices and revenues as a result of low-priced cumulated subject imports led to a substantial decline in the industry's gross profits, irrespective of Japanese Respondents' claim regarding the industry's trends in SG&A expenses. *Original Determinations*, USITC Pub. 4900 at 33.

¹⁸¹ In its expedited review of the antidumping duty orders, Commerce determined that revocation of the orders would likely result in the continuation or recurrence of dumping, with margins of up to 13.61 percent for India, 86.22 percent for Japan, and 227.17 percent for Thailand. *Glycine from India, Japan, and Thailand: Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders*, 89 Fed. Reg. 74206, 74207 (Sept. 12, 2024). Commerce also determined that revocation of the countervailing duty orders on glycine from China and India would likely result in the continuation or recurrence of countervailable subsidies at rates up to 144.01 percent for China and ranging from 3.03 to 6.99 percent for India. *Glycine from India and the People's Republic of China: Final Results of the Expedited First Sunset Reviews of the Countervailing Duty Orders*, 89 Fed. Reg. 74898, 74899 (Sept. 13, 2024).

than in 2017, the final year of the original period of investigation, in terms of capacity, production, U.S. shipments, and financial indicators, but weaker in terms of capacity utilization. Specifically, the domestic industry's production capacity (***) pounds), production (***) pounds), and U.S. shipments (***) pounds, valued at \$***) were all higher in 2023 than in 2017.¹⁸² The industry's financial performance has also improved since the original investigations, as its COGS-to-net-sales ratio (***) percent), gross profits (\$***), operating income (\$***), and operating income margin (***) percent) improved in 2021 compared to 2017 or any other year during the original investigations.¹⁸³ On the other hand, the domestic industry's capacity utilization (***) percent) was lower in 2023 compared to 2017.¹⁸⁴ The limited information in these expedited reviews is insufficient for us to make a finding on whether the domestic industry is vulnerable to the continuation or recurrence of material injury in the event of revocation of the orders.

Based on the information available, we find that revocation of the orders would likely result in a significant volume of cumulated subject imports that would likely undersell the domestic like product to a significant degree. Given the high degree of substitutability between the domestic like product and subject imports and the importance of price to purchasers, significant volumes of low-priced subject imports would likely capture sales and market share from the domestic industry and/or force domestic producers to lower their prices or forgo needed price increases in order to maintain their sales, thereby depressing or suppressing prices for the domestic like product to a significant degree. The likely significant volume of subject imports and their price effects would negatively affect the domestic industry's capacity, production, capacity utilization, shipments, market share, net sales values and quantities, employment levels, operating income, operating income margins, and capital investments. Consequently, we conclude that, if the orders were revoked, cumulated subject imports from China, India, Japan, and Thailand would be likely to have an adverse impact on the domestic industry within a reasonably foreseeable time.

We have also considered the role of factors other than cumulated subject imports, including the presence of nonsubject imports, so as not to attribute injury from other factors to cumulated subject imports. Nonsubject imports accounted for *** percent of apparent U.S.

¹⁸² CR/PR at Table I-5. In 2017, the domestic industry's production capacity was *** pounds, its production was *** pounds, and its U.S. shipments were *** pounds (\$***). *Id.*

¹⁸³ CR/PR at Table I-5. From 2016 to 2017, the domestic industry's COGS-to-net-sales ratio ranged from *** to *** percent, its gross profits ranged from \$*** to \$***, its operating income ranged from \$*** to \$***, and its operating income margin ranged from *** to *** percent. *Id.*

¹⁸⁴ CR/PR at Table I-5. From 2015 to 2017, the domestic industry's capacity utilization rate ranged from *** percent to *** percent. *Id.*

consumption in 2023 and were the *** source of supply in the U.S. market that year.¹⁸⁵ The record provides no indication that the presence of nonsubject imports would prevent subject imports from China, India, Japan, and Thailand from having a significant presence in the U.S. market after revocation. In light of the high degree of substitutability between subject imports and the domestic like product and the importance of price to purchasers, it is likely that any increase in low-priced subject imports would come at least in part at the expense of the domestic industry's market share and/or depress or suppress prices for the domestic like product. Consequently, we find that any future effects of nonsubject imports would be distinct from the likely effects attributable to subject imports and that nonsubject imports would not prevent subject imports from having a significant impact on the domestic industry.

In sum, we conclude that if the antidumping and countervailing duty orders were revoked, cumulated subject imports from China, India, Japan, and Thailand would likely have a significant adverse impact on the domestic industry within a reasonably foreseeable time.

V. Conclusion

For the foregoing reasons, we determine that revocation of the antidumping duty orders on glycine from China, India, Japan, and Thailand and the countervailing duty orders on glycine from China and India would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

¹⁸⁵ CR/PR at Table I-7.

Information obtained in these reviews

Background

On May 1, 2024, the U.S. International Trade Commission (“Commission”) gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended (“the Act”),¹ that it had instituted reviews to determine whether revocation of antidumping and countervailing duty orders on glycine from China, Japan, India, and Thailand would likely lead to the continuation or recurrence of material injury to a domestic industry.² All interested parties were requested to respond to this notice by submitting certain information requested by the Commission.^{3 4}

Table I-1 presents information relating to the background and schedule of this proceeding:

Table I-1

Glycine: Information relating to the background and schedule of this proceeding

Effective date	Action
May 1, 2024	Notice of initiation by Commerce (89 FR 35073, May 1, 2024)
May 1, 2024	Notice of institution by Commission (89 FR 35237, May 1, 2024)
August 5, 2024	Commission’s vote on adequacy
September 12, 2024	Commerce’s results of its expedited reviews of the antidumping duty orders (89 FR 74206, September 12, 2024)
September 13, 2024	Commerce’s results of its expedited reviews of the countervailing duty orders (89 FR 74898, September 13, 2024)
November 22, 2024	Commission’s determinations and views

Responses to the Commission’s notice of institution

Individual responses

The Commission received one submission in response to its notice of institution in the subject reviews. They were filed on behalf of the following entities:

¹ 19 U.S.C. 1675(c).

² 89 FR 35237, May 1, 2024. In accordance with section 751(c) of the Act, the U.S. Department of Commerce (“Commerce”) published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders. 89 FR 35073, May 1, 2024. Pertinent Federal Register notices are referenced in app. A, and may be found at the Commission’s website (www.usitc.gov).

³ As part of their response to the notice of institution, interested parties were requested to provide company-specific information. That information is presented in app. B. Summary data compiled in the original investigations are presented in app. C.

⁴ Interested parties were also requested to provide a list of three to five leading purchasers in the U.S. market for the domestic like product and the subject merchandise. Presented in app. D are the responses received from purchaser surveys transmitted to the purchasers identified in this proceeding.

Deer Park Glycine, LLG (“DPG”) which is a subsidiary of GEO Specialty Chemicals, Inc., (“GEO”), and Chattem Chemicals, Inc. (“Chattem”), domestic producers of glycine (collectively referred to herein as “domestic interested parties”).⁵

A complete response to the Commission’s notice of institution requires that the responding interested party submit to the Commission all the information listed in the notice. Responding firms are given an opportunity to remedy or explain deficiencies in their responses and to provide clarifying details where appropriate. A summary of the number of responses and estimates of coverage for each is shown in table I-2.

Table I-2

Glycine: Summary of responses to the Commission’s notice of institution

Interested party type	Number	Coverage
U.S. producer	2	***%

Note: The U.S. producer coverage figure presented is the domestic interested parties’ estimate of their share of total U.S. production of glycine during 2023. Domestic interested parties’ response to the notice of institution, May 30, 2024, exh. H.

Party comments on adequacy

The Commission received party comments on the adequacy of responses to the notice of institution and whether the Commission should conduct expedited or full reviews from the domestic interested parties. The domestic interested parties request that the Commission conduct expedited reviews of the antidumping and countervailing duty orders on glycine.⁶

The original investigations

The original investigations resulted from petitions filed on March 28, 2018 with Commerce and the Commission by GEO, Lafayette, Indiana, and Chattem, Chattanooga, Tennessee.⁷ On May 1, 2019, Commerce determined that imports of glycine from India and Japan were being sold at less than fair value (“LTFV”) and subsidized by the Governments of

⁵ The domestic interested parties also provided certain trade and financial information on behalf of U.S. producers DPG / GEO and Chattem. Domestic interested parties response to the notice of institution, May 30, 2024, exh. H. Domestic interested parties supplemental response to the notice of institution, June, 17, 2024, pp. 52-53.

⁶ Domestic interested parties’ comments on adequacy, July 3, 2024, p. 2.

⁷ Glycine from China, India, and Japan, Inv. Nos. 701-TA-603-604 and 731-TA-1413-1414 (Final), USITC Publication 4900, June 2019 (“Original publication”), p. I-1.

China and India.⁸ ⁹ The Commission determined on June 14, 2019 that the domestic industry was materially injured by reason of LTFV imports from India and Japan and subsidized imports of glycine from China and India.¹⁰ On June 21, 2019, Commerce issued its antidumping duty orders for India and Japan with final weighted-average dumping margins ranging from 10.86 to 13.61 percent and 53.66 to 86.22 percent, respectively.¹¹ Commerce issued its countervailing duty orders for India and China with final subsidy rates ranging from 3.03 to 6.99 percent and 144.01 percent, respectively.¹² On August 5, 2019, Commerce issued its final affirmative LTFV and critical circumstances determination and final negative countervailing duty determination for Thailand.¹³ As a result of Commerce's final negative countervailing duty determination for Thailand, the Commission terminated the countervailing duty investigation for Thailand.¹⁴ Following an affirmative determination by Commerce,¹⁵ the Commission determined on October 8, 2019 that the domestic industry was materially injured by reason of LTFV of imports from Thailand.¹⁶ On October 18, 2019, Commerce issued its antidumping duty order for

⁸ 84 FR 18482, May 1, 2019; 84 FR 18484, May 1, 2019; 84 FR 18487, May 1, 2019; 84 FR 18489, May 1, 2019.

⁹ On April 24, 2019, Commerce postponed its final antidumping and countervailing duty determinations regarding Thailand until further notice due to allegations of evasion by means of transshipment through Thailand. See Memorandum of Postponement of the Final Determinations in the Less-Than-Fair-Value and Countervailing Duty Investigations of Glycine from Thailand, Cases A-549-837 and C-549-838, April 24, 2019. Therefore, the investigations regarding Thailand became separated from the other antidumping and countervailing duty investigations regarding glycine. The investigations at Commerce were extended beyond the original postponed schedule. The resulting EAPA proceeding determined there was no transshipment of Chinese-origin glycine through Thailand, U.S. Customs and Border Protection (CBP), "Notice of Final Determination as to Evasion – EAPA Case Number 7270," September 25, 2019.

¹⁰ 84 FR 29238, June 21, 2019.

¹¹ 84 FR 29170, June 21, 2019.

¹² 84 FR 29173, June 21, 2019. On July 25, 2019, Commerce published a correction to the final affirmative CVD determination and order for China, 84 FR 35854.

¹³ 84 FR 37998, August 5, 2019; 84 FR 38007, August 5, 2019.

¹⁴ 84 FR 43618, August 21, 2019.

¹⁵ For the preliminary determination, Commerce calculated a zero estimated weighted-average dumping margin for Newtrend Food Ingredient Co., Ltd ("Newtrend Thailand"), the sole mandatory respondent. In its final determination, however Commerce characterized Newtrend Thailand as having "failed to provide critical information in determining its cost of production of glycine" and applied total adverse facts available (AFA), determining that Newtrend Thailand's estimated weighted-average dumping margin is 227.17 percent, the highest dumping margin alleged in the Petition, as supplemented. 83 FR 54717, October 31, 2018 and 84 FR 37998, August 5, 2019.

¹⁶ 84 FR 55172, October 15, 2019. Commissioners Randolph J. Stayin and Amy A. Karpel did not participate in this investigation. The Commission also found that imports subject to Commerce's affirmative critical circumstances determination were not likely to undermine seriously the remedial effect of the antidumping duty order on Thailand.

Thailand with final weighted-average dumping margins ranging from 201.59 to 227.17 percent.¹⁷

Previous and related investigations

The Commission has conducted eight previous import relief investigations on glycine, as presented in table I-3.

Table I-3
Glycine: Previous and related Commission proceedings and current status

Date	Number	Country	ITC original determination	Current status
1968	---	Japan	Negative	---
1968	AA1921-61	France	Affirmative	Order revoked in 1979
1968	---	Federal Republic of Germany	Negative	---
1968	---	Netherlands	Negative	---
1994	731-TA-718	China	Affirmative	Order continued after fifth review, 2022
2007	731-TA-111	India	Negative	---
2007	731-TA-112	Japan	Negative	---
2007	731-TA-113	Korea	Negative	---

Source: U.S. International Trade Commission publications and Federal Register notices.

Note: "Date" refers to the year in which the investigation was instituted by the Commission.

Commerce's five-year reviews

Commerce announced that it would conduct expedited reviews with respect to the orders on imports of glycine from China, Japan, India, and Thailand with the intent of issuing the final results of these reviews based on the facts available not later than August 29, 2024.¹⁸ Commerce publishes its Issues and Decision Memoranda and its final results concurrently, accessible upon publication at <https://access.trade.gov/public/FRNoticesListLayout.aspx> and subsequently on the Commission's Electronic Document Information System ("EDIS"). Issues and Decision Memoranda contain complete and up-to-date information regarding the

¹⁷ 84 FR 37998, August 5, 2019 and 84 FR 55912, October 18, 2019.

¹⁸ Letter from Eric Greynolds, Director, AD/CVD Operations, Enforcement and Compliance, U.S. Department of Commerce to Nannette Christ, Director of Investigations, June 21, 2024.

background and history of the order, including scope rulings, duty absorption, changed circumstances reviews, and anticircumvention, as well as any decisions that may have been pending at the issuance of this report. Any foreign producers/exporters that are not currently subject to the antidumping and countervailing duty orders on imports of glycine from China, India, Japan, and Thailand are noted in the sections titled “The original investigations” and “U.S. imports,” if applicable.

The product

Commerce’s scope

Commerce has defined the scope as follows:

The merchandise covered by this order is glycine at any purity level or grade. This includes glycine of all purity levels, which covers all forms of crude or technical glycine including, but not limited to, sodium glycinate, glycine slurry and any other forms of amino acetic acid or glycine. Subject merchandise also includes glycine and precursors of dried crystalline glycine that are processed in a third country, including, but not limited to, refining or any other processing that would not otherwise remove the merchandise from the scope of this order if performed in the country of manufacture of the in-scope glycine or precursors of dried crystalline glycine. Glycine has the Chemical Abstracts Service (CAS) registry number of 56-40-6. Glycine and glycine slurry are classified under Harmonized Tariff Schedule of the United States (HTSUS) subheading 2922.49.43.00. Sodium glycinate is classified in the HTSUS under 2922.49.80.00. While the HTSUS subheadings and CAS registry number are provided for convenience and customs purposes, the written description of the scope of this order is dispositive. ¹⁹

U.S. tariff treatment

Glycine is currently provided for in subheading 2922.49.43 of the Harmonized Tariff Schedule of the United States (“HTS”). Glycine produced in China is imported into the U.S. market at a column 1-general duty rate of 4.2 percent ad valorem. Effective September 24,

¹⁹ 84 FR 37998, August 5, 2019.

2018, glycine produced in China was subject to an additional 10 percent ad valorem duty under Section 301 of the Trade Act of 1974, increasing to 25 percent as of May 10, 2019.²⁰ Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Description and uses²¹

Glycine, also known as aminoacetic acid, is an organic chemical with the formula $\text{NH}_2\text{CH}_2\text{COOH}$. Glycine is a nonessential amino acid that is produced naturally by humans and other organisms as a building block for proteins.²² Commercial production of glycine uses traditional chemical synthesis. Glycine is most commonly sold in its dry form as a white, free-flowing powder and is odorless and sweet to the taste. Glycine has the Chemical Abstracts Service (“CAS”) registry number of 56-40-6.

Glycine is typically sold as “USP” grade and technical grade.²³ The glycine in these grades is chemically identical; the grades differ by the kind and amounts of impurities in the product.

²⁰ “Notice of Modification of Section 301 Action: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation,” 83 FR 47974, September 21, 2018, <https://ustr.gov/sites/default/files/enforcement/301Investigations/83%20FR%2047974.pdf>; “Notice of Modification of Section 301 Action: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation,” 84 FR 20459, May 9, 2019, https://ustr.gov/sites/default/files/enforcement/301Investigations/84_FR_20459.pdf. Also as noted in HTS Chapter 99 (Rev. 2, 2022), “For the purposes of heading 9903.88.03, products of China, as provided for in this note, shall be subject to an additional 25 percent ad valorem rate of duty. The products of China that are subject to an additional 25 percent ad valorem rate of duty under heading 9903.88.03 are products of China that are classified in the subheadings enumerated in U.S. note 20(f) to subchapter III.”

²¹ Unless otherwise noted, this information is based on Glycine from China, India, and Japan, Inv. Nos. 701-TA-603-604 and 731-TA-1413-1414 (Final), USITC Publication 4900, June 2019 (“Final investigations”), pp. I-13-I-16; Glycine from Thailand, Inv. No. 731-TA-1415 (Final), USITC Publication 4977, October 2019 (“Final investigation”), p. 13; Glycine from China, Inv. No. 731-TA-718 (Fifth Review), USITC Publication 5347, August 2022 (“Fifth review publication”), pp. I-7-I-9.

²² Despite their name, nonessential amino acids are necessary for cell function. Nonessential amino acids are synthesized by the body, while essential amino acids must be furnished through the diet.

²³ Glycine is sold in various grades under various names but there does not seem to be an industrywide consensus on the names of the grades. Many agree on the terms “technical” (e.g., glycine used in industrial applications) and “USP-grade” (e.g., glycine used as a sweetener or flavor enhancer in foods and pharmaceuticals). There is also a higher-purity grade (“ultra-pure”) used as either an API (sometimes called “pharmaceutical grade;” “USP-NF pharmaceutical grade;” or “IV-grade”) or in the manufacture of semiconductors. The USP sets standards for medicines, food ingredients, and dietary supplements. Its standards are used in more than 140 countries, with its drug standards enforceable in the United States by the Food and Drug Administration. See <http://www.usp.org/about-usp>, retrieved February 26, 2022. Also, Glycine from China, India, Japan, and Thailand, Inv. Nos. 701-TA-603-604 and 731-TA-1413-1414 (Final), USITC Publication 4900, June 2019, pp. 1-14.

The USP-grade standard is stricter than technical-grade standard. For technical-grade glycine, the maximum allowable concentrations for impurities are either less strict or not specified. USP-grade glycine is typically used for pharmaceutical and food applications, while technical-grade glycine is used for industrial applications. Some customers have even stricter requirements for glycine purity than those included in the USP standard. These higher purity products are often referred to as “pharmaceutical grade” glycine, but the purity standards for these products are set by individual customers, not by the government or industry organizations.

Glycine is used as a sweetener and flavor enhancer in food, beverage, and pharmaceutical products. Glycine is used to sweeten soft drinks, juice concentrates, and other beverages. Manufacturers of medicaments and personal care products, such as mouthwash and toothpaste, use glycine to mask the bitter taste of some active ingredients. Glycine is also used to enhance the flavor of animal feed for household pets and livestock. Pharmaceutical manufacturers use USP-grade glycine to promote the gastric absorption of certain drugs such as aspirin and to treat diarrhea in humans and animals. USP-grade glycine is required for products made for human or animal consumption.

Glycine is used as a buffering agent in certain products and manufacturing processes to maintain a stable pH. In antacids and analgesics, USP-grade glycine helps to reduce the acidity of the digestive tract. In personal care products such as antiperspirants and cosmetics, USP grade glycine is used to reduce the acidity of other ingredients. Technical-grade glycine is used as a buffer in the production of foam rubber sponges.

Glycine can also be used as a starting material for producing other organic chemicals or in metal finishing. USP-grade glycine is typically used in the production of other amino acids and pharmaceuticals. Technical-grade glycine is used in metal finishing to brighten metal surfaces or to enhance the adhesion of rubber to a surface.

Manufacturing process²⁴

There are two known processes for the commercial production of glycine: the hydrogen cyanide (“HCN”) process and the monochloroacetic acid (“MCA”) process. Both of these processes can be used to produce both technical and USP grades of glycine. GEO uses the HCN process and Chattem, another domestic producer of glycine, uses the MCA process. Most glycine producers in China use the MCA process. The HCN process uses hydrogen cyanide and

²⁴ Unless otherwise noted, this information is based on Glycine from China, Inv. No. 731-TA-718 (Fifth Review), USITC Publication 5347, August 2022 (“Fifth review publication”), p. I-9.

formaldehyde (CH₂O) as the primary starting materials. These chemicals are mixed with aqueous ammonia (NH₄OH) in the first reaction step of the process. The reaction product from this first step is then reacted with caustic soda (NaOH) to produce sodium glycinate. Glycine is produced when an acid, such as sulfuric acid, is mixed with sodium glycinate. The glycine solution then goes through one or more crystallization and filtration steps to produce a pure white glycine powder. For the MCA process, the primary feedstocks are monochloroacetic acid (ClCH₂COOH) and ammonia. These feedstocks are mixed together in the presence of a catalyst to produce glycine. The MCA process is the less economical process in terms of operating cost due to higher raw material and energy costs.

The industry in the United States

U.S. producers

During the final phase of the original investigations, the Commission received U.S. producer questionnaires from Chattem and GEO, which accounted for approximately 100 percent of production of glycine in the United States during 2017.²⁵

In response to the Commission's notice of institution in these current reviews, the domestic interested parties identified themselves as the only currently operating U.S. producers of glycine. Both firms providing U.S. industry data in response to the Commission's notice of institution accounted for 100 percent of production of glycine in the United States during 2023.²⁶

²⁵ Original publication, p. III-1.

²⁶ Domestic interested parties' response to the notice of institution, May 30, 2024, p. 2.

Recent developments

Table I-4 presents events in the U.S. industry since the Commission's original investigations.²⁷

Table I-4

Glycine: Developments in the U.S. industry

Item	Firm	Event
Expansion	GEO	GEO Specialty Chemicals continued to invest in capital improvements and staffing since 2017. GEO updated its quality control lab, updated necessary software, and ensured a sufficient flow of parts. GEO also created a new position for a Lead Quality Control Technician and filled the position in April 2020.
Acquisition	GEO	GEO Specialty Chemicals was bought by CPS Performance Materials, a unit of Arsenal Capital Partners (a private equity firm) in September 2019.
Divestiture/ Transfer	GEO	GEO and DPG notified U.S. Customs and Border Protection ("CBP") that GEO transferred its entire glycine business to DPG on January 1, 2024.

Sources: Glycine from China, Inv. No. 731-TA-718 (Fifth Review), USITC Publication 5347, August 2022 ("Fifth review publication"), pp. I-9 and I-11; CBP, "RE: Notice of Initiation of Investigation and Interim Measures: EAPA Case 7846," Letter to Mr. Hitesh Patel and Mr. David M. Schwartz, February 14, 2024, footnote 4. <https://www.cbp.gov/sites/default/files/assets/documents/2024-Feb/02-14-2024%20-%20TRLED%20-%20NOI%20and%20Interim%20Measures%20%28508%20compliant%29%20-%20%287846%29%20-%20PV.pdf>.

U.S. producers' trade and financial data

The Commission asked domestic interested parties to provide trade and financial data in their response to the notice of institution in the current five-year reviews.²⁸ Table I-5 presents a compilation of the trade and financial data submitted from all responding U.S. producers in the original investigations and the ongoing reviews.

²⁷ For recent developments, if any, in tariff treatment, please see "U.S. tariff treatment" section.

²⁸ Individual company trade and financial data are presented in app. B.

Table I-5**Glycine: Trade and financial data submitted by U.S. producers, by period**

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound; ratio in percent

Item	Measure	2015	2016	2017	2023
Capacity	Quantity	***	***	***	***
Production	Quantity	***	***	***	***
Capacity utilization	Ratio	***	***	***	***
U.S. shipments	Quantity	***	***	***	***
U.S. shipments	Value	***	***	***	***
U.S. shipments	Unit value	***	***	***	***
Net sales	Value	***	***	***	***
COGS	Value	***	***	***	***
COGS to net sales	Ratio	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***
SG&A expenses	Value	***	***	***	***
Operating income or (loss)	Value	***	***	***	***
Operating income or (loss) to net sales	Ratio	***	***	***	***

Source: For the years 2015-17, data are compiled using data submitted in the Commission's original investigations. For the year 2023, data are compiled using data submitted by domestic interested parties. Domestic interested parties' response to the notice of institution, May 30, 2024, exh. H, and supplemental response, June 17, 2024, exh. 1.

Note: For a discussion of data coverage, please see "U.S. producers" section.

Definitions of the domestic like product and domestic industry

The domestic like product is defined as the domestically produced product or products which are like, or in the absence of like, most similar in characteristics and uses with, the subject merchandise. The domestic industry is defined as the U.S. producers as a whole of the domestic like product, or those producers whose collective output of the domestic like product constitutes a major proportion of the total domestic production of the product. Under the related parties provision, the Commission may exclude a U.S. producer from the domestic industry for purposes of its injury determination if "appropriate circumstances" exist.²⁹

In its original determinations, the Commission defined the domestic like product as consisting of all glycine, regardless of grade or purity level, coextensive with Commerce's scope.

²⁹ Section 771(4)(B) of the Tariff Act of 1930, 19 U.S.C. § 1677(4)(B).

In its original determinations, the Commission defined the domestic industry as all domestic producers of glycine, regardless of grade or purity level.³⁰

U.S. importers

During the final phase of the original investigations, the Commission received U.S. importer questionnaires from 25 firms, which accounted for approximately *** percent of total U.S. imports of glycine from China, *** percent of total U.S. imports of glycine from India, *** percent of total U.S. imports of glycine from Japan, and *** percent of total U.S. imports of glycine from Thailand in 2017. Overall, the 25 questionnaire responses represented 95.2 percent of total U.S. imports of glycine from all sources in 2017.³¹ Import data presented in the original investigations are compiled from official U.S. import statistics for HTS statistical reporting numbers 2922.49.4020 and 2922.49.4300.

Although the Commission did not receive responses from any respondent interested parties in these current reviews, in its response to the Commission's notice of institution, the domestic interested parties provided a list of 70 potential U.S. importers of glycine.³²

U.S. imports

Table I-6 presents the quantity, value, and unit value of U.S. imports from China, India, Japan, and Thailand as well as the other top sources of U.S. imports (shown in descending order of 2023 imports by quantity).

³⁰ 89 FR 35237, May 1, 2024.

³¹ Original confidential report and original publication, p. IV-1.

³² The list of possible U.S. importers submitted by domestic interested parties likely overstates the actual number of U.S. importers of glycine because it includes numerous logistics firms as well as a number of duplicate entities. Domestic interested parties' supplemental response to the notice of institution, June 17, 2024, exh. 1, p. 13.

Table I-6
Glycine: U.S. imports, by source and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound

U.S. imports from	Measure	2018	2019	2020	2021	2022	2023
China	Quantity	134	316	274	1,213	1,231	840
India	Quantity	1,136	5,219	6,871	6,509	12,751	6,856
Japan	Quantity	3,568	3,489	5,317	4,449	4,154	3,884
Thailand	Quantity	6,003	867	---	---	---	---
Subject sources	Quantity	10,841	9,891	12,462	12,171	18,136	11,581
Malaysia	Quantity	---	---	---	---	441	662
Indonesia	Quantity	---	---	---	1,196	1,244	617
Germany	Quantity	2	68	312	747	402	258
All other sources	Quantity	80	0	41	103	44	23
Nonsubject sources	Quantity	82	68	353	2,046	2,130	1,561
All import sources	Quantity	10,923	9,959	12,815	14,218	20,266	13,142
China	Value	252	763	920	3,334	2,577	2,555
India	Value	1,859	10,133	13,105	13,628	45,860	19,155
Japan	Value	7,046	7,334	10,502	10,110	12,572	12,690
Thailand	Value	9,268	1,334	---	---	---	---
Subject sources	Value	18,425	19,563	24,527	27,073	61,009	34,400
Malaysia	Value	---	---	---	---	844	1,129
Indonesia	Value	---	---	---	2,533	5,596	865
Germany	Value	3	175	821	1,997	1,244	822
All other sources	Value	204	29	339	729	414	304
Nonsubject sources	Value	207	204	1,160	5,259	8,098	3,120
All import sources	Value	18,632	19,767	25,687	32,332	69,107	37,520
China	Unit value	1.88	2.41	3.35	2.75	2.09	3.04
India	Unit value	1.64	1.94	1.91	2.09	3.60	2.79
Japan	Unit value	1.97	2.10	1.98	2.27	3.03	3.27
Thailand	Unit value	1.54	1.54	---	---	---	---
Subject sources	Unit value	1.70	1.98	1.97	2.22	3.36	2.97
Malaysia	Unit value	---	---	---	---	1.91	1.70
Indonesia	Unit value	---	---	---	2.12	4.50	1.40
Germany	Unit value	1.64	2.59	2.63	2.67	3.09	3.18
All other sources	Unit value	2.55		8.31	7.09	9.52	13.02
Nonsubject sources	Unit value	2.53	3.01	3.29	2.57	3.80	2.00
All import sources	Unit value	1.71	1.98	2.00	2.27	3.41	2.85

Source: Compiled from official Commerce statistics for HTS statistical reporting number 2922.49.4300, accessed June 27, 2024.

Note: Because of rounding, figure may not add to total shown.

Note: CBP has made affirmative determinations in Enforce and Protect Act investigations in 2022 in which substantial evidence demonstrated that Chinese-origin glycine were being transshipped through Indonesia. Therefore, imports from China are likely understated and imports from Indonesia are likely overstated during 2021 and 2022. CBP, “Notice of Determination as to Evasion – EAPA Consolidated Case Number 7647,” July 22, 2022.

Cumulation considerations³³

In assessing whether imports should be cumulated in five-year reviews, the Commission considers, among other things, whether there is a likelihood of a reasonable overlap of competition among subject imports and the domestic like product. Additional information concerning geographical markets and simultaneous presence in the market is presented below.

Imports from Thailand were reported in 17 of the 24 months between 2018 and 2019. There were no reported U.S. imports of glycine from Thailand during 2020-23. Imports from China, India, and Japan were reported in 72 of the 72 months between 2018 and 2023. Imports from China, India, and Japan entered through all borders of entry in all years from 2018 through 2023. Imports from Thailand entered through east and west borders from 2018 through 2019.

Apparent U.S. consumption and market shares

Table I-7 presents data on U.S. producers’ U.S. shipments, U.S. imports, apparent U.S. consumption, and market shares.

Table I-7
Glycine: Apparent U.S. consumption and market shares, by source and period

Quantity in 1,000 pounds

Source	Measure	2015	2016	2017	2023
U.S. producers	Quantity	***	***	***	***
China	Quantity	104	526	734	840
India	Quantity	2,926	4,260	3,903	6,856
Japan	Quantity	6,011	4,629	5,305	3,884
Thailand	Quantity	3,895	1,356	2,720	---
Subject sources	Quantity	12,936	10,771	12,661	11,581
Nonsubject sources	Quantity	859	292	174	1,561
All import sources	Quantity	13,795	11,063	12,835	13,142
Apparent U.S. consumption	Quantity	***	***	***	***

Table continued.

³³ Unless otherwise noted, this information is based on official U.S. import statistics for HTS statistical reporting number 2922.49.4300.

Table I-7 Continued**Glycine: Apparent U.S. consumption and market shares, by source and period**

Value in 1,000 dollars; shares in percent

Source	Measure	2015	2016	2017	2023
U.S. producers	Value	***	***	***	***
China	Value	177	835	1,339	2,555
India	Value	6,008	8,146	7,030	19,155
Japan	Value	12,450	9,807	10,206	12,690
Thailand	Value	8,665	3,014	4,592	---
Subject sources	Value	27,300	21,802	23,168	34,400
Nonsubject sources	Value	1,386	526	480	3,120
All import sources	Value	28,685	22,328	23,647	37,520
Apparent U.S. consumption	Value	***	***	***	***
U.S. producers	Share of quantity	***	***	***	***
China	Share of quantity	***	***	***	***
India	Share of quantity	***	***	***	***
Japan	Share of quantity	***	***	***	***
Thailand	Share of quantity	***	***	***	***
Subject sources	Share of quantity	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***
All import sources	Share of quantity	***	***	***	***
U.S. producers	Share of value	***	***	***	***
China	Share of value	***	***	***	***
India	Share of value	***	***	***	***
Japan	Share of value	***	***	***	***
Thailand	Share of value	***	***	***	***
Subject sources	Share of value	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***
All import sources	Share of value	***	***	***	***

Source: For the years 2015-17, data are compiled using data compiled from official U.S. import statistics in the Commission's original investigations and imports from Cambodia were reclassified as imports from China. For the year 2023, U.S. producers' U.S. shipments are compiled from the domestic interested parties' response to the Commission's notice of institution and U.S. imports are compiled using official Commerce statistics under HTS statistical reporting number 2922.49.4300, accessed June 27, 2024.

Note: Share of quantity is the share of apparent U.S. consumption by quantity in percent; share of value is the share of apparent U.S. consumption by value in percent.

Note: For a discussion of data coverage, please see "U.S. producers" and "U.S. importers" sections.

The industry in China

Producers in China

During the final phase of the original investigations, the Commission did not receive any questionnaire response from the firms issued producer questionnaires, including Commerce's two mandatory respondents in its countervailing duty investigations.³⁴

Although the Commission did not receive responses from any respondent interested parties in these five-year reviews, the domestic interested parties provided a list of two possible producers of glycine in China.³⁵

Recent developments

On July 22, 2022, U.S. Customs and Border Protection (CBP) issued a determination finding substantial evidence that covered merchandise (glycine) from China was being transshipped to the United States through Indonesia.³⁶ On July 18, 2024, CBP reiterated in a remand redetermination that substantial evidence of evasion exists and that the glycine imports were produced in China.³⁷

Exports

Table I-8 presents export data from China for glycine and other amino acids, a category that includes glycine and out-of-scope products (by source in descending order of quantity for 2023).

³⁴ Original publication, p. VII-3.

³⁵ Domestic interested parties' response to the notice of institution, May 30, 2024, exh. G.

³⁶ CBP, "EAPA of Action Notice of Determination as to Evasion in EAPA Case 7647 – Glycine," November 18, 2022, <https://www.cbp.gov/trade/trade-enforcement/tftea/eapa/recent-eapa-actions/eapa-action-notice-determination-evasion-eapa-case-7647-glycine>.

³⁷ Alyssa Aquino, "Feds Maintain Glycine Duty Evasion Stance, Despite New Info," Law360, January 19, 2024. <https://www.law360.com/articles/1787707/feds-maintain-glycine-duty-evasion-stance-despite-new-info>; CBP, "Final Remand Redetermination Newtrend USA Co., Ltd., et al. v. United States Court No. 22-00347 (Court of International Trade October 20, 2023) EAPA Consolidated Case No. 7647," January 18, 2024, <https://assets.law360news.com/1787000/1787707/newtrendremand.pdf>.

Table I-8
Glycine and other amino acids: Quantity of exports from China, by destination and period

Quantity in 1,000 pounds

Destination market	2018	2019	2020	2021	2022	2023
Netherlands	79,671	89,712	105,462	136,357	143,134	138,256
United States	91,380	73,002	97,996	150,818	118,776	104,593
India	40,489	52,564	60,222	52,854	67,207	68,592
Germany	68,059	62,893	63,655	67,556	72,410	68,334
Japan	44,279	48,551	48,686	49,435	49,369	57,421
Russia	21,517	29,599	36,983	42,735	41,540	54,496
Spain	24,410	29,944	34,785	36,041	35,315	44,797
Brazil	16,602	18,718	25,997	32,091	31,782	37,530
Thailand	23,721	20,277	20,341	26,021	22,040	29,879
South Korea	19,881	22,298	24,416	27,562	27,935	28,048
All other markets	161,487	211,673	259,352	284,925	293,811	362,515
All markets	591,495	659,231	777,896	906,395	903,320	994,460

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 2922.49, accessed May 17, 2024. These data may be overstated as HS subheading 2922.49 contains products outside the scope of these reviews.

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

The industry in India

Producers in India

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from four firms, which accounted for approximately *** percent of glycine exports from India to the United States during 2017.³⁸

Although the Commission did not receive responses from any respondent interested parties in these five-year reviews, the domestic interested parties provided a list of three possible producers of glycine in India.³⁹

Recent developments

There were no major developments in the industry of India since the imposition of the orders identified by interested parties in the proceeding and no relevant information from outside sources was found.

³⁸ Original publication, p. VII-7.

³⁹ Domestic interested parties' response to the notice of institution, May 30, 2024, exh. G.

Table I-9 presents export data from India for glycine and other amino acids, a category that includes glycine and out-of-scope products (by source in descending order of quantity for 2023).

Exports

Table I-9

Glycine and other amino acids: Quantity of exports from India, by destination and period

Quantity in 1,000 pounds

Destination market	2018	2019	2020	2021	2022	2023
United States	4,502	9,195	10,370	11,224	17,986	10,626
Vietnam	948	1,154	1,387	998	893	1,213
United Arab Emirates	131	167	94	406	472	1,040
Netherlands	779	350	234	588	631	672
Puerto Rico	640	700	546	632	588	568
Germany	827	563	353	306	304	488
United Kingdom	472	98	103	175	196	410
Switzerland	323	336	254	235	362	376
Turkey	247	363	300	397	318	308
Canada	157	340	186	518	213	308
All other markets	3,557	4,891	5,284	6,824	6,063	5,199
All markets	12,582	18,156	19,111	22,303	28,027	21,208

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 2922.49, accessed May 17, 2024. These data may be overstated as HS subheading 2922.49 contains products outside the scope of these reviews.

Note: Puerto Rico is identified separately by the reporting authority.

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

The industry in Japan

Producers in Japan

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from three firms, which accounted for approximately *** percent of production of glycine in Japan during 2017, and approximately *** percent of glycine exports from Japan to the United States during 2017.⁴⁰

⁴⁰ Original publication, p. VII-10.

Although the Commission did not receive responses from any respondent interested parties in these five-year reviews, the domestic interested parties provided a list of five possible producers of glycine in Japan.⁴¹

Recent developments

On January 1, 2023, Showa Denko K.K. and Showa Denko Materials Co., Ltd. merged and transformed themselves into newly integrated company "Resonac".⁴²

Exports

Table I-10 presents export data from Japan for glycine and other amino acids, a category that includes glycine and out-of-scope products (by source in descending order of quantity for 2023).

Table I-10
Glycine and other amino acids: Quantity of exports from Japan, by destination and period

Quantity in 1,000 pounds

Destination market	2018	2019	2020	2021	2022	2023
United States	5,598	6,814	7,478	7,365	6,587	4,617
Taiwan	1,840	1,912	2,257	3,252	2,390	2,208
United Kingdom	3,055	3,092	3,262	3,248	2,658	2,091
Vietnam	1,504	1,460	1,712	2,301	1,564	2,006
Germany	2,483	1,863	1,688	3,759	2,476	1,944
South Korea	4,345	2,720	2,923	3,891	2,594	1,389
Thailand	1,003	628	1,107	1,688	972	1,027
Netherlands	643	517	659	717	660	645
China	1,245	934	745	614	614	544
Spain	136	681	846	303	380	300
All other markets	1,869	1,833	1,936	2,953	1,692	1,008
All markets	23,722	22,454	24,614	30,090	22,587	17,780

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 2922.49, accessed May 17, 2024. These data may be overstated as HS subheading 2922.49 contains products outside the scope of these reviews.

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

⁴¹ Domestic interested parties' response to the notice of institution, May 30, 2024, exh. G.

⁴² For more information, see <https://www.resonac.com/corporate/name-change.html>.

The industry in Thailand

Producers in Thailand

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from one firm, which accounted for approximately all production of glycine in Thailand during 2017, and approximately all glycine exports from Thailand to the United States during 2017.⁴³

Although the Commission did not receive responses from any respondent interested parties in these five-year reviews, the domestic interested parties provided a list of two possible producers of glycine in Thailand.⁴⁴

Recent developments

There were no major developments in the industry in Thailand since the imposition of the orders identified by interested parties in the proceeding and no relevant information from outside sources was found.

Exports

Table I-11 presents export data from Thailand for glycine and other amino acids, a category that includes glycine and out-of-scope products (by source in descending order of quantity for 2023).

⁴³ Original publication, pp. VII-13-14.

⁴⁴ Domestic interested parties' response to the notice of institution, May 30, 2024, exh. G.

Table I-11**Glycine and other amino acids: Quantity of exports from Thailand, by destination and period**

Quantity in 1,000 pounds

Destination market	2018	2019	2020	2021	2022	2023
China	227	566	2,214	2,210	1,671	974
Cambodia	251	437	592	1,091	975	739
Indonesia	0	176	92	0	1	61
Myanmar	0	0	0	9	13	36
Nepal	0	0	0	0	0	22
Laos	88	331	3	41	12	20
Vietnam	26	17	5	8	33	13
India	181	5	0	0	1	12
Malaysia	60	397	0	0	22	11
Bolivia	0	0	0	0	3	3
All other markets	6,572	1,673	158	56	95	5
All markets	7,405	3,603	3,064	3,414	2,826	1,896

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 2922.49, accessed May 17, 2024. These data may be overstated as HS subheading 2922.49 contains products outside the scope of these reviews.

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

Third-country trade actions

Based on available information, glycine has been subject to an antidumping investigation conducted by India, one of the subject countries in this investigation. Despite the Directorate General of Trade Remedies (DGTR) of India recommending the imposition of duties on imports of glycine originating in or imported from China after a year-long investigation (April 2020–March 2021), the Department of Revenue, Ministry of Finance, Government of India, decided not to accept the recommendation made by the DGTR, and India will not impose the antidumping duties.⁴⁵

⁴⁵ ICN Bureau, “India Not to Impose Anti-dumping Duty on Imports of Glycine from China,” January 3, 2023, <https://www.indianchemicalnews.com/policy/india-not-to-impose-anti-dumping-duty-on-imports-of-glycine-from-china-15946>; SDI Logistics Company, Ltd., “India Does Not Apply Anti-Dumping Measures On Glycine To China,” December 27, 2022, <https://www.sdilogistics-shippings.com/news/india-does-not-apply-anti-dumping-measures-on-63962883.html>; Directorate General of Trade Remedies, Department Of Commerce, New Delhi, “Anti-dumping investigation concerning imports of Glycine originating in or exported from China PR: Case No.: 6/14/2021-DGTR,” December 24, 2022, <https://www.dgtr.gov.in/anti-dumping-cases/anti-dumping-investigation-concerning-imports-glycine-originating-or-exported>; Tax Research Unit, Department of Revenue,

(continued...)

The global market

Global trade in glycine is tracked under HS heading 2922.49, a basket category covering glycine and other amino acids. Table I-12 presents export data for HS 2922.49 (by source in descending order of quantity for 2023).

As shown in table I-12, China was the largest exporter in every year during 2018-23 for this basket category and its share of total global exports by quantity increased from 38.8 percent in 2018 to 53.8 percent in 2023.

Table I-12
Glycine and other amino acids: Quantity of global exports by country and period

Quantity in 1,000 pounds

Exporting country	2018	2019	2020	2021	2022	2023
China	591,495	659,231	777,896	906,395	903,320	994,460
Netherlands	218,684	246,226	258,571	295,715	269,793	274,922
Germany	265,182	259,523	233,637	238,306	247,313	181,799
United States	164,611	169,752	128,465	144,213	158,291	129,456
Belgium	63,324	79,586	69,885	60,517	65,216	43,841
France	40,869	55,480	64,358	65,013	53,216	39,798
Indonesia	211	12	607	3,684	2,270	28,847
India	12,582	18,156	19,111	22,303	28,027	21,208
Japan	23,722	22,454	24,614	30,090	22,587	17,780
Malaysia	825	361	873	986	1,756	17,212
All other exporters	141,417	122,610	124,047	128,752	110,114	98,006
All exporters	1,522,923	1,633,391	1,702,063	1,895,974	1,861,903	1,847,329

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 2922.49, accessed May 17, 2024. These data may be overstated as HS subheading 2922.49 contains products outside the scope of these reviews.

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

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
89 FR 35073, May 1, 2024	Initiation of Five-Year (Sunset) Reviews	https://www.govinfo.gov/content/pkg/FR-2024-05-01/pdf/2024-09424.pdf
89 FR 35237, May 1, 2024	Glycine From China, India, Japan, and Thailand; Institution of a Five-Year Review	https://www.govinfo.gov/content/pkg/FR-2024-05-01/pdf/2024-09365.pdf

APPENDIX B

COMPANY-SPECIFIC DATA

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APPENDIX C
SUMMARY DATA

Table C-1

Glycine: Summary data concerning the U.S. market, 2015-17, January to September 2017, and January to September 2018

(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year		2017	January to September		Calendar year		2016-17	Jan-Sep 2017-18
	2015	2016		2017	2018	2015-17	2015-16		
U.S. consumption quantity:									
Amount.....	***	***	***	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China.....	***	***	***	***	***	***	***	***	***
India.....	***	***	***	***	***	***	***	***	***
Japan.....	***	***	***	***	***	***	***	***	***
Subtotal.....	***	***	***	***	***	***	***	***	***
Thailand.....	***	***	***	***	***	***	***	***	***
Subtotal.....	***	***	***	***	***	***	***	***	***
All other sources.....	***	***	***	***	***	***	***	***	***
All import sources.....	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount.....	***	***	***	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China.....	***	***	***	***	***	***	***	***	***
India.....	***	***	***	***	***	***	***	***	***
Japan.....	***	***	***	***	***	***	***	***	***
Subtotal.....	***	***	***	***	***	***	***	***	***
Thailand.....	***	***	***	***	***	***	***	***	***
Subtotal.....	***	***	***	***	***	***	***	***	***
All other sources.....	***	***	***	***	***	***	***	***	***
All import sources.....	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity.....	104	526	734	608	132	608.1	407.3	39.6	(78.2)
Value.....	177	835	1,339	1,201	183	656.9	371.8	60.4	(84.7)
Unit value.....	\$1.71	\$1.59	\$1.83	\$1.97	\$1.38	6.9	(7.0)	14.9	(29.9)
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
India:									
Quantity.....	2,926	4,260	3,903	2,950	897	33.4	45.6	(8.4)	(69.6)
Value.....	6,008	8,146	7,030	5,296	1,443	17.0	35.6	(13.7)	(72.8)
Unit value.....	\$2.05	\$1.91	\$1.80	\$1.80	\$1.61	(12.3)	(6.9)	(5.8)	(10.4)
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Japan:									
Quantity.....	6,011	4,629	5,305	3,841	3,170	(11.7)	(23.0)	14.6	(17.5)
Value.....	12,450	9,807	10,206	7,355	6,267	(18.0)	(21.2)	4.1	(14.8)
Unit value.....	\$2.07	\$2.12	\$1.92	\$1.91	\$1.98	(7.1)	2.3	(9.2)	3.2
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Subtotal:									
Quantity.....	9,041	9,415	9,941	7,399	4,199	10.0	4.1	5.6	(43.3)
Value.....	18,635	18,788	18,575	13,852	7,893	(0.3)	0.8	(1.1)	(43.0)
Unit value.....	\$2.06	\$2.00	\$1.87	\$1.87	\$1.88	(9.4)	(3.2)	(6.4)	0.4
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Thailand:									
Quantity.....	3,895	1,356	2,720	2,222	4,740	(30.2)	(65.2)	100.5	113.3
Value.....	8,665	3,014	4,592	3,735	7,415	(47.0)	(65.2)	52.4	98.5
Unit value.....	\$2.22	\$2.22	\$1.69	\$1.68	\$1.56	(24.1)	(0.1)	(24.0)	(6.9)
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Subtotal:									
Quantity.....	12,936	10,771	12,661	9,621	8,939	(2.1)	(16.7)	17.5	(7.1)
Value.....	27,300	21,802	23,168	17,587	15,308	(15.1)	(20.1)	6.3	(13.0)
Unit value.....	\$2.11	\$2.02	\$1.83	\$1.83	\$1.71	(13.3)	(4.1)	(9.6)	(6.3)
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
All other sources:									
Quantity.....	859	292	174	131	40	(79.7)	(66.0)	(40.3)	(69.1)
Value.....	1,386	526	480	352	123	(65.4)	(62.0)	(8.9)	(65.1)
Unit value.....	\$1.61	\$1.80	\$2.75	\$2.69	\$3.04	70.7	11.8	52.6	13.1
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity.....	13,795	11,063	12,835	9,752	8,979	(7.0)	(19.8)	16.0	(7.9)
Value.....	28,685	22,328	23,647	17,939	15,431	(17.6)	(22.2)	5.9	(14.0)
Unit value.....	\$2.08	\$2.02	\$1.84	\$1.84	\$1.72	(11.4)	(2.9)	(8.7)	(6.6)
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***

Table C-1--Continued

Glycine: Summary data concerning the U.S. market, 2015-17, January to September 2017, and January to September 2018

(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year		2017	January to September		Calendar year		2016-17	Jan-Sep 2017-18
	2015	2016		2017	2018	2015-17	2015-16		
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).....	***	***	***	***	***	***	***	***	***
Production workers.....	***	***	***	***	***	***	***	***	***
Hours worked (1,000s).....	***	***	***	***	***	***	***	***	***
Wages paid (\$1,000).....	***	***	***	***	***	***	***	***	***
Hourly wages (dollars per hour).....	***	***	***	***	***	***	***	***	***
Productivity (pounds per hour).....	***	***	***	***	***	***	***	***	***
Unit labor costs.....	***	***	***	***	***	***	***	***	***
Net sales:									
Quantity.....	***	***	***	***	***	***	***	***	***
Value.....	***	***	***	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS).....	***	***	***	***	***	***	***	***	***
Gross profit or (loss).....	***	***	***	***	***	***	***	***	***
SG&A expenses.....	***	***	***	***	***	***	***	***	***
Operating income or (loss).....	***	***	***	***	***	***	***	***	***
Net income or (loss).....	***	***	***	***	***	***	***	***	***
Capital expenditures.....	***	***	***	***	***	***	***	***	***
Unit COGS.....	***	***	***	***	***	***	***	***	***
Unit SG&A expenses.....	***	***	***	***	***	***	***	***	***
Unit operating income or (loss).....	***	***	***	***	***	***	***	***	***
Unit net income or (loss).....	***	***	***	***	***	***	***	***	***
COGS/sales (fn1).....	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1).....	***	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1).....	***	***	***	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.

fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting numbers 2922.49.4020 and 2922.49.4300, accessed March 19, 2019

APPENDIX D

PURCHASER QUESTIONNAIRE RESPONSES

As part of their response to the notice of institution, interested parties were asked to provide a list of three to five leading purchasers in the U.S. market for the domestic like product. A response was received from domestic interested parties, and it provided contact information for the following four firms as top purchasers of glycine: ***. Purchaser questionnaires were sent to these four firms and no firms submitted a response to the Commission's request for information.

