Creatine Monohydrate From China

Investigation No. 731-TA-814 (Final)

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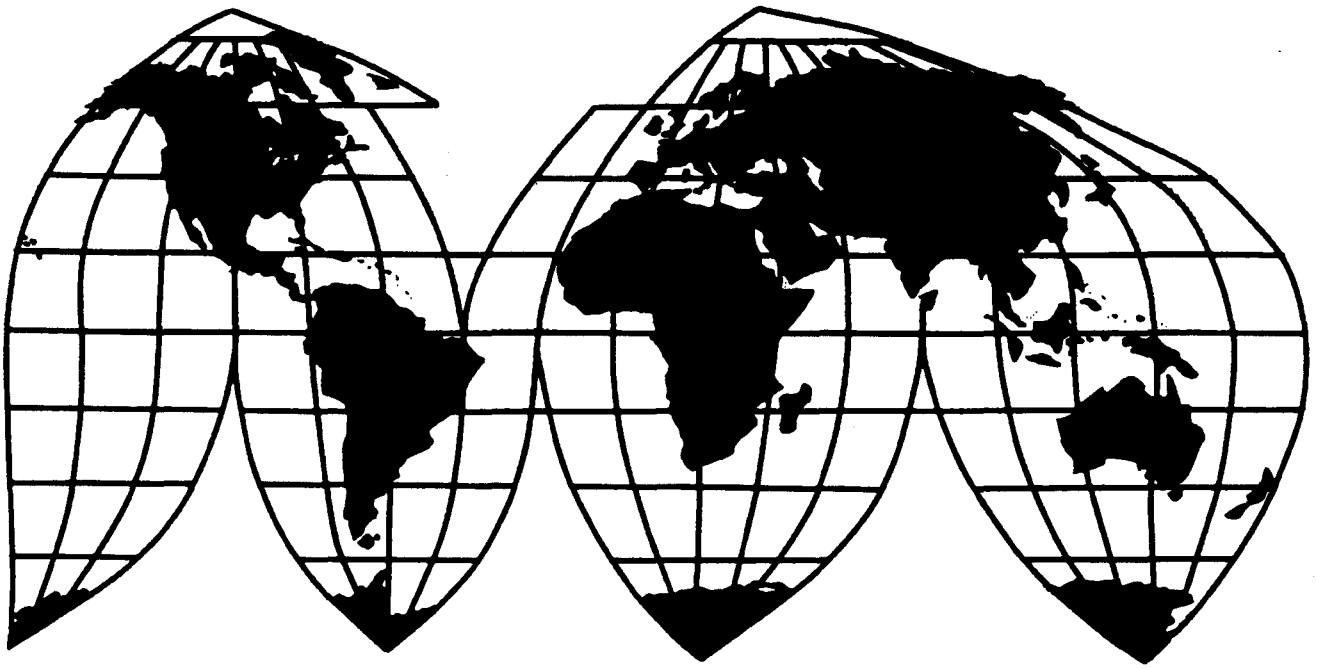
U.S. International Trade Commission



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U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-814 (Final)

CREATINE MONOHYDRATE FROM CHINA

DETERMINATION

On the basis of the record[1] developed in the subject investigation, the United States International Trade Commission determines, pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (the Act), that an industry in the United States is materially injured by reason of imports from China of creatine monohydrate, provided for in subheading 2925.20.90 of the Harmonized Tariff Schedule of the United States, that have been found by the Department of Commerce to be sold in the United States at less than fair value (LTFV).[2] The Commission made a negative determination concerning critical circumstances.

BACKGROUND

The Commission instituted this investigation effective February 12, 1999, following receipt of a petition filed with the Commission and the Department of Commerce by Pfanstiehl Laboratories, Inc., Waukegan, IL. The final phase of the investigation was scheduled by the Commission following notification of a preliminary determination by the Department of Commerce that imports of creatine monohydrate from China were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. § 1673b(b)). Notice of the scheduling of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of August 19, 1999 (64 FR 45275). The hearing was held in Washington, DC, on December 16, 1999, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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

[2] Commissioner Deanna Tanner Okun did not participate in this investigation.

VIEWS OF THE COMMISSION

Based on the record in this investigation, we find that an industry in the United States is materially injured by reason of imports of creatine monohydrate (sometimes hereinafter "creatine") from the People's Republic of China that are sold in the United States at less than fair value ("LTFV").[1]

I. DOMESTIC LIKE PRODUCT AND INDUSTRY

A. In General

To determine whether an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[2] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Act"), defines the relevant domestic industry as the "producers as a [w]hole 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."[3] In turn, the 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 . . . ."[4]

The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[5] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[6] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[7] Although the Commission must accept the determination of the Department of Commerce ("Commerce") as to the scope of the imported merchandise that has been found to be subsidized or sold at LTFV, the Commission determines what domestic product is like the imported articles Commerce has identified.[8]

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[1] Commissioner Deanna Tanner Okun not participating.

[2] 19 U.S.C. § 1677(4)(A).

[3] 19 U.S.C. § 1677(4)(A).

[4] 19 U.S.C. § 1677(10).

[5] See, e.g., NEC Corp. v. Department of Commerce, 36 F. Supp. 2d 380, 383 (CIT 1998); Nippon Steel Corp. v. United States, 19 CIT 450, 455 (1995); Torrington Co. v. United States, 747 F. Supp. 744, 749, n.3 (CIT 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case' "). The Commission generally considers a number of factors including: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes and production employees; and, where appropriate, (6) price. See Nippon, 19 CIT at 455, n.4; Timken Co. v. United States, 913 F. Supp. 580, 584 (CIT 1996).

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

[7] Nippon Steel, 19 CIT at 455; Torrington, 747 F. Supp. at 748-49. See also S. Rep. No. 96-249, at 90-91 (1979) (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

[8] Hosiden Corp. v. Advanced Display Mfrs., 85 F.3d 1561, 1568 (Fed. Cir. 1996) (Commission may find single like product corresponding to several different classes or kinds defined by Commerce); Torrington, 747 F. Supp. at 748-752 (affirming Commission determination of six like products in investigations where Commerce found five classes or kinds).

B. Product Description

In its final determination, Commerce defined the imported merchandise within the scope of this investigation as:

> [c]reatine monohydrate, which is commonly referred to as "creatine." The chemical name for creatine monohydrate is N-(aminoiminomethyl)-N-methylg[l]ycine monohydrate. The Chemical Abstracts Service ("CAS") registry number for this product is 6020-87-7. Creatine monohydrate in its pure form is a white, tasteless, odorless powder, that is a naturally occurring metabolite found in muscle tissue.
>
> Creatine monohydrate is provided for in subheading 2925.20.90 of the Harmonized Tariff Schedule of the United States ("HTSUS"). Although the HTSUS subheading and the CAS registry number are provided for convenience and customs purposes, the written description of the merchandise under investigation is dispositive.[9]

Creatine is an amino acid produced in the human body that plays a role in replenishing the energy supply to muscle cells.[10] Synthetic creatine is a white powder, usually 99.5 percent pure or higher.[11] Until recently, the primary use for creatine was as a laboratory reagent, demand for which was relatively limited.[12] In the early 1990s, however, weight trainers and other athletes began using creatine in the belief that it promotes muscle strength and endurance if used in conjunction with strength training.[13] Most of the creatine consumed as a dietary supplement is in the form of creatine monohydrate, although downstream derivatives such as creatine citrate are also consumed.[14]

C. Domestic Like Product Issues

In the preliminary determination in this investigation, the Commission found a single domestic like product consisting of creatine monohydrate.[15] In this final phase, petitioner[16] argues that the domestic like product should also include creatine citrate, a downstream derivative of creatine monohydrate.[17] [18] Creatine citrate is produced from a chemical reaction of creatine monohydrate and

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[9] 64 Fed. Reg. 71104, 71104 (Dec. 20, 1999).

[10] Confidential staff report ("CR") at I-4, public staff report ("PR") at I-3.

[11] CR and PR at I-3.

[12] CR at I-5 and PR at I-4 and transcript of Dec. 17, 1999 hearing (hearing tr.) at 11 (testimony of Edward S. Holstein, Executive Vice President and Treasurer of Petitioner Pfanstiehl Laboratories, Inc.).

[13] CR at I-4 to I-5 and PR at I-3, and hearing tr. at 11, 13 (Holstein).

[14] CR at I-9 and PR at I-6 (creatine citrate is a downstream product), table III-2, CR at III-7 and PR at III-4 (production and shipments of creatine monohydrate), CR at III-10 to III-11 and PR at III-5 (production of creatine citrate).

[15] In the Commission's preliminary determination, Commissioner Crawford defined the domestic like product to include creatine monohydrate and its downstream derivatives: creatine citrate, creatine phosphate, and creatine liquid. Creatine Monohydrate from the People's Republic of China, Inv. No. 731-TA-814 (Preliminary), USITC Pub. 3177 at 5 n.16 and 7 n.42 (April 1999) ("Prelim. Det.").

[16] The petitioner is Pfanstiehl Laboratories, Inc. In the final phase of the investigation, no respondent filed briefs, testified at the hearing, or otherwise presented argument.

[17] Petitioner's Posthearing Brief at 11. Petitioner also argues that the Commission should include two other derivatives of creatine monohydrate -- creatine phosphate and creatine liquid -- in the domestic like product. *Id.*

(continued...)

citric acid.[19] Like creatine monohydrate, creatine citrate is used as a dietary supplement by people engaged in strength training.[20] The record in this final investigation is mixed regarding whether a clear dividing line exists between creatine monohydrate and creatine citrate. On balance, we determine not to include creatine citrate in the like product and find that there is a single domestic like product consisting of creatine monohydrate only.[21]

Physical Characteristics and Uses. Creatine monohydrate and creatine citrate differ chemically, as creatine citrate is a salt, chemically distinct from creatine monohydrate, which is produced by a reaction of creatine monohydrate with citric acid.[22] Creatine citrate is more soluble in water than creatine monohydrate, and the former is therefore believed to be more biologically absorbable than creatine monohydrate.[23] Creatine citrate contains a smaller creatine content by weight than does creatine monohydrate.[24] Creatine citrate is reported to have an unpleasant taste, while creatine monohydrate in its pure form has a mildly sweet taste.[25] Despite these differences, both forms of creatine occur in the body naturally, and each is ultimately metabolized into creatine phosphate in the muscle cell.[26] Both products are consumed by persons wishing to increase endurance or muscle size.[27]

Interchangeability. Producers and purchasers report that interchangeability between the two forms of creatine is limited because creatine citrate is less potent than creatine monohydrate, and because

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[17] (...continued)
The Commission found no domestic production of these two products, however, and thus cannot consider them for inclusion in the domestic like product. CR at I-11 and PR at I-7.

[18] In the preliminary phase, respondents argued that the domestic like product should include the downstream creatine monohydrate derivatives, as well as beta-hydroxyl-beta-methylbutyrate ("HMB") and glutamine -- dietary supplements that are chemically unrelated to creatine. For the reasons expressed in the preliminary determination, we do not include HMB or glutamine in the domestic like product. See Prelim. Det. at 7-8.

[19] CR at I-9 n.34 and PR at I-6 n.34.

[20] CR at I-9 and PR at I-6.

[21] Chairman Bragg notes that the Commission generally has determined in past investigations that the domestic like product should not include downstream products that are made using the product subject to investigation, unless those downstream products are also themselves included within the scope of the subject merchandise. See, e.g., Uranium from Kazakhstan, Inv. No. 731-TA-539-A (Final), USITC Pub. 3213 at 8 (July 1999); Certain Stainless Steel Plate from Belgium, Canada, Italy, Korea, South Africa, and Taiwan, Invs. Nos. 701-TA-376-379 (Preliminary) and 731-TA-788-793 (Preliminary), USITC Pub. 3107 at 5 (May 1998). Indeed, the Commission expressly noted this in its preliminary determination in the instant investigation. Prelim. Det. at 5. The downstream product presently at issue, i.e. creatine citrate, does not fall within the scope of the subject merchandise. It is in this context that Chairman Bragg evaluates the possible inclusion of creatine citrate in the definition of the domestic like product using the Commission's traditional six factor analysis.

[22] CR at I-9 & n.34 and PR at I-6 & n.34.

[23] CR at I-9 n.34 and PR at I-6 n.34.

[24] CR at I-10 and PR at I-7.

[25] CR at I-3 and I-12 and PR at I-3 and I-8.

[26] CR and I-4 and PR at I-3 (monohydrate naturally occurring and metabolized into creatine phosphate), CR at I-7 and PR at I-5 (ultimately same form), and CR and I-9 n.34 and PR at I-6 n.34 (citrate naturally occurring).

[27] CR at I-9 to I-10 and PR at I-6.

only creatine monohydrate has been clinically validated.[28] A majority of producers, importers, and purchasers reported that the two products are not substitutable.[29]

Channels of Distribution. The two products generally are sold in the same channels of distribution common to dietary supplements.[30]

Customer and Producer Perceptions. Customers and producers perceive creatine monohydrate and creatine citrate to differ in potency, clinical validation, and cost.[31] A majority of them do not view the products as substitutes.[32]

Common Manufacturing Processes, Facilities, and Employees. Because creatine citrate is made using creatine monohydrate as an input, the two products necessarily share common manufacturing processes, facilities, and employees up to the point in the process when creatine monohydrate and citric acid are reacted to produce creatine citrate. The production of creatine citrate from creatine monohydrate, however, does not employ processes, facilities, or employees also used to make creatine monohydrate. Peak Nutrition, Inc. ("Peak") produces creatine citrate, ***.[33] AMT Labs, Inc. ("AMT"), which produces both forms of creatine, reports that the ***.[34]

Price. As noted, creatine citrate is produced from a reaction of creatine monohydrate and citric acid, and thus is more costly to produce than creatine monohydrate.[35] However, AMT, which accounted for over *** percent of domestic creatine citrate production, reported an average 1996 selling price that was *** than the average delivered purchase price for creatine monohydrate in the same year, and its 1998 prices were *** of quarterly prices for creatine monohydrate in that year.[36] Peak, which accounted for less than *** percent of creatine citrate production, reported a price of $*** per kilogram in 1998, which was *** the price for AMT's creatine citrate, or the average delivered purchase price for creatine monohydrate that year.[37]

In sum, the products share certain similarities in physical characteristics and uses, channels of distribution, price, and to a certain extent manufacturing processes, facilities, and employees. However, creatine monohydrate and creatine citrate differ in certain other physical characteristics, in producer and customer perceptions, and to some extent in their manufacturing processes, facilities and employees. Most importantly, as a result of these differences, the degree of interchangeability between the products is limited. Based on these factors, we do not include creatine citrate in the domestic like product, which we define to include only creatine monohydrate.

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[28] CR at I-11 and II-4 to II-5 at PR at I-7 and II-3.

[29] CR at II-4 to II-5 and PR at II-3.

[30] CR at I-11 and PR at I-7.

[31] CR at I-11 and II-4 to II-5 and PR at I-7 and II-3.

[32] CR at II-4 to II-5 and PR at II-3.

[33] CR at III-11 and PR at III-6.

[34] CR at III-10 and PR at III-5.

[35] CR at I-9 n.34 and II-4 to II-5 and PR at I-6 n.34 and II-3.

[36] CR at I-12 and PR at I-7 (AMT's prices for creatine citrate) and tables V-1 and V-2, CR at V-6 and V-9 and PR at V-5 and V-7 (average prices for domestically produced creatine monohydrate).

[37] CR and I-12 and PR at I-7 (Peak's and AMT's prices for creatine citrate) and tables V-1 and V-2, CR at V-6 and V-9 and PR at V-5 and V-7 (average prices for domestically produced creatine monohydrate).

D. Domestic Industry and Related Parties

The domestic industry is defined as "the producers as a [w]hole of a domestic like product."[38] In defining the domestic industry, the Commission's general practice has been to include in the industry all of the domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.[39] Based on our domestic like product finding, we conclude that the domestic industry consists of all domestic producers of creatine monohydrate.

We must also determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to 19 U.S.C. § 1677(4)(B). That provision of the statute allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise, or which are themselves importers.[40] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each case.[41]

We find that *** is a related party because it imported subject merchandise from China during the investigation period.[42] We also find that appropriate circumstances exist to exclude *** from the domestic industry.[43] *** produced ***.[44] The company imported a ***.[45] *** indicated that it began production ***.[46] Because the company did not ***. Based on the above, we determine that appropriate circumstances exist to exclude *** from the domestic industry.[47]

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[38] 19 U.S.C. § 1677(4)(A).

[39] See United States Steel Group v. United States, 873 F. Supp. 673, 681-84 (CIT 1994), aff'd, 96 F.3d 1352 (Fed. Cir. 1996).

[40] 19 U.S.C. § 1677(4)(B).

[41] Sandvik AB v. United States, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), aff'd without opinion, 904 F.2d 46 (Fed. Cir. 1990); Empire Plow Co. v. United States, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987). The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude the related parties include: (1) the percentage of domestic production attributable to the importing producer; (2) the reason the U.S. producer has decided to import he product subject to investigation, *i.e.*, whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market; and (3) the position of the producer vis-a-vis the rest of the industry. See, e.g., Torrington Co. v. United States, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), aff'd without opinion, 991 F.2d 809 (Fed. Cir. 1993). The Commission has also considered the ratio of import shipments to U.S. production for related producers and whether the primary interests of the related producers lie in domestic production or in importation. See, e.g., Melamine Institutional Dinnerware from China, Indonesia, and Taiwan, Inv. Nos. 731-TA-741-743 (Final), USITC Pub. 3016 at 14, n.81 (Feb. 1997).

[42] CR at III-9 and PR at III-6.

[43] Vice Chairman Miller does not join this finding. In Vice Chairman Miller's view, this company is no longer a domestic producer that is subject to exclusion from the domestic industry pursuant to 19 U.S.C. § 1677(4)(B). *** ceased domestic production in 1997 and, therefore, was not a domestic producer in 1998 and 1999, when subject imports became a significant factor in the market. However, she joins the remainder of this opinion since exclusion of this company's 1997 data does not materially alter her analysis.

[44] CR at III-9 and PR at III-5.

[45] CR at III-9 to III-10 and PR at III-5.

[46] CR at III-5 and PR at III-3.

[47] In accordance with our finding, we have deleted capacity, production, shipments, and other data pertaining to *** from the overall domestic industry data figures reported in this opinion, although that company's data are included in the figures reported in the CR at tables III-3, III-4, IV-3 and IV-5. Consequently, although these views cite to 1997 data from various tables in the CR, the figures reported here pertaining to the domestic industry are net of *** 1997 data as reported in its response to the producers' questionnaire. Because *** produced only in 1997,

(continued...)

II. MATERIAL INJURY BY REASON OF THE SUBJECT IMPORTS

In the final phase of antidumping or countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured by reason of the imports under investigation.[48] In making this determination, the Commission must consider the volume of imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[49] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[50] In assessing whether there is a reasonable indication that the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[51] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[52]

For the reasons discussed below, we determine that the domestic industry producing creatine monohydrate is materially injured by reason of subject imports from China that are sold in the United States at less than fair value.

A. Conditions of Competition

A number of conditions of competition are pertinent to our analysis in this investigation.[53]

First, demand for creatine monohydrate increased strongly over most of the investigation period. Apparent U.S. consumption increased in the range of *** percent per year from 1996 to 1998.[54] The general increase in demand is reflective of the evolution of creatine from a small-volume product used principally as a laboratory reagent to a high-volume product used as a dietary supplement to aid in

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[47] (...continued)
the figures in the tables for other portions of the investigation period never included data from ***. Because *** did not supply useable financial data, such data remain unaffected by the exclusion of *** from the domestic industry. Figures provided in this opinion for 1997 apparent U.S. consumption include *** shipments, because apparent U.S. consumption is calculated as all U.S. shipments, regardless of by whom the merchandise was produced.

[48] 19 U.S.C. § 1671b(a) and 1673b(a).

[49] 19 U.S.C. § 1677(7)(B)(i). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each [such] factor . . . [a]nd explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B). See also Angus Chemical Co. v. United States, 140 F.3d 1478 (Fed. Cir. 1998).

[50] 19 U.S.C. § 1677(7)(A).

[51] 19 U.S.C. § 1677(7)(C)(iii).

[52] 19 U.S.C. § 1677(7)(C)(iii).

[53] We have also considered whether to apply the statutory captive production provision for purposes of this determination. 19 U.S.C. § 1677(7)(C)(iv). No party has argued that the captive production provision applies. Although one small producer reported that it made internal transfers of the domestic like product for the production of a downstream article, that transfer was too small to constitute the transfer of "significant" production, as required by the captive production provision. CR and PR at III-*** and PR at III-*** (producer reporting small volume internal transfers) and table VI-3, CR at VI-5 and PR at VI-3 (producer's production small compared to overall domestic production).

[54] Apparent U.S. consumption of creatine monohydrate was *** kilograms in 1996, *** kilograms in 1997, and *** kilograms in 1998. Table IV-3, CR and PR at IV-4.

strength training.[55] Demand was somewhat lower in January through June ("interim") 1999, compared to interim 1998.[56]

Second, domestic capacity to produce creatine increased, as new producers entered the market and existing producers increased production capacity over the period of investigation. Although the number of domestic producers fluctuated between three and six during the investigation period, their collective capacity increased from 1.1 million kilograms in 1996 to *** million kilograms in 1997, and further to 6.1 million kilograms in 1998.[57] Domestic capacity was somewhat lower in interim 1999, at 2.7 million kilograms, than in interim 1998, when it was 3.1 million kilograms.[58] The largest domestic producer built and began production at a dedicated creatine-producing facility during the investigation period.[59]

A further condition of competition is the emergence of a two-tiered price market following the introduction of significant quantities of lower-priced subject merchandise in 1997. The first tier is served by creatine purchasers marketing to quality-sensitive end users who are willing to pay more for domestically produced creatine, or nonsubject creatine imported from Austria and Germany.[60] The second tier is served by creatine purchasers marketing to price-sensitive end users who were willing to buy the subject merchandise, some early shipments of which reportedly contained impurities that made the product less desirable.[61] Subsequent shipments from at least some subject Chinese suppliers eliminated these impurities, however, and perceptions of the subject merchandise improved during the investigation period.[62] Domestic producers, importers, and purchasers reported that domestically produced creatine and the subject merchandise may be used interchangeably.[63] As perceptions of the quality of the subject merchandise have improved, and as more price-sensitive customers have entered the market, the lower price tier has grown relative to the higher price tier.[64]

A final condition of competition that we consider is the presence of nonsubject imports. The nonsubject imports held an approximate *** percent market share in each full year during the period of investigation, and a *** percent share in interim 1999.[65] The nonsubject imports generally are priced ***

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[55] Hearing tr. at 11-13 (Holstein) and CR at I-4 to I-5 and PR at I-3.

[56] Table IV-3, CR and PR at IV-4.

[57] Table III-2, CR III-7 and PR at III-4. As noted above, 1997 figures from this and other tables as reported here are net of *** data.

[58] Table III-2, CR at III-7 and PR at III-4.

[59] Hearing tr. at 13-14 (Holstein), CR and PR at III-2.

[60] Revised and corrected transcript of March 8, 1999 conference ("conf. tr.") at 31-33 (Seth T. Kaplan, economic analyst for petitioner) and hearing tr. at 19-20 (Kaplan) (development price tiers) and CR at II-7 and PR at II-5 (purchasers view domestic and European creatine to be of higher quality than the subject Chinese creatine). The petitioner, for example, manufactures pharmaceutical grade creatine according to current good manufacturing practices ("CGMP"), a fact mentioned in producer advertising. Hearing tr. at 13 (Holstein) (petitioner uses CGMP) and petitioner's Posthearing Brief at Exhibit B (advertising mentions that petitioner's creatine is pharmaceutical grade made using CGMP).

[61] Conf. tr. at 31-33 (Kaplan) and hearing tr. at 19-20 (Kaplan).

[62] Conf. tr. at 48 (Holstein), hearing tr. at 19-20 (Kaplan), 49 (Holstein), CR at V-11 to V-13 and VII-2 and PR at V-8 to V-9 and VII-1 to VII-2.

[63] CR at I-7 and II-7 and PR at I-4 and II-5. Commission staff estimate that the elasticity of substitution between imported creatine (which includes both the subject and nonsubject merchandise) and domestic creatine is likely to be high. CR at II-9 and PR at II-6.

[64] Hearing tr. at 45-47 (Kaplan).

[65] Table IV-5, CR at IV-7 and PR at IV-6.

as the domestic product.[66] The vast majority of the nonsubject imports were from Austria and Germany, although a much smaller volume was comprised of merchandise from China that Commerce determined to be fairly traded.[67] Imports of nonsubject creatine monohydrate increased from *** million kilograms in 1996 to *** million kilograms in 1998.[68]

B. Volume

Section 771(7)(C)(i) of the Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[69]

The volume of imports of the subject merchandise increased rapidly, and accounted for a significant share of apparent U.S. consumption by the end of the investigation period. The volume of subject imports was *** kilograms in 1996, *** kilograms in 1997, and *** kilograms in 1998.[70] In interim 1999 subject import volume reached *** kilograms, compared to *** kilograms in interim 1998.[71] Subject import market share also increased rapidly, despite rapid growth in apparent consumption. U.S. shipments of the subject merchandise accounted for *** percent of apparent U.S. consumption in 1996, *** percent in 1997, and *** percent in 1998.[72] In interim 1998, U.S. shipments of the subject merchandise accounted for *** percent of apparent U.S. consumption, while in interim 1999 they accounted for *** of apparent U.S. consumption.[73]

Although imports of nonsubject imports from China also increased, their volume was *** compared to the subject imports from China.[74] The volume of the former was less than *** that of the latter in 1998 and interim 1999, the period during which the great majority of the subject imports entered the United States.[75] The volume of nonsubject imports from countries other than China was higher than

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[66] Compare table III-2, CR at III-7 and PR at III-4 (average unit values of U.S. shipments of domestic product) and tables V-1 and V-2, CR at V-6 and V-9 and PR at V-5 and V-7 with table IV-1, CR and PR at IV-2 (average unit values of imports from countries other than China) and CR at V-5 n.4 and PR at V-3 n.4 (average unit values reported by importers of Austrian and German creatine monohydrate). Differences in average unit values may not accurately reflect differences in prices for the same goods, if the two set of goods from which the average unit values are derived are different. Here, however, both average unit values are derived from prices for high-quality creatine monohydrate. Accordingly, we regard the figures as a reasonably accurate proxy for price in this investigation.

[67] Table IV-3, CR at IV-5 and PR at IV-4.

[68] Table IV-1, CR and PR at IV-2.

[69] 19 U.S.C. § 1677(7)(C)(i).

[70] Table IV-1, CR and PR at IV-2.

[71] Id.

[72] Table IV-5, CR at IV-7 and PR at IV-6.

[73] Id.

[74] Commerce calculated zero percent dumping margins for merchandise that is produced and exported by Tianjin Tiancheng Pharmaceutical Co., Ltd. and for merchandise that is exported by Nantong Medicines and Health Products Import and Export Co. Ltd. and produced by Nantong's proprietary producer. 64 Fed. Reg. 71104, 71110 (December 20, 1999). Commerce calculated dumping margins ranging from 24.84 percent to 153.70 percent for all other Chinese exporters and manufacturers of creatine monohydrate. 64 Fed. Reg. at 71111. Because the zero percent dumping margins apply to specific producer/exporter pairings, Chinese exporters cannot convert subject merchandise into nonsubject merchandise by changing exporters.

[75] Table IV-1, CR and PR at IV-2.

the volume of subject imports, although the difference narrowed considerably from 1996 to 1998, as the volume of the former grew at a much slower rate than did the latter.[76]

Based on the foregoing, we find that the volume of imports of the subject merchandise from China, and their increase, are significant both in absolute terms and relative to consumption.

C. Price Effects of the Subject Imports

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

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[77]

As previously discussed, the subject imports generally are interchangeable with the domestic like product, and any real or perceived inferiority of the subject merchandise has diminished over the course of the investigation period. Additionally, price has become an increasingly important factor in purchasing decisions by U.S. purchasers.[78]

In 1996 and 1997, when subject import volumes were very small, the subject merchandise both undersold and oversold the domestic like product.[79] During 1998 and interim 1999, however, when subject import volumes were more than *** times higher than in prior years, the subject merchandise undersold the domestic like product in six out of six quarterly comparisons using prices supplied by U.S. purchasers, and in five out of six quarterly comparisons using prices reported by U.S. producers and importers.[80] Moreover, during 1998 and interim 1999 margins of underselling were high, ranging from *** to *** percent, while the single margin of overselling was 1.0 percent.[81] Based on the above price comparisons, the fact that price is an important factor in pricing decisions, and the substitutability of the subject merchandise for the domestic product, we find significant price underselling by the subject merchandise as compared with the price of the domestic like product.

We find that this significant underselling by increasing volumes of subject imports depressed prices for domestically produced creatine to a significant degree, especially in light of the importance of price in purchasing decisions. Although prices for domestically produced creatine fell throughout the investigation period, we do not attribute a significant share of the price declines in 1996 and 1997 to the subject imports, because of the relatively small volume and market share of subject imports during those years.[82] From 1997 to 1998, however, the subject imports increased by a factor of *** in absolute volume, and from *** percent to *** percent in market share. The volume of subject imports continued

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[76] Id.

[77] 19 U.S.C. § 1677(7)(C)(ii).

[78] CR at II-6 and PR at II-4 (price an important factor), CR at V-11 to V-13 and PR at V-6 and V-8 to V-9 (improving quality of subject merchandise suggesting that price growing in importance).

[79] Tables V-1 and V-2, CR at V-6 and V-9 and PR at V-5 and V-7.

[80] Id.

[81] Id.

[82] Id. Petitioner asserted that prices fell in 1996 and 1997 due to greater economies of scale as production volumes increased, and to increased competition both among domestic producers and with nonsubject imports from Austria and Germany. Hearing tr. at 14, 31, 35 (Holstein).

to rise in interim 1999, accounting for a market share of *** percent compared to a *** percent market share in interim 1998.[83] From the first quarter of 1998 to the second quarter of 1999 prices for domestically produced creatine reported by U.S. producers fell from $14.10 per kilogram to $11.17, while prices reported by purchasers fell from $15.09 to $11.92.[84] In addition, the Commission received reports from producers and purchasers that the subject imports led price declines during this period.[85] In fact, *** reported that prices quoted for the subject merchandise were lower than *** raw materials costs alone.[86]

Based on the foregoing, we find that the significant and growing volumes of lower-priced subject imports that are generally substitutable with the domestic like product depressed prices in the U.S. market to a significant degree.

D. Impact

In examining the impact of the subject imports on the domestic industry, we consider all relevant economic factors that bear on the state of the industry in the United States.[87] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[88] [89] [90]

Consistent with our finding that the volume, and increase in volume, of the subject imports were significant, and that the subject imports significantly contributed to the decline in prices for domestically produced creatine in 1998 and interim 1999, we find that the subject imports are having a significant adverse impact on domestic producers.

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[83] Table IV-5, CR at IV-7 and PR at IV-6. By contrast, the nonsubject imports increased by a smaller amount from 1997 to 1998 than did the subject merchandise, and nonsubject imports were *** lower in volume in interim 1999 than in interim 1998, whereas the subject imports were higher in volume in interim 1999 than in interim1998. Table IV-3, CR at IV-5 and PR at IV-4. As noted in section II.A, prices for the nonsubject imports were *** than for the subject merchandise, and *** the domestic like product.

[84] Tables V-1 and V-2, CR at V-6 and V-9 and PR at V-5 and V-7. The average unit values for the domestic industry's shipments declined similarly. Table III-2, CR at III-7 and PR at III-4.

[85] CR at V-10 n.10 and V-11 to V-13 and PR at V-6 & n.10 and V-8 to V-9.

[86] Hearing tr. at 15-16 (Holstein) and domestic producers' questionnaire responses of *** at page 2. See table III-1, CR at III-2 and PR at III-1 (shares of domestic production accounted for by ***).

[87] 19 U.S.C. § 1677(7)(C)(iii). See also SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." Id. at 885.).

[88] 19 U.S.C. § 1677(7)(C)(iii). See also SAA at 851 and 885 and Live Cattle from Canada and Mexico, Inv. Nos. 701-TA-386 and 731-TA-812-813 (Preliminary), USITC Pub. 3155 (Feb. 1999) at 25, n.148.

[89] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii) (V). In its notice of final results, Commerce calculated dumping margins ranging from 24.84 to 153.70 percent for Chinese exporters and producers. 64 Fed. Reg. 71104, 71111 (Dec. 20, 1999).

[90] Chairman Bragg notes that she does not ordinarily consider the magnitude of the margin of dumping to be of particular significance in evaluating the effects of subject imports on domestic producers. See Separate and Dissenting Views of Commissioner Lynn M. Bragg in Bicycles from China, Inv. No. 731-TA-731 (Final), USITC Pub. 2968 (June 1996).

Various indicators of the condition of the domestic industry fell in 1998 and were lower in interim 1999 than in interim 1998. The domestic industry's market share fell nearly *** percentage points in 1998, from *** percent in 1997 to *** percent in 1998.[91] The domestic industry's loss was due in principal part to a market share gain by the subject merchandise of *** percentage points, from *** percent in 1997 to *** percent in 1998.[92] The domestic industry's market share was nearly *** percentage points lower in interim 1999 than in interim 1998, declining from *** percent to *** percent.[93] This loss was also principally due to gains by the subject imports, which held a market share that was *** percentage points higher in interim 1999 than in interim 1998 (*** compared to *** percent).[94]

The domestic industry's production rose *** from *** million kilograms in 1997 to 2.1 million kilograms in 1998, despite a much greater increase in apparent U.S. consumption.[95] Production was much lower in interim 1999, at 0.6 million kilograms, than in interim 1998, when it was 1.3 million kilograms.[96] Production capacity rose from *** million kilograms in 1997 to 6.1 million kilograms in 1998, but was lower in interim 1999, at 2.7 million kilograms, than in interim 1998, when it was 3.1 million kilograms.[97]

From 1997 to 1998, domestic shipments rose in quantity, from *** million kilograms to 2.1 million kilograms, but due to falling prices, the value of the domestic shipments fell from $*** million in 1997 to $28.2 million in 1998.[98] Both the quantity and the value of domestic shipments were sharply lower in interim 1999 than in interim 1998.[99]

Likewise, the domestic industry's net sales fell from $35.5 million in 1997 to $29.7 million on 1998, and were $18.2 million in interim 1998 and $7.5 million in interim 1999.[100] The domestic industry's operating income as a ratio to net sales similarly declined from 19.5 percent in 1997 to 12.3 percent in 1998.[101] The ratio fell from positive 21.7 percent in interim 1998 to a loss of 6.5 percent in interim 1999.[102] This deteriorating financial performance occurred despite a general decline in the domestic industry's average unit costs of goods sold, which fell sharply from $12.49 per kilogram in 1997 to $9.60 per kilogram in 1998, but was somewhat higher in interim 1999 at $10.77 per kilogram than in interim 1998 at $9.40 per kilogram.[103] [104] The number of production-related workers ("PRWs")

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[91] Table IV-5, CR at IV-7 and PR at IV-6.

[92] Id.

[93] Id.

[94] Id.

[95] Tables III-2 and IV-3, CR at III-7 and IV-5 and PR at III-4 and IV-4.

[96] Table III-2, CR at III-7 and PR at III-4.

[97] Id.

[98] Id.

[99] Shipments by the domestic industry were 1.3 million kilograms in interim 1998, and 0.6 million kilograms in interim 1999. In value, the domestic shipments totaled $18.2 million in interim 1998 and $0.7 million in interim 1999. Table III-2, CR at III-7 and PR at III-4.

[100] Table VI-1, CR and PR at VI-2.

[101] Id.

[102] Id.

[103] Table VI-2, CR at VI-4 and PR at VI-3.

[104] Other evidence also indicates the adverse impact of the subject imports on the domestic industry. Purchasers confirmed that the domestic industry lost nearly *** kilograms in sales valued at $*** due to competition with the subject merchandise during 1998 and interim 1999. CR at V-11 and PR at V-6. That confirmed lost sales volume is equivalent to approximately *** percent of domestic shipments during 1998 and interim 1999. Compare CR at V-

(continued...)

employed in the domestic industry rose from 36 in 1996 to 57 in 1997.[105] The number of PRWs fell to 39 in 1998, however, and was 20 in interim 1999 compared to 31 in interim 1998.[106]

In sum, we find that significantly increasing subject imports have had a significant negative effect on the output, sales, employment, market share, and profits of the domestic industry. Accordingly, we find that the subject imports have had a significant adverse impact on the domestic industry.[107]

III. CRITICAL CIRCUMSTANCES

Because Commerce made affirmative critical circumstances determinations with respect to certain imports from China and we have determined that the domestic creatine industry is materially injured by reason of subject imports from China, we must further determine "whether the imports subject to the affirmative [critical circumstances] determinations . . . are likely to undermine seriously the remedial effect of the [antidumping or countervailing duty order] to be issued."[108] The URAA Statement of Administrative Action indicates that the Commission is to determine "whether, by massively increasing imports prior to the effective date of relief, the importers have seriously undermined the remedial effect of the order."[109]

Of the six individually identified exporters/manufacturers that it examined, Commerce made an affirmative critical circumstances determination only with regard to Shanghai Freemen International Trading Co., Ltd. and Shanghai Greenmen International Trading Co., Ltd. ("Freemen/Greenmen"), which Commerce discussed as a single entity.[110] Commerce also made an affirmative critical circumstances determination with regard to all unidentified exporters and manufacturers.[111] Based on the record, we determine that the imports subject to Commerce's affirmative critical circumstances determinations are not likely to undermine seriously the remedial effect of the antidumping duty order to be issued on creatine monohydrate from China.

With respect to Freeman/Greenmen, we have examined the companies' volume of exports prior to and after the February 12, 1999 filing of the petition. During the five months prior to the filing,

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[104] (...continued)
11 and PR at V-6 (volume of confirmed lost sales) with table III-2, CR at III-7 and PR at III-4 (volume of domestic shipments).

[105] Table C-1, CR and PR at C-3.

[106] Id. Although increased productivity in 1998 resulting from the *** may account for some of the decline in the number of PRWs from 1997 to 1998, both productivity and the number of PRWs were lower in interim 1999 than in interim 1998. Id.

[107] Contrary to respondents' assertions made during the preliminary phase of the investigation, we find no evidence that ***. Petitioner's Posthearing Brief at Exhibit D (***) and table VI-5, CR at VI-9 and PR at VI-5 (***).

[108] 19 U.S.C. § 1671d(b)(4)(i) and § 1673d(b)(4)(A)(i). The statute further provides that in making this determination:

> the Commission shall consider, among other factors it considers relevant--
>
> (I) the timing and volume of the imports,
>
> (II) a rapid increase in inventories of the imports, and
>
> (III) any other circumstances indicating that the remedial effect of the antidumping order will be seriously undermined.

19 U.S.C. § 1671d(b)(4)(ii) and § 1673d(b)(4)(ii).

[109] SAA at 877.

[110] 64 Fed. Reg. at 71104 (single entity) and 71111 (the only individually identified company as to which Commerce made an affirmative critical circumstances determination).

[111] 64 Fed. Reg. at 71107 and 71111.

September 1998 through January 1999, Freemen/Greenmen exported *** kilograms to the United States.[112] During the next five months, February through June of 1999, Freemen/Greenmen's exports were higher, at *** kilograms.[113] However, *** kilograms of that total was exported in February; because the petition was filed on February 12, 1999, this *** kilogram amount does not necessarily reflect an increase occurring after the filing of the petition.[114]

We do not have volume data for the same periods for the unidentified exporters/manufacturers as to which Commerce made affirmative critical circumstances determinations. Using the second half of 1998 and the first half of 1999 as the closest proxies available, however, it appears that imports from these exporters/manufacturers did not increase. Overall subject merchandise volumes imported in the first half of 1999 were lower, at *** kilograms, than in the second half of 1998, at *** kilograms.[115] Moreover, the record indicates that importers that imported principally from companies as to which Commerce did not make affirmative critical circumstances determinations accounted for the bulk of those imports.[116] The record also indicates that the remaining imports were accounted for at least in part by imports from companies as to which Commerce did not make affirmative critical circumstances determinations.[117] Likewise, overall importers' inventories of subject merchandise were lower at the end of June of 1999 than they were at the end of 1998.[118] Importers that imported from exporters and manufacturers as to which Commerce did not make affirmative critical circumstances determinations accounted for the bulk of the inventories.[119]

Based on the foregoing, we determine that the imports subject to Commerce's affirmative critical circumstances determinations are not likely to undermine seriously the remedial effect of the antidumping duty order to be issued on creatine monohydrate from China.

CONCLUSION

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of imports of creatine monohydrate from the People's Republic of China that are sold in the United States at less than fair value.

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[112] Table IV-7, CR at IV-10 and PR at IV-6.

[113] Id.

[114] Id.

[115] Table IV-1, CR and PR at IV-2.

[116] Responses to importers' questionnaires at 6.

[117] Id.

[118] Table VII-2, CR at VII-5 and PR at VII-3.

[119] Responses to importers' questionnaires at 6.

PART I: INTRODUCTION

BACKGROUND

This investigation results from a petition filed by Pfanstiehl Laboratories, Inc. (Pfanstiehl), Waukegan, IL, on February 12, 1999, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value (LTFV) imports of creatine monohydrate (creatine)[1] from the People's Republic of China (China). Information relating to the background of the investigation is provided below.[2]

Date	*Action*
February 12, 1999 ..	Petition filed with Commerce and the Commission; institution of Commission investigation
March 8, 1999	Commerce's notice of initiation
March 26, 1999	Commission's preliminary determination
July 22, 1999	Commerce's preliminary determination (64 FR 41375, July 30, 1999); scheduling of the final phase of the Commission's investigation (64 FR 45275, August 19, 1999)
December 13, 1999 .	Commerce's final determination (64 FR 71104, December 20, 1999)[3]
December 16, 1999 .	Commission's hearing[4]
January 19, 2000 ...	Date of the Commission's vote
January 28, 2000 ...	Commission's determination sent to Commerce

SUMMARY DATA

A summary of data collected in the investigation is presented in appendix C. Table C-1 is for creatine, table C-2 is for creatine citrate, and table C-3 is for creatine plus creatine citrate. Except as

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[1] For purposes of this investigation, the product covered is creatine monohydrate, which is commonly referred to as "creatine." The chemical name for creatine monohydrate is N-(aminoiminomethyl)-N-methylglycine monohydrate. The Chemical Abstracts Service (CAS) registry number for this product is 6020-87-7. Creatine monohydrate in its pure form is a white, tasteless, odorless powder that is a naturally occurring metabolite found in muscle tissue. Creatine is provided for in subheading 2925.20.90 of the *Harmonized Tariff Schedule of the United States* (HTS) with a normal trade relations tariff rate of 3.7 percent *ad valorem* during 1999 applicable to imports from China. Although the HTS subheading and CAS registry number are provided for convenience and customs purposes, the written description of the merchandise under investigation is dispositive.

[2] *Federal Register* notices cited in the tabulation are presented in app. A.

[3] Commerce calculated final LTFV margins to be as follows: Blue Science International Trading (Shanghai) Co., Ltd., 58.10 percent; Nantong Medicines and Health Products Import and Export Co., Ltd., 0.00 percent; Shanghai Desano International Trading Co., Ltd. (Desano), 24.84 percent; Shanghai Freemen International Trading Co., Ltd. (Freemen) and Shanghai Greenmen International Trading Co., Ltd. (Greenmen), 44.43 percent; Suzhou Sanjian Fine Chemical Co., Ltd., 50.32 percent; Tianjin Tiancheng Pharmaceutical Co., Ltd., 0.00 percent; and an "all others" rate of 153.70 percent. Additionally, critical circumstances were determined to exist for Freemen, Greenmen, and all other Chinese exporters except Blue Science, Desano, Nantong, Suzhou Sanjian, and Tianjin Tiancheng. The final LTFV margins for the complying firms were based on comparisons of export price to normal value, and the final LTFV margin for "all other" firms was based on "adverse facts available," which consisted of the highest margin alleged in the petition.

[4] A list of witnesses appearing at the hearing is presented in app. B.

noted, U.S. producers' data are based on questionnaire responses of 7 firms that accounted for 100 percent of U.S. production of creatine during 1996-June 1999. U.S. imports are based on responses to Commission questionnaires.

THE SUBJECT PRODUCT

The imported product subject to this investigation is creatine.[5] The following sections present information on both imported and domestically produced creatine, as well as information related to the Commission's "domestic like product" determination.[6]

During the period of investigation there were 7 domestic producers of creatine, but currently there are 4 domestic creatine producers: the petitioner plus Chattem Chemicals, Inc. (Chattem), Chattanooga, TN; Larchmont Technologies, LC (Larchmont), Danville, VA; and Stella Laboratories, LLC (Stella), New Orleans, LA.

In the preliminary phase of this investigation, Pfanstiehl contended that there is only one domestic like product in the investigation, encompassing creatine of all purity levels; that the domestic product is the same as the imported product; and that there are no substitutes for creatine.[7] Respondents argued that possible substitutes for creatine are creatine derivatives, such as creatine citrate, creatine phosphate, and liquid (serum) creatine, as well as dietary supplement products such as HMB, tribulus, andro, and glutamine.[8]

In its preliminary determination, the Commission did not expand the definition of the domestic like product to include either creatine derivatives or other dietary supplements, but stated its intention to gather additional information on certain downstream products (creatine citrate, creatine phosphate, and liquid creatine) in any final phase of the investigation.[9]

Pfanstiehl believes the products identified by the Commission for potential inclusion in the domestic like product are simply downstream creatine monohydrate products that have been blended or slightly modified to improve the palatability and ease of use of creatine monohydrate. Pfanstiehl maintains that downstream creatine products require very few additional steps in their respective preparation processes and are, for the most part, creatine with inexpensive additional ingredients blended or mixed in. Pfanstiehl also states that such operations would not add significantly to the cost of product preparation.[10]

Domestic downstream creatine product producers account for the equivalent of less than 1 percent of the domestic creatine production, and consumers generally view these products as more expensive than pure creatine without any appreciable benefits as reflected by the fact that they have failed to gain a significant foothold in the marketplace.[11]

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[5] As defined previously in the Background section.

[6] The Commission's decision regarding the appropriate domestic products that are "like" the subject imported products is based on a number of factors including (1) physical characteristics and uses; (2) common manufacturing facilities and production employees; (3) interchangeability; (4) customer and producer perceptions; (5) channels of distribution; and, where appropriate, (6) price.

[7] Conference transcript, p. 55, and petitioner's postconference brief, pp. 5-8.

[8] Conference transcript, p. 74; and MW International and GCI Nutrients' postconference brief, pp. 4-5.

[9] *Creatine Monohydrate from the Peoples Republic of China*, USITC Pub. 3177, April 1999, pp. 7, 9.

[10] Pfanstiehl's posthearing brief, p. 11.

[11] Ibid., p. 12.

Physical Characteristics and Uses

The subject creatine is produced as a dry, white crystalline powder, with a slightly sweetish taste. Creatine is usually of very high purity, 99.5 percent or higher by weight, when sold to end users. It has a stable shelf life, and is sold in bulk containers (i.e., a sealed plastic bag inside a cardboard container) without any preservatives. Creatine may also be available to consumers in this pure form repackaged into smaller containers.

Chemically, creatine is a non-essential amino acid. Such amino acids are produced inside living organisms, and in humans creatine is produced by the liver, pancreas, and kidneys. Creatine is transported in the bloodstream to muscle cells, where it is stored as both creatine and creatine phosphate. The presence of creatine phosphate serves to replenish phosphate groups when energy, provided in muscle cells by the reduction of adenosine triphosphate (ATP) to adenosine diphosphate (ADP), is needed.

Information on two grades of purity was requested for the purposes of the investigation. Four of the seven responding domestic producers have stated that they produce creatine with a purity of 99.7 percent or higher,[12] two indicated that production was 99.0 percent or more pure (without specifying purity level), and one did not respond to the question. None of the domestic producers that submitted questionnaire responses indicated any production of grades with less than 99.0 percent purity. Pfanstiehl states that there is complete interchangeability among the different levels of purity of creatine.[13]

Creatine is used as a dietary supplement, and to formulate some specialty weight-gain products. It also is used to a comparatively minor extent in laboratory research. In most instances, creatine monohydrate is repackaged and sold to athletes, bodybuilders, and occasional sports participants as a pure product in a powdered form. Alternative markets for creatine monohydrate in such applications as combating neuromuscular and autoimmune diseases and in bovine and thoroughbred horse nutrition are under research.[14]

Exercise depletes creatine phosphate stored in muscle tissue. As it is being used, creatine is gradually converted into creatinine, an unusable byproduct. Large ingested doses (known as "loading") of creatine are believed by some to help replenish the available creatine and creatine phosphate in muscle tissue, helping the individual to regain or maintain muscle strength during workouts,[15] and smaller doses are also considered to be beneficial by users.

Distributors and retailers of creatine typically re-package creatine purchased in bulk. They also formulate some dietary supplements and other edible preparations that contain creatine. Creatine-containing supplements can consist of amounts of creatine with other amino acids, sugars, flavoring, or other adjuncts. Typical products include pills, capsules, drink mixes, chewing gum, and energy bars. According to ***, the second largest U.S. producer in 1998, the vast majority of creatine is sold as a pure product in medium-sized (1 kilogram) containers. ***, the third largest U.S. producer, also states that most creatine production is sold as the pure product.[16]

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[12] *** reported a production purity of *** percent and *** reported a production purity of *** percent.

[13] Pfanstiehl's postconference brief, p. 7.

[14] "A Weapon Against Lou Gehrig's Disease," *Newsweek*, March 22, 1999, p. 65; J.D. Pagan and L.M. Lawrence, "Performance horse nutrition: How does feeding affect performance?," downloaded from *http://63.80.222.119/WEVR/V2N2/08/*, December 22, 1999; and staff fieldwork December 13, 1999.

[15] Although studies have shown that "loading" of creatine tends to increase the available amount of creatine in the muscle cell, not all studies have reported ergogenic benefits.

[16] Staff telephone conversations with ***.

Manufacturing Facilities and Production Employees

Creatine has been produced domestically for at least 40 years. Because of low demand for creatine in biochemical research as a laboratory standard, specialty chemical companies produced creatine on an as-needed basis in small batches. In recent years, however, creatine has formed an essential part of many weight-gain and muscle-building formulations sold in health food stores.

Pfanstiehl states that creatine is manufactured using dedicated equipment. *** reported that creatine is produced on essentially dedicated equipment. ***.[17]

The manufacturing process for creatine is described in many publications.[18] Creatine is produced by a batch process from the reaction of sodium sarcosinate and cyanamide under controlled conditions. ***. The process begins as sarcosine is introduced as a solution into a stainless steel reactor and alkaline conditions are maintained (pH 10-11). Cyanamide is then slowly introduced as a solution in water, and the reaction mixture is cooled by means of a water jacket surrounding the tank. The reaction is complete in about 8 hours. During this period, crystals of creatine form in the reaction mix. The mixture is centrifuged to separate the creatine crystals from the mixture, and the crystals are washed with water to remove any impurities. Finally, the product is dried using a hot air dryer, screened, and packed into bulk plastic bags for shipment or storage.

Pfanstiehl states that it recently constructed a highly automated facility exclusively to produce creatine, and the equipment could not be used to produce any other product.[19] Responses from Commission questionnaires indicate that similar equipment is used by other producers of creatine.[20] Pfanstiehl states that production workers are dedicated to creatine production. *** reported that production and related workers are dedicated to creatine production, although ***.[21] In general, domestic creatine manufacturers do not produce downstream creatine products.[22]

Interchangeability

Virtually all responding firms believe that U.S. and Chinese creatine may be used interchangeably. Similarly, the responding firms cite interchangeability between U.S. and nonsubject imported creatine, as well as subject and nonsubject imported creatine.

Pfanstiehl states that creatine does not compete with any other product (apart from downstream creatine products),[23] and that there are no known legal substitutes for creatine.[24] Pfanstiehl further contends that other products are used in health food and body building in the same way as creatine is and

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[17] Domestic producer questionnaire responses, p. 5.

[18] See e.g., Merck Index, Ninth Edition, Entry number 2556 ("Creatine"), p. 34 (c. 1976 by Merck & Co., Inc., Rahway, NJ).

[19] Conference transcript, p. 34.

[20] Domestic producer questionnaire responses, p. 6.

[21] Ibid.

[22] AMT and Peak Nutrition produced commercial quantities of creatine citrate. See the section of this report entitled "Certain Creatine Products."

[23] Hearing transcript, pp. 40-41.

[24] Although Pfanstiehl originally alleged that anabolic steroids were a substitute for creatine, this was clarified at the conference (conference transcript, pp. 43-45).

that instead of competing with creatine, products such as andro[25] are complementary in their usage.[26] However, *** reports that, "Uses of all four versions *** are the same: muscle development and stamina. All forms of creatine become the same entity upon digestion. The liquid form is ready to drink, the powdered forms must be mixed with water first and then can be drunk. Creatine citrate is more water-soluble than creatine monohydrate. All forms of creatine are interchangeable as long as one consumes an equal amount of contained creatine. Mixing the creatine with other moieties will raise the cost to the consumer on a creatine-contained basis."[27]

There are various other performance-enhancing products in the marketplace; however, they work differently and have different physiological effects on the body than creatine and products that contain creatine. For example, "d-Ribose can delay the on-set of fatigue, but it will not enlarge muscles and costs 10 times what creatine costs for the same dosage."[28]

Customer and Producer Perceptions

Pfanstiehl states that creatine producers are generally classified as fine chemical manufacturers or food intermediate manufacturers.[29] It further contends that producers and end users perceive creatine to be a single product regardless of purity level, and that customers view creatine as a distinct product similar to a brand name.[30] Respondent MW International contends that some imports from Chinese producers contain insoluble impurities that leave residues and cause an extremely bitter and offensive taste.[31] MW International also contends that advertising campaigns have been developed to discourage domestic purchases of the Chinese creatine through allegations of product impurity.[32] The interchangeability and substitutability of creatine with downstream creatine products are discussed more fully in the section of this report entitled "Certain Creatine Products" and in Part II.

Channels of Distribution

Creatine is typically sold to distributors, retail outlets, and packagers in plastic bulk bags weighing approximately 25 kilograms each. It is generally shipped directly to firms that re-sell the pure product in a smaller (1 kilogram) package, although some creatine is repackaged as capsules or tablets, or blended to make flavored drinks, drink mixes, dietary supplements, or gums.[33] Channels of distribution of creatine are discussed more fully in Part II of this report.

Price

Commission questionnaire responses indicate that creatine prices are set based upon open-market competition. In 1996, the U.S. market price (i.e., unit value) for domestically produced creatine was

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[25] 4-androstene-3,17-dione, more commonly known as andro, is a synthetic organic chemical steroid precursor.

[26] Conference transcript, p. 35.

[27] *** domestic producer questionnaire, p. 10.

[28] Ibid., p. 18.

[29] Petition, p. 8.

[30] Pfanstiehl's postconference brief, p. 8.

[31] Conference transcript, p. 73.

[32] Ibid., pp. 73-74.

[33] Staff telephone conversation with ***, March 9, 1999.

$27.76 per kilogram. Unit values for domestically produced creatine then steadily decreased to $20.40 per kilogram in 1997, $13.26 per kilogram in 1998, and $12.13 per kilogram during January-June 1999.

In comparison, average unit values for subject creatine imported from China steadily decreased from $*** per kilogram in 1996 to $*** per kilogram during January-June 1999. Unit values for creatine imported from nonsubject countries steadily decreased from $*** per kilogram to $*** per kilogram for the same period. Actual transaction prices in each of the years tended to be within a range of prices above or below the averages cited above, depending to some extent on the purity of creatine and the type of transaction (spot sale or formula sales contract). More detailed information on prices is presented in Part V of this report.

DERIVATIVE CREATINE PRODUCTS

Certain other dietary supplements that may replenish energy to muscle cells and promote muscle growth may be produced as derivative products from creatine. For the purpose of this investigation, such products include creatine citrate,[34] creatine phosphate,[35] and liquid (serum) creatine.[36] These products provide different methods of delivering creatine to the muscle.

Creatine citrate, creatine phosphate, and liquid creatine all use creatine monohydrate as a starting material. Creatine citrate is produced by the reaction of creatine and citric acid. Chemically defined creatine phosphate, while necessary for the production of energy inside muscle tissue, is not absorbed into muscle tissue as easily as creatine monohydrate; as a result, it is not generally sold to the consumer in that form.[37] In fact, some labeling may lead customers to believe that they are purchasing a product containing chemical creatine phosphate when such is not necessarily the case.[38] Even considering the Commission's definition of creatine phosphate as a mixture of creatine monohydrate and one or more inorganic phosphates, no consumer products were found that consisted solely of this simple mixture. Instead, creatine monohydrate is frequently mixed with inorganic phosphates and a variety of other

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[34] Produced by the reaction of creatine monohydrate with citric acid, creatine citrate is also found occurring naturally in muscle tissue. As creatine citrate is slightly more soluble than creatine monohydrate, it is believed to be a more biologically absorbable form, but it is also less concentrated. Creatine citrate is provided for in subheading 2925.20.90 of the HTS.

[35] Creatine phosphate can come in two different forms and includes not only the chemically defined creatine phosphate salt, but also mixtures of creatine monohydrate and an inorganic phosphate, usually calcium phosphate or sodium phosphate. Both types of creatine phosphate are derived from creatine monohydrate, although the latter mixture is obtained by blending ingredients rather than by reaction of the creatine with a phosphoric acid. Chemically defined creatine phosphate is provided for as an edible preparation in HTS subheading 2925.20.90; mixtures of creatine monohydrate and an inorganic phosphate are provided for in HTS subheading 2106.90.99.

[36] Liquid (serum) creatine includes semi-soluble suspensions of creatine monohydrate in water with other ingredients (e.g., aloe vera juice) that enable the creatine monohydrate to remain in suspension. However, creatine is naturally degraded to creatinine in an irreversible, non-enzymatic dehydration reaction in an aqueous environment. Degradation may occur in a matter of hours; therefore, by the time the liquid creatine reaches the end user, there may be no creatine available, only creatinine waste product. Liquid creatine typically contains other ingredients such as ginseng, royal jelly, honey, and/or glycerine. Liquid creatine is classified in HTS subheading 2106.90.99.

[37] Information downloaded from *www.americanemporium.com/aemporium/mednutup.html,* December 20, 1999.

[38] Some products are labeled "Phosphogen," Phosphogain," or "Phosphocreatin." Phosphogen and Phosphocreatin are laboratory terms used to describe creatine phosphate; however, the products contain creatine monohydrate, flavorings, sweeteners, and varying amounts of sodium, potassium, or calcium phosphate blended or mixed with the creatine phosphate. Information downloaded from *www.netrition.com/Phosphagen/HP_page.html,* December 20, 1999.

ingredients to produce drink mixes, chewable tablets, and candy.[39] Likewise, liquid creatine consists of creatine monohydrate that has been mixed with flavorings and adjuncts.[40] In responses to Commission questionnaires, no company reported the production or preparation of either creatine phosphate or liquid (serum) creatine; only two firms reported commercial production of creatine citrate.

According to a purchaser, although creatine is produced in various chemical forms, the most economical (lowest-cost) process results in creatine monohydrate. Anhydrous creatine is generally not produced because the material will tend to absorb water to form the monohydrate. The salts of creatine, such as the citrate and phosphate, are marketed to meet consumer demand for a more biologically absorbable product. Differences between the various forms include the amount of creatine provided per dose. Creatine monohydrate provides more creatine per weight of product than other creatine products. However, not only would the end user have to take larger portions of creatine products substituting for creatine monohydrate, but the creatine in the products may actually manifest as the by-product creatinine.[41] Another purchaser states, "We do not believe that other forms of creatine are anything more than value-added marketing. There is clinical science validating creatine monohydrate, but not other forms."[42]

According to two producers, "Those who purchase the creatine mixtures must believe they have some advantage. That perceived advantage must be increased effectiveness. Knowledgeable professionals do not see a cost-effective advantage to these mixtures."[43] "Creatine and products containing creatine are viewed as having different costs, ingredients, and potency levels."[44]

Two U.S. producers of creatine citrate, and no U.S. producers of creatine phosphate and liquid (serum) creatine, were identified.[45] Equipment, machinery, production process, and production employees used in the production of creatine citrate ***.[46] Creatine citrate is produced by the reaction of creatine and citric acid.[47] Citric acid, in the form of citrate ion, is known to play a major role in the cycle of energy production in muscle tissue (also known as the Krebs cycle). The presence of creatine, in a soluble form with citrate ion, is thought to be more available for absorption in muscle tissue. As a result, the solubility and absorption rate of creatine citrate in the body is claimed to be several times that of creatine monohydrate.[48] As creatine citrate is a dietary supplement, it follows the same general channels of distribution (i.e., distributors, packagers, retail outlets) as the subject creatine.

Prices for creatine citrate are set based on competition in the open market. In general, *** to produce the value-added creatine citrate ***. However, pricing experience of the two producers is ***. AMT's prices *** of domestically produced creatine monohydrate, falling from *** per kilogram in 1996 to *** per kilogram in the first half of 1998, while Peak Nutrition's domestic creatine citrate prices remained steady at *** per kilogram during its *** period of creatine citrate production.

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[39] Based on information downloaded from *www.netrition.com/phosphagain2_page.html, www.netrition.com/phosphagen_page.html,* and *www.netrition.com/phosphagems_page.html,* December 22, 1999.

[40] Information obtained from *www.netrition.com/creatine_serum_page.html,* December 22, 1999.

[41] ***, p. 2, and Wesley James, "Liquid Creatine - Is it a Fraud?," *Physique Tools* (© 1997) as found at *http://www.pipeline.com/~bakti/MuscleMaker/lqcrtn.html*, retrieved August 26, 1999.

[42] ***, p. 7.

[43] ***, p. 10.

[44] ***, p. 10.

[45] AMT and Peak Nutrition Inc. (Peak Nutrition) were identified as domestic commercial producers of creatine citrate. AMT produced both creatine and creatine citrate ***. Peak Nutrition produced only creatine citrate ***.

[46] AMT fax, November 23, 1999; staff telephone conversation with *** of AMT, November 24, 1999.

[47] Staff telephone conversation with *** on March 15, 1999.

[48] Information obtained from *http://www.askpeak.com/aapi/creatincitin.html,* November 3, 1999.

Certain creatine (monohydrate) producers state, "On a creatine-contained basis, creatine monohydrate is, by far, the cheapest form of creatine."[49] "As creatine is a raw material in the production of the downstream products, these products require additional ingredients and/or processing which would increase costs making the downstream product more expensive."[50] According to a purchaser, "Creatine citrate is more soluble than creatine monohydrate but it is also less concentrated... ...creatine citrate does not taste very good and is more expensive than creatine monohydrate."[51] Additional information on creatine citrate is presented in Part III of this report.

[49] ***, p. 10.

[50] ***, p. 10.

[51] ***, p. 2.

PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

CHANNELS OF DISTRIBUTION AND MARKET SEGMENTATION

Sales of creatine in the U.S. market by U.S. producers and importers take place primarily through 3 channels – distributors, packagers, and retailers. Sales from the supplier can go directly to any of these 3 channels. Distributors generally buy in large quantities and then resell to either packagers or retailers. Packagers primarily buy, blend, and process the product for sale to customers, generally retailers, who supply their own labels. Retailers purchase from producers, importers, distributors, and packagers and then resell to consumers.[1]

Available information indicates that the majority of 1998 sales by U.S. producers were made to retailers, while the majority of sales by importers were made to packagers. During 1998, data reported by U.S. producers indicate that approximately 63 percent of their domestic creatine shipments went to retailers, 31 percent to distributors, and 6 percent to packagers. Data from importers indicate that approximately 86 percent of their domestic creatine shipments went to packagers, and 14 percent went to distributors.

According to Pfanstiehl, market segmentation exists based on perceived quality differences in creatine produced in the United States and Europe versus China. A two-tier market consisting of (1) consumers primarily concerned with quality and (2) consumers primarily concerned with price allegedly evolved in the United States after the pronounced market entry of Chinese creatine in the third quarter of 1997. According to Pfanstiehl, the quality-conscious market segment, which prefers U.S. and European creatine, is dissipating as consumers become increasingly price sensitive.[2]

SUPPLY AND DEMAND CONSIDERATIONS

U.S. Supply

Domestic Production

Based on available information, U.S. creatine producers are likely to respond to changes in demand with notable changes in the quantity of shipments of U.S.-produced creatine to the U.S. market. The main factors contributing to the likely responsiveness of supply are excess industry capacity and relatively high inventory levels.

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[1] Some firms operate in more than one distribution channel. For example, some retailers perform packaging operations (staff interviews with ***, ***, and ***, March 1999).

[2] Seth Kaplan, Vice President, Charles River Associates, Inc., conference transcript, pp. 32-33. This increased price sensitivity was further explained at the hearing on December 16, 1999. According to Pfanstiehl, when Chinese creatine first entered the market, the dominant consumers were very quality sensitive (i.e., professional athletes or high-level amateur athletes). As demand increased, price-sensitive recreational athletes displaced the quality-sensitive consumers as the dominant end users, which led to increased demand for the lower-priced Chinese creatine (Seth Kaplan, Vice President, Charles River Associates, Inc., hearing transcript, p. 19).

Industry capacity

Data reported by U.S. producers indicate that there is available capacity with which to expand production. Domestic capacity utilization declined from 89.0 percent in 1996 to 35.3 percent in 1998 as capacity expanded greatly.

Alternative markets

Available data indicate that U.S. producers have increased their exports of creatine since 1996. As a share of total shipments, exports accounted for 3.1 percent in 1996 and rose to 5.0 percent in 1998. These data indicate that U.S. producers have some, albeit a limited, ability to respond to changes in prices in the U.S. market by diverting creatine to or from the U.S. market.

Inventory levels

The latest-available inventory data (June 1999) indicate that U.S. producers have considerable ability to immediately respond to changes in demand. Inventories rose from 79,000 kilograms in 1996 to 224,000 kilograms in 1998,[3] and amounted to 197,000 kilograms in the first six months of 1999, representing 8.1 percent of annual shipments in 1996, 10.0 percent in 1998, and 16.0 percent (annualized) in the first six months of 1999. Relative to U.S. consumption, inventories represented *** percent of demand in 1996, *** percent in 1998, and *** percent for the first six months of 1999.[4]

Production alternatives

In general, U.S. creatine producers still in operation view their equipment as dedicated to the production of the subject product.[5] However, *** reported that it has successfully modified drying equipment for use in the production of another product. *** stated that this was a very expensive modification and that the ability to utilize creatine equipment in the production of other products depends on numerous factors, such as the capacity and construction of the creatine equipment and the existence of demand for a profitable alternative product.[6]

U.S. Demand

Demand Characteristics

U.S. producers, importers, and purchasers were in general agreement that overall demand for creatine in the United States increased substantially from 1996 through 1998. However, several firms noted that demand has weakened in 1999. Among U.S. producers, *** reported that the body-building

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[3] Pfanstiehl shuttered its creatine facility from March until July of 1999 due to excessive inventories (several hundred thousand kilograms), which built up due to lost sales in the last half of 1998 (Ed Holstein, Executive Vice President, Pfanstiehl, hearing transcript, p. 43, and posthearing brief, p. 8).

[4] *** reported that a favorable inventory level within the industry equates to three weeks of average weekly production (staff interview with ***, March 17, 1999).

[5] U.S. producers showed greater disparity on the issue of facility usage. *** reported that their facilities are dedicated to creatine production, while *** reported that they have multi-use facilities.

[6] Staff interview with ***, November 9, 1999.

and sports performance markets appear to be approaching saturation. Among importers, *** reported that 1999 demand is flat at a time of increased capacity and inventories. Among purchasers, *** reported weaker demand for their firms' final products in 1999, with *** noting that consumers are now looking for a better product – "the next creatine."[7] Available data indicate that U.S. consumption of creatine rose from nearly *** kilograms in 1996 to nearly *** kilograms in 1998. However, U.S. consumption of creatine for the first six months of 1999 was *** kilograms as compared with *** kilograms for the same time period in 1998. U.S. producers, importers, and purchasers reported that the increased demand during 1996-98 was caused by heightened consumer awareness of the performance benefits of creatine and a resultant broader usage from an exclusive body-building supplement to a mainstream sports supplement.[8]

Substitute Products

Based on questionnaire responses from U.S. producers, importers, and purchasers, there are no unequivocal substitutes for creatine. Among U.S. producers, *** cited anabolic steroids as a potential substitute product. Among importers, *** stated that nutritional supplements in various combinations may provide similar performance benefits.

U.S. producers, importers, and purchasers were asked to comment on the substitutability of certain derivative products of creatine – creatine citrate, creatine phosphate, and liquid (serum) creatine – with respect to creatine monohydrate. U.S. producers generally view these products as downstream products, not as pure substitutes, because these products are either derived from or involve mixing other substances with creatine monohydrate.[9] Further, *** claimed that these products differ in cost (generally are more expensive than creatine monohydrate) and potency (generally provide less creatine per serving). Similarly, purchasers generally did not view these as substitute products for creatine monohydrate. For example, *** noted that these are value-added sources of creatine without either the potency or clinical backing of creatine monohydrate. Many importers reported having no knowledge of substitutability; however, *** and ***[10] stated that creatine citrate, creatine phosphate, and liquid creatine are not substitute products for creatine monohydrate. In contrast, *** views these products, with the exception of liquid creatine, as substitute products due to similar physical characteristics, uses, and distribution channels as compared with creatine monohydrate.

Cost Share

Most creatine is sold as such, in powder form, to consumers and is therefore generally not used as an intermediate product in the production of another product. Several exceptions include the aforementioned creatine serum, creatine citrate, and creatine phosphate, which account for a very small percent of overall creatine usage.

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[7] In contrast, Pfanstiehl believes that creatine usage will most likely expand into new markets such as geriatric nutrition (Ed Holstein, Executive Vice President, Pfanstiehl, hearing transcript, pp. 41-42).

[8] According to Pfanstiehl, creatine consumption is primarily a U.S. phenomenon. While demand for creatine does exist in Europe (particularly Western Europe), it is not a high-volume product as in the United States (Ed Holstein, Executive Vice President, Pfanstiehl, hearing transcript, pp. 57-58).

[9] Pfanstiehl views creatine citrate and other derivative products as minor niche products (Seth Kaplan, Vice President, Charles River Associates, Inc., hearing transcript, p. 60).

[10] *** was an importer of creatine as well as a U.S. producer of creatine during the period for which data were collected.

Purchasers were asked to estimate the percent of their final products' total costs accounted for by creatine. Answers varied by type of product, but were generally higher than 50 percent.[11] For creatine monohydrate as a final product, the percent of total cost as reported by purchasers appears to be around 90 percent.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported creatine depends upon such factors as relative prices, quality (e.g., level of impurities), and conditions of sale (e.g., price discounts/rebates, payment terms, product support, etc.). Based on available data, staff believes that there is a fairly high degree of substitution between domestic creatine and creatine imported from China.

Factors Affecting Purchasing Decisions

While price is an important factor in the sale of creatine, other factors such as quality and availability may be equally, if not more, important considerations in purchase decisions. Table II-1 summarizes 13 purchasers' responses concerning the top three factors that they consider in creatine purchasing decisions. As indicated in the table, quality and availability were cited most frequently by responding purchasers as primary factors when purchasing creatine.

Table II-1
Creatine: Ranking of factors used in purchasing decisions as reported by U.S. purchasers

Factor	Number of firms reporting		
	Number one factor	Number two factor	Number three factor
Availability	4	4	5
Price	1	5	5
Quality[1]	8	4	3

[1] Several purchasers cited variations of "quality" for their number two and number three factors.

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

Questions concerning purchasers' awareness of origin and supplier of creatine suggest that both of these factors are very important in purchase decisions, as virtually all purchasers answered both questions with responses of "always" or "usually." Purchasers' customers also appear to be interested in the country of origin of creatine, with 7 of 13 purchasers reporting that customers "always" or "usually" know the country of origin, while the remaining 6 purchasers reported that customers "sometimes" know the country of origin. Similarly, when asked if customers ever specifically order creatine from a particular country, 9 of 13 purchasers responded in the affirmative, citing quality issues as the driving factor.

[11] *** estimated that creatine as an input relative to total cost equates to approximately 50 percent for creatine citrate, 60 percent for creatine serum, and 80 percent for creatine phosphate (staff interview with ***, March 19, 1999).

Comparisons of Domestic Product, Subject Imports, and Nonsubject Imports

Virtually all responding U.S. producers, importers, and purchasers believe that U.S. and Chinese creatine are used interchangeably. Similarly, virtually all responding U.S. producers, importers, and purchasers believe that U.S. and nonsubject imported creatine are used interchangeably, as well as subject and nonsubject imported creatine. Importers and purchasers who did not answer with the majority reported having no knowledge of product interchangeability for the relevant categories cited in the particular questions.

Purchasers were asked to assess whether U.S.-produced creatine is superior, comparable, or inferior to imported creatine with respect to various factors. Compiled responses indicate comparability between U.S.-produced and European creatine on such issues as availability, delivery, quality, reliability, transportation network, and price. In contrast, compiled responses indicate differences between U.S.-produced and European creatine versus Chinese creatine on these same issues. U.S.-produced and European material tends to be viewed as superior to Chinese material on such issues as product quality, reliability of supply, and technical support. However, U.S.-produced and European material tends to be viewed as inferior to Chinese material in terms of discounts and price.[12]

MODELING ESTIMATES

U.S. Supply Elasticity

The domestic supply elasticity for creatine measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of creatine. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced creatine. Previous analysis of these factors indicates that the U.S. industry is likely to be able to increase or decrease shipments to the U.S. market within a 1 year time frame; an estimate in the range of 3 to 5 is suggested. Pfanstiehl did not comment directly on this estimate, but implied agreement by noting that its own model of the creatine industry is calibrated to be consistent with staff's assumption of a high U.S. supply elasticity.

U.S. Demand Elasticity

The U.S. demand elasticity for creatine measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of creatine. This estimate depends on factors discussed earlier such as the existence, availability, and commercial viability of substitute products, as well as the component share of creatine in the production of any derivative products. Based on the available information, the aggregate demand for creatine is likely to be elastic; a range of -1 to -2 is suggested. Pfanstiehl did not comment directly on this estimate, but implied agreement through use of this estimate in its own model of the U.S. creatine industry.

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[12] According to Pfanstiehl, many customers prefer to buy U.S. or European creatine but must compete against mass marketers that are buying less expensive Chinese material. Thus, many of these customers have switched to Chinese suppliers due to competitive pressure. The Chinese material may not always be equivalent, but it is viewed as adequate (Ed Holstein, Executive Vice President, Pfanstiehl, hearing transcript, pp. 47-48).

Substitution Elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported product.[13] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (availability, sales terms/discounts/promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced creatine and imported creatine is likely to be high, in the range of 3 to 6. Pfanstiehl did not comment directly on this estimate, but implied agreement through use of this estimate in its own model of the U.S. creatine industry.

MODEL DISCUSSION AND RESULTS

This analysis uses a nonlinear partial equilibrium model that assumes that domestic and imported products are less than perfect substitutes. Such models, also known as Armington models, are relatively standard in applied trade policy analysis and are used for the analysis of trade policy changes in both partial and general equilibrium. Based on discussion earlier, staff has selected a range of estimates that represent price-supply, price-demand, and product-substitution relationships (i.e., supply elasticity, demand elasticity, and substitution elasticities) in the U.S. creatine market. The model uses these estimates along with data on market shares and Commerce's final dumping margins. In this modeling exercise, staff has calculated a weighted-average margin for subject imports using available data for 1998 importers' shipments of subject material that were resold in the U.S. market.[14]

The analysis uses the most recent one year period for which data are available, 1998, as the base year. The model results estimate the effects of dumping on the domestic creatine industry over a one year time period only. Effects over a longer time period are not part of this modeling exercise. Finally, the model does not assume that all of the dumping margin is passed forward to U.S. prices of the subject imports.

Based on staff's estimates and the margins given by Commerce, the modeling results indicate that, if subject Chinese imports had not been dumped in the U.S. market, U.S. creatine prices would have been between 1.0 and 4.1 percent higher, output levels would have been between 4.1 and 11.9 percent higher, and revenues would have been between 5.4 and 15.5 percent higher.[15]

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

[14] Staff calculated the market share of subject Chinese imports for each foreign producer based on available data for 1998 shipments of creatine imported from China and resold in the U.S. market. This share was then applied to the dumping margin estimated by Commerce for each subject Chinese producer; these margins were combined for a weighted-average margin for all subject Chinese producers.

[15] See appendix table D-1 for model results. Petitoner's economic consultant, Charles River Associates (CRA), developed a two-consumer model of the U.S. creatine market to estimate the effects of Chinese imports on the domestic creatine market (see petitioner's prehearing brief, exhibit 1, and posthearing brief, exhibit C). According to CRA, this model distinguishes between price-sensitive and quality-sensitive consumers as compared with COMPAS, which does not differentiate between types of consumers. Based on CRA's model, the domestic creatine industry's prices, output, and revenues would have been 2.5, 16.2, and 19.1 percent higher, respectively, if subject imports from China had not been dumped in the U.S. market.

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the margin of dumping was presented earlier in this report (see page I-1) and information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire responses of 7 firms that accounted for 100 percent of U.S. production of creatine during 1998.

U.S. PRODUCERS

Overview of the Industry

The Commission sent producers' questionnaires to the three firms identified as producers in the petition as well as to five other firms believed to have produced creatine and/or downstream creatine products in the United States during the period 1996 through June 1999. According to questionnaire responses, seven firms produced creatine in the United States during at least part of this period, and two firms produced creatine citrate in commercial quantities.[1] Responding producers are believed to account for all U.S. creatine production. Currently, four firms (Pfanstiehl, Chattem, Larchmont, and Stella) continue to produce creatine. U.S. producers' identities, plant locations, and shares of U.S. production are shown in table III-1. In terms of shares of total production and shipments, *** of the 7 producing firms in 1998 were significant producers.

Table III-1
Creatine: U.S. producers, plant locations, share of production in 1998, and position on the petition

Firm	Location of production facilities	Share (percent) of reported total production of creatine in 1998	Position on the petition
Pfanstiehl	Waukegan, IL	***	Petitioner
All American[1]	Billings, MT	([1])	***
AMT[2]	North Salt Lake, UT	***	***
Chattem	Chattanooga, TN	***	***
Larchmont	Danville, VA	***	***
NATRX[3]	Murray, UT	***	***
Stella	New Orleans, LA	***	***

1 ***.
2 ***.
3 ***.

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

[1] AMT Labs, Inc., North Salt Lake, UT, produced creatine citrate during *** and Peak Nutrition, Inc., Syracuse, NE, produced creatine citrate beginning in ***.

Overview of Companies[2]

Pfanstiehl Laboratories, Inc.

Petitioner Pfanstiehl (*** percent of 1998 U.S. production), located in Waukegan, IL, is a U.S. producer of a variety of chemical products such as pharmaceuticals and intermediates, biological chemicals, cosmetic chemicals, and dietary supplements. Pfanstiehl has reportedly been a U.S. producer of creatine since the 1960s. Until the early 1990s, Pfanstiehl produced creatine on non-dedicated equipment in a multi-use facility. Creatine was produced in relatively small amounts and sold as a fine chemical for research purposes.[3] In response to growth in the use of creatine as a dietary sports supplement, Pfanstiehl ramped up production during the early 1990s. Pfanstiehl invested in dedicated equipment which was employed in a multi-use facility. Further rapid growth in the market led Pfanstiehl to build a dedicated facility with dedicated equipment used solely in the production of creatine, which it opened in August 1997.[4] On the basis of ***.[5] ***.[6]

Pfanstiehl is a licensee of a process patent for producing creatine.[7] The patent holder is ***. In addition, Pfanstiehl maintains ***.[8] Reportedly, none of the other domestic producers ***.[9]

Chattem Chemicals, Inc.

Chattem (*** percent of 1998 U.S. production), located in Chattanooga, TN, is a ***.[10] Chattem is a producer of a variety of fine and specialty chemicals, including pharmaceuticals, nutriceuticals, catalysts, printing inks, greases, coatings, and plastic additives.[11] Chattem began producing creatine ***. *** Chattem was reportedly producing ***, increased its capacity[12] ***. At various times during the period, production ***.[13]

Stella Laboratories, LLC

Stella (*** percent of 1998 U.S. production), located in New Orleans, LA, began producing ***. Stella experienced *** capacity expansions during both ***.[14]

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[2] None of the responding U.S. producers are related by ownership to any foreign producers.

[3] Edward Holstein, Executive Vice President, Pfanstiehl Laboratories, conference transcript, p. 15.

[4] Ibid., pp. 15-18.

[5] Pfanstiehl's posthearing brief, p. 9.

[6] Ibid., p. 8.

[7] Pfanstiehl's posthearing brief, exhibit D.

[8] Ibid.

[9] Staff notes, March 16, 1999.

[10] Chattem's questionnaire response, p. 2.

[11] Chattem Fine Chemicals, "Welcome to Chattem Chemicals," found at *http://www.chattemchemicals.com/,* retrieved March 14, 1999.

[12] *** Chattem's questionnaire response, p. 5.

[13] Ibid.

[14] Stella's questionnaire response, p. 5.

Other producers

Four additional producers (All American, AMT, Larchmont, and NATRX) produced creatine ***. Of these, AMT also produced creatine citrate, as did Peak Nutrition. All American, located in Billings, MT, produced creatine ***.[15] All American's creatine production ***.[16]

AMT, located in North Salt Lake, UT, began producing creatine ***[17] ***.[18]

Larchmont (*** percent of 1998 U.S. production), located in Danville, VA, began creatine production ***.[19]

NATRX (*** percent of 1998 U.S. production), located in Murray, UT, produced creatine ***.[20]

U.S. PRODUCTION, CAPACITY, CAPACITY UTILIZATION, SHIPMENTS, INVENTORIES, AND EMPLOYMENT

Aggregate data for the U.S. producers of creatine are shown in table III-2. Production increased by 120.4 percent from 1996 to 1998. Pfanstiehl accounted for *** percent of total U.S. production in 1998, *** from *** percent in 1996, although Pfanstiehl's production increased *** from *** kilograms in 1996 to *** kilograms in 1998, with concurrent capacity increases of *** percent over the period from *** kilograms in 1996 to *** kilograms in 1998.[21] Aggregate capacity utilization decreased irregularly from 89.0 percent in 1996 to 35.3 percent in 1998. The number of production and related workers and hours worked peaked in 1997. Hourly wages and productivity increased irregularly, with a wage downturn in 1998. Unit labor costs decreased through 1998, but rose again in January-June 1999. Inventories increased irregularly during the period. U.S. producers' capacity, production, capacity utilization, and U.S. shipments, by firm, are presented in appendix E. Producers' aggregate capacity, production, capacity utilization, commercial shipments quantity and value, and certain employment data for the last two quarters of 1998 and the first two quarters of 1999 are presented in table III-3.[22] The data generally show steady decreases across the period presented.

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[15] During the period of investigation, All American ***. All American's questionnaire ***.

[16] All American's questionnaire response, p. 9, and staff telephone conversation with ***, October 25, 1999.

[17] AMT's questionnaire response, p. 17.

[18] Ibid., p. 5.

[19] Larchmont's questionnaire response, pp. 5, 8, 12, 14, and 19.

[20] NATRX' questionnaire response, pp. 5 and 14.

[21] ***. Pfanstiehl's posthearing brief, p. 9.

[22] Pfanstiehl alleges July 1998-June 1999 to be the period of greatest import penetration and injury.

Table III-2
Creatine: U.S. production capacity, production, capacity utilization, shipments, end-of-period inventories, and employment-related indicators, 1996-98, January-June 1998, and January-June 1999

Item	Calendar year			January-June	
	1996	1997	1998	1998	1999
Capacity (*1,000 kilograms*)	1,091	5,313	6,066	3,072	2,739
Production (*1,000 kilograms*)	970	2,001	2,139	1,336	590
Capacity utilization (*percent*)	89.0	37.7	35.3	43.5	21.5
U.S. shipments:					
Quantity (*1,000 kilograms*)	936	1,676	2,127	1,330	569
Value (*1,000 dollars*)	25,987	34,179	28,203	18,243	6,901
Unit value (*per kilogram*)	$27.76	$20.40	$13.26	$13.71	$12.13
Exports:					
Quantity (*1,000 kilograms*)	30	81	113	60	47
Value (*1,000 dollars*)	920	1,695	1,599	824	582
Unit value (*per kilogram*)	$30.31	$20.93	$14.16	$13.70	$12.46
Total shipments:					
Quantity (*1,000 kilograms*)	966	1,757	2,240	1,390	616
Value (*1,000 dollars*)	26,907	35,873	29,802	19,067	7,483
Unit value (*per kilogram*)	$27.85	$20.42	13.30	$13.71	$12.15
Inventories (*1,000 kilograms*)	79	325	224	270	197
Ratio of inventories to total shipments (*percent*)[1]	8.1	18.5	10.0	9.7	16.0
Production and related workers (PRWs)	36	57	39	31	20
Hours worked by PRWs (*1,000 hours*)	75	109	67	32	19
Productivity (*kilograms produced per hour*)	12.9	18.4	32.0	41.4	31.0
Wages paid to PRWs (*1,000 dollars*)	1,431	2,124	952	481	377
Hourly wages	$19.08	$19.49	$14.26	$14.93	$19.86
Unit labor costs (*per kilogram*)	$1.47	$1.06	$0.45	$0.36	$0.64

[1] Ratios for the January-June periods are based on annualized shipment data.

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

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

Table III-3
Creatine: U.S. production capacity, production, capacity utilization, U.S. commercial shipments quantity and value, average number of production and related workers (PRWs), and hours worked by such employees, by quarters, July 1998-June 1999

Item	Quarters			
	July-Sept. 98	Oct.-Dec. 98	Jan.-Mar. 99	Apr.-June 99
Capacity (*1,000 kilograms*)	1,505	1,390	1,370	1,370
Production (*1,000 kilograms*)	532	296	436	154
Capacity utilization (*percent*)	35.4	21.3	31.8	11.2
U.S. commercial shipments quantity (*1,000 kilograms*)	487	323	310	259
U.S. commercial shipments value (*$1,000*)	6,049	4,215	4,022	2,879
Production and related workers (PRWs)	35	27	20	17
Hours worked by PRWs (*1,000 hours*)	12.5	8.6	8.2	6.6
Source: Compiled from data submitted in response to Commission questionnaires.				

U.S. PRODUCERS' SHIPMENTS

Aggregate trends in U.S. shipments paralleled those for U.S. production, although the unit value of U.S. shipments declined steadily during the period for which data were collected (table III-4). The quantity of exports increased steadily and the value increased irregularly, while the unit value decreased steadily.

U.S. PRODUCERS' IMPORTS AND PURCHASES

One U.S. producer reported imports and purchases of creatine. During the period of investigation, ***.[23]

DERIVATIVE CREATINE PRODUCTS

One U.S. producer of creatine also commercially produced a derivative creatine product.[24] Two U.S. producers of creatine citrate and no U.S. producers of creatine phosphate and liquid (serum) creatine were identified. AMT produced both creatine and creatine citrate ***.[25] AMT produced ***.[26] All

[23] ***.

[24] ***. Additionally, Pfanstiehl, ***, produced *** kilograms of creatine citrate ***. Commission staff telephone conversation with *** of Pfanstiehl, January 6, 2000.

[25] AMT fax, November 23, 1999; staff telephone conversation with *** of AMT, November 24, 1999.

[26] AMT's domestic producer questionnaire response.

Table III-4
Creatine: U.S. producers' shipments, by types, 1996-98, January-June 1998, and January-June 1999

Item	Calendar year			January-June	
	1996	1997	1998	1998	1999
			Quantity (*1,000 kilograms*)		
Commercial U.S. shipments	936	1,666	2,121	1,330	569
Internal U.S. shipments	-	10	6	(1)	-
Total U.S. shipments	936	1,676	2,127	1,330	569
Export shipments	30	81	113	60	47
Total shipments	966	1,757	2,240	1,390	616
			Value (*1,000 dollars*)		
Commercial U.S. shipments	25,987	34,065	28,137	18,242	6,901
Internal U.S. shipments	-	114	66	1	-
Total U.S. shipments	25,987	34,179	28,203	18,243	6,901
Export shipments	920	1,695	1,599	824	582
Total shipments	26,907	35,873	29,802	19,067	7,483
			Unit value (*per kilogram*)		
Commercial U.S. shipments	$27.76	$20.45	$13.26	$13.73	$12.13
Internal U.S. shipments	-	11.44	11.01	8.00	-
Total U.S. shipments	27.76	20.40	13.26	13.71	12.13
Export shipments	30.31	20.93	14.16	13.70	12.46
Total shipments	27.84	20.42	13.30	13.71	12.15

[1] Less than 500 kilograms.

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

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

production was *** each year, at prices that ***.[27] *** creatine citrate inventory was held during the period of production.[28]

Peak Nutrition[29] began production of creatine citrate ***. Peak Nutrition produced ***. All production was *** each year at an average price of *** per kilogram; *** inventory was held. Peak Nutrition's production of creatine citrate ***.[30] In 1996 and 1997, ***, Peak Nutrition ***.[31]

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[27] Ibid.

[28] Ibid.

[29] Peak Nutrition is a ***.

[30] Peak Nutrition's producer questionnaire response, ***.

[31] ***. Ibid., ***.

PART IV: U.S. IMPORTS, APPARENT CONSUMPTION, AND MARKET SHARES

Questionnaires were sent to 43 firms (including U.S. producers) believed to be importers of creatine, based on information provided by the U.S. Customs Service, information obtained in the preliminary phase of the investigation, and information in the petition.[1] Questionnaire responses were received from 30 of the 43 firms, including from all importers believed to be large importers of creatine; 12 of the 30 firms responded that they did not import the subject product. Based on questionnaire responses, it appears that the overwhelming bulk of creatine imported into the United States is produced in China, Austria, and Germany. Only two firms, ***, reported imports from other than China in the importers' questionnaire responses in the final phase of the investigation. The largest import quantity was from *** as reported by ***.[2]

The largest known U.S. importers by far during 1996-January 1999, ***, were: (1) from China, ***; (2) from Austria, ***, and (3) from Germany, ***. No firm reported that it imports from all three countries.

U.S. import data presented in this report are based on data compiled from questionnaire responses to the Commission. Official statistics are not used because creatine is classified along with other unrelated chemical products in a basket HTS subheading. U.S. imports of creatine are presented on an annual basis for 1996-98, with interim January-June period comparisons for 1998 and 1999, in table IV-1. Further, as merchandise exported by Nantong and produced by its proprietary producer and merchandise produced and exported by Tianjin were found by Commerce to have zero final weighted-average margins, data for these companies have been subtracted from subject Chinese imports and presented separately as nonsubject imports.[3] Similar data on a quarterly basis for July 1998-June 1999 are presented in table IV-2.

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[1] In an attachment to the petition, the petitioner included a list of 39 potential importers of creatine. Only one of the companies listed appears to have imported creatine during the period of investigation. The remaining companies provided by the petitioner appear to be freight forwarders and shipping companies, and not importers.

[2] ***.

[3] Faxes submitted to Commission staff on December 22, 1999, by *** of *** indicate *** subsequent to Commerce's final determination.

Table IV-1
Creatine: U.S. imports, by sources, 1996-98, January-June 1998, and January-June 1999

Source	Calendar year			January-June	
	1996	1997	1998	1998	1999
			Quantity (*1,000 kilograms*)		
China	15	127	1,187	317	586
Subject	***	***	***	***	***
Nonsubject [1]	***	***	***	***	***
Other sources	***	***	***	***	***
Total	***	***	***	***	***
			Value (*1,000 dollars*)[2]		
China	382	2,003	10,100	3,004	4,034
Subject	***	***	***	***	***
Nonsubject [1]	***	***	***	***	***
Other sources	***	***	***	***	***
Total	***	***	***	***	***
			Unit value (*per kilogram*)[2]		
China	$25.94	$15.82	$8.51	$9.48	$6.89
Subject	***	***	***	***	***
Nonsubject	***	***	***	***	***
Other sources	***	***	***	***	***
Average	***	***	***	***	***
			Share of quantity (*percent*)		
China	***	***	***	***	***
Subject	***	***	***	***	***
Nonsubject	***	***	***	***	***
Other sources	***	***	***	***	***
			Share of value (*percent*)		
China	***	***	***	***	***
Subject	***	***	***	***	***
Nonsubject	***	***	***	***	***
Other sources	***	***	***	***	***
Total	100.0	100.0	100.0	100.0	100.0

[1] Importer questionnaire responses presented ***.
[2] Landed, duty-paid.

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

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

Table IV-2
Creatine: U.S. imports, by sources and by quarters, July 1998-June 1999

Source	Quarter			
	July-Sept. 98	Oct.-Dec. 98	Jan.-Mar. 99	Apr.-June 99
	Quantity (*1,000 kilograms*)			
China[1]	325	545	465	162
Other sources	***	***	***	***
Total	***	***	***	***
	Value (*1,000 dollars*)[2]			
China[1]	2,779	4,003	2,969	1,064
Other sources	***	***	***	***
Total	***	***	***	***
	Unit value (*per kilogram*)[2]			
China[1]	$8.54	$7.35	$6.39	$6.58
Other sources	***	***	***	***
Average	***	***	***	***
	Share of quantity (*percent*)			
China[1]	***	***	***	***
Other sources	***	***	***	***
Total	100.0	100.0	100.0	100.0
	Share of value (*percent*)			
China[1]	***	***	***	***
Other sources	***	***	***	***
Total	100.0	100.0	100.0	100.0

[1] Data for China are for subject and nonsubject imports combined, as subject/nonsubject breakouts are not available for the quarterly data.
[2] Landed, duty-paid.

Note.–Because of rounding, figures may not add to the totals shown. Also, combined data for January-March 1999 and April-June 1999 do not match the January-June 1999 data in table IV-1 because of reporting anomalies of certain importers.

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

Shipments of domestic and imported product and apparent U.S. consumption for the period for which data were collected in the investigation are presented in table IV-3. Similar data for the period July 1998-June 1999 are presented on a quarterly basis in table IV-4. Apparent U.S. consumption and market shares are presented in table IV-5, and table IV-6 presents similar data for July 1998-June 1999 on a quarterly basis.

Table IV-3
Creatine: U.S. shipments of domestic product, U.S. shipments of imports, by sources, and apparent U.S. consumption, 1996-98, January-June 1998, and January-June 1999

Item	Calendar year			January-June	
	1996	1997	1998	1998	1999
	Quantity (*1,000 kilograms*)				
U.S. producers' shipments	936	1,676	2,127	1,330	569
U.S. shipments of imports from--					
China	14	93	871	265	688
Subject	***	***	***	***	***
Nonsubject	***	***	***	***	***
Other sources	***	***	***	***	***
Total import shipments	***	***	***	***	***
Apparent U.S. consumption	***	***	***	***	***
	Value (*1,000 dollars*)				
U.S. producers' shipments	25,987	34,179	28,203	18,243	6,901
U.S. shipments of imports from--					
China	462	1,726	9,176	3,269	5,976
Subject	***	***	***	***	***
Nonsubject	***	***	***	***	***
Other sources	***	***	***	***	***
Total import shipments	***	***	***	***	***
Apparent U.S. consumption	***	***	***	***	***

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

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

Table IV-4
Creatine: U.S. shipments of domestic product, U.S. shipments of imports, by sources, and apparent U.S. consumption, by quarters, July 1998-June 1999

Item	Quarters			
	July-Sept. 98	Oct.-Dec. 98	Jan.-Mar. 99	Apr.-June 99
	Quantity (*1,000 kilograms*)			
U.S. producers' shipments	487	323	310	259
U.S. shipments of imports from--				
China[1]	179	423	392	296
Other sources	***	***	***	***
Total import shipments	***	***	***	***
Apparent U.S. consumption	***	***	***	***
	Value (*1,000 dollars*)			
U.S. producers' shipments	6,049	4,215	4,022	2,879
U.S. shipments of imports from--				
China[1]	1,914	3,928	3,194	2,570
Other sources	***	***	***	***
Total import shipments	***	***	***	***
Apparent U.S. consumption	***	***	***	***

[1] Data for China are for subject and nonsubject imports combined, as subject/nonsubject breakouts are not available for the quarterly data.

Note.–Because of rounding, figures may not add to the totals shown. Also, combined U.S. importers' shipment data for January-March 1999 and April-June 1999 do not match the January-June 1999 data in table IV-3, and combined apparent U.S. consumption data do not match those in tables IV-3 and IV-5, because of reporting anomalies of certain importers.

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

Table IV-5
Creatine: Apparent U.S. consumption and market shares, 1996-98, January-June 1998, and January-June 1999

* * * * * * *

Table IV-6
Creatine: Apparent U.S. consumption and market shares, by quarters, July 1998-June 1999

* * * * * * *

CRITICAL CIRCUMSTANCES

Commerce determines that critical circumstances exist if there is a reasonable basis to believe or suspect that: (1) there is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise; or (2) the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at less than fair value and that there was likely to be material injury by reason of such sales; and (3) there have been massive imports of the subject merchandise over a relative short period.

With respect to the first criteria, Commerce was not aware of any antidumping order in any country on creatine from the China. With regard to the second criteria, Commerce normally considers margins of 25 percent or more and a preliminary Commission determination of material injury sufficient to impute knowledge of dumping and the likelihood of resultant material injury. In determining whether there are "massive imports" over a "relatively short time period," Commerce based its analysis on a comparison of each respondent's export volume for five months prior to the filing of the petition (September 1998 to January 1999) to that during the five months subsequent to the filing of the petition (February 1999 to June 1999). For all other exporters, Commerce performed the analysis using import statistics.

Based on Commerce's final analysis, it was determined that critical circumstances exist for Freemen/Greenmen and all other Chinese exporters except Blue Science, Desano, Nantong, Sanjian, and Tiancheng. Monthly export quantity and value from Freemen/Greenmen for the period of analysis are presented in table IV-7. Monthly data for all other Chinese exporters other than Blue Science, Desano, Nantong, Sanjian, and Tiancheng are not available.

Table IV-7
Creatine: Export quantity and value from the Chinese firms Freemen/Greenmen, September 1998-January 1999 and February-June 1999

* * * * * * *

PART V: PRICING AND RELATED INFORMATION

FACTORS AFFECTING PRICES

Raw Material Costs

The two main raw materials used in the production of creatine are cyanamide and sodium sarcosinate. The significance of raw material costs in the overall cost structure varies among U.S. producers, but such costs accounted for an average of 89 percent of the total 1998 cost of creatine production. There are few suppliers of cyanamide and sodium sarcosinate in the world and, as a result, prices for these two main raw materials tend to be rather inflexible.[1]

Transportation Costs to the U.S. Market

Transportation costs for creatine from China to the United States (excluding U.S. inland costs) are estimated to be approximately 3.6 percent of the total cost for creatine. This estimate is derived from official import data for HTS subheading 2925.20.90 and represents the transportation and other charges on imports valued on a c.i.f. basis, as compared with customs value.

U.S. Inland Transportation Costs

Transportation costs for creatine for delivery within the United States vary from firm to firm but tend to account for a small percentage of the total cost of the product. For the 3 U.S. producers that provided usable responses, these costs accounted for between 0.5 and 5.0 percent of the total cost of creatine, with a weighted average (based on 1998 U.S. sales value) of approximately 2.8 percent. For the 9 importers that provided usable responses, these costs accounted for between 1.0 and 8.5 percent of the total cost of creatine, with a weighted average (based on 1998 U.S. sales value) of approximately 2.0 percent. In general, reported inland transportation costs for imported creatine were slightly lower than those for U.S. creatine, reflecting the smaller average distances that the imported product is shipped, as discussed next.

Virtually all U.S. producers reported a geographic market area encompassing the entire United States,[2] while many importers reported smaller market areas. For the 15 importers that provided usable responses to this question, only 3 reported a market area encompassing the entire continental United States, while 5 reported sales to various regions in the western, midwestern, and eastern parts of the country. Of the 7 remaining responses, 4 importers reported market areas specifically on the East Coast and 3 importers reported market areas specifically on the West Coast.

Producers and importers were also requested to provide estimates of the percentages of their shipments that were made within specific distance ranges. Among the 6 U.S. producers that provided usable responses to this question, an average of 1.5 percent of shipments occurred within 100 miles and 52.7 percent occurred within 101 to 1,000 miles. Among the 14 importers that provided usable responses to this question, an average of 46.3 percent of shipments occurred within 100 miles and 40.3 percent occurred within 101 to 1,000 miles.

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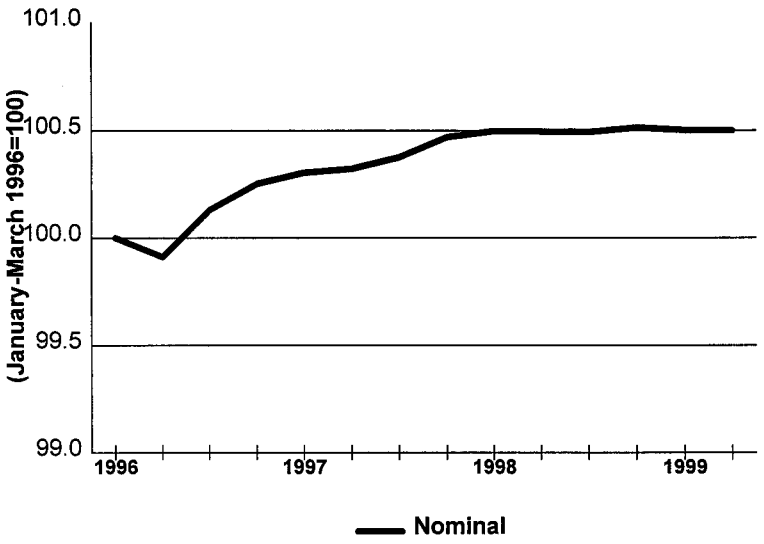
[1] Staff interview with ***, March 10, 1999.

[2] *** reported that its sales are generally to the East Coast.

Exchange Rates

Quarterly data reported by the International Monetary Fund indicate that the nominal value of the Chinese yuan appreciated by 0.5 percent relative to the U.S. dollar from January 1996 to June 1999, with the nominal value remaining unchanged from the fourth quarter of 1997 through the second quarter of 1999 (figure V-1). Real exchange rates cannot be calculated due to the unavailability of Chinese producer price information.

Figure V-1
Exchange rate: Index of the nominal exchange rate between the Chinese yuan and the U.S. dollar, by quarters, January 1996-June 1999



Source: International Monetary Fund, *International Financial Statistics*, October 1999.

PRICING PRACTICES

Pricing Methods

Most sales of creatine in the United States are made on a transaction-by-transaction basis, with prices quoted based on current market conditions. Available information indicates that the majority of U.S. producers' and importers' sales are on a spot basis. However, 2 U.S. producers, ***, and 1 importer, ***, reported that a significant portion of their sales were on a contract basis during the period for which data were requested.[3]

In those instances where suppliers engaged in contractual sales of creatine, contracts varied in duration from 1 to 5 months. Reported contract terms were somewhat dissimilar, with *** reporting that price and quantity were fixed while *** reported that these two factors were sometimes fixed. *** reported that its contract agreement did contain a meet-or-release provision, while *** reported in the negative. Both suppliers stated that there are no standard quantity requirements.

[3] *** reported that *** percent of its sales were on a contract basis, *** reported that *** percent of its sales were on a contract basis, and *** reported that *** percent of its sales were on a contract basis.

Sales Terms and Discounts

The vast majority of U.S. producers and importers of creatine did not report having either price lists or fixed discount policies. However, some suppliers reported that price discounting based on quantity may occur during negotiations with individual customers. Similarly, purchasers reported that sales terms are negotiated at the time of order, with suppliers issuing price quotes based on requested quantity. U.S. producers and importers reported similar information regarding payment terms, with all U.S. producers and 14 of 17 importers reporting that payment is required within 30 days. U.S. producers, importers, and purchasers provided mixed responses with regard to how prices are quoted in the creatine market. Among U.S. producers, 4 of 7 quote prices only on an f.o.b. basis, while *** reported that price quotes occur on either an f.o.b. or delivered basis, and *** quotes prices only on a delivered basis. Among importers, 10 of 17 reported that price quotes occur only on a delivered basis, while 5 quote prices only on an f.o.b. basis. The remaining 2 importers quote prices on either basis. Of the 13 purchasers that responded to this question, 6 reported that prices are usually quoted on an f.o.b. basis, 6 reported that prices are usually quoted on a delivered basis, and 1 reported that prices are quoted on either basis.

PRICE DATA

The Commission requested U.S. producers and importers of creatine to provide quarterly data for the total quantity and value of creatine that was shipped to unrelated customers in the U.S. market. The Commission also requested U.S. purchasers of creatine to provide similar data regarding their purchases in the U.S. market. Data were requested for the period January 1996 to June 1999. The products for which pricing data were requested are as follows:

Product 1.-- **Creatine Monohydrate - 99.0 percent pure or greater**
Product 2.-- **Creatine Monohydrate - less than 99.0 percent pure**

Seven U.S. producers, 11 importers,[4] and 12 purchasers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters. No price data were reported for product 2.[5] Pricing data reported by U.S. producers and importers accounted for virtually all U.S. producers' shipments of creatine, as well as 94.7 percent of U.S. shipments of subject imports from China in 1998. Pricing data reported by purchasers accounted for approximately 90.0 percent of U.S. producers' shipments of creatine and approximately 32.1 percent of U.S. shipments of subject imports from China in 1998.

[4] Two additional importers, ***, imported from Austria and Germany, respectively. Based on these sources, European nonsubject average annual unit values per kilogram are as follows: Austria - $*** (1996), $*** (1997), $*** (1998), $*** (January-June 1999); Germany - $*** (1996), $*** (1997), $*** (1998), $*** (January-June 1999).

[5] Virtually all creatine sold in the United States is product 1. However, staff requested data on product 2 to ensure that information on all creatine sales was obtained for this investigation.

Price Trends and Price Comparisons

U.S. Producers' and Importers' Data[6]

Weighted-average prices for creatine as reported by U.S. producers and importers showed overall declines during the period January 1996 through June 1999. Prices for Chinese creatine during this time frame showed more volatility and more substantial declines (table V-1 and figure V-2) as compared with U.S.-produced creatine. Prices for creatine reported by U.S. producers and importers from China fell by 58 and *** percent, respectively, from the fourth quarter of 1996 through the second quarter of 1999, and fell by 21 and 40 percent, respectively, from the first quarter of 1998 through the second quarter of 1999. According to Pfanstiehl, price declines in the creatine market prior to 1998 are considered a normal result of increased competition from nonsubject producers.[7]

Price comparisons between U.S.-produced and Chinese creatine were possible in a total of 11 quarters. In 3 of these instances (mostly in 1997), Chinese creatine was priced above U.S. creatine, with margins ranging from 1.0 to 14.2 percent. In the other 8 quarters (mostly in 1998 and through June 1999), Chinese creatine was priced below U.S. creatine, with margins ranging from 15.8 to 33.7 percent. The average margin of underselling between U.S. and Chinese creatine prices in those 8 quarters was 21.8 percent, with margins generally trending upward until the second quarter of 1999.

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[6] Based on Commerce's final determination in this investigation, imports from two Chinese firms – Nantong (exporter) and Tianjin Tiancheng (producer) – have been removed from the price data. One importer, ***, was unable to assist staff in extracting the relevant data from its original questionnaire response. Therefore, all price data provided by *** have been deleted from table V-1 and figure V-2.

[7] Ed Holstein, Executive Vice President, Pfanstiehl, conference transcript, p. 22. At the March 8, 1999, conference and in its postconference brief, Pfanstiehl provided its explanation of the U.S. creatine market and how it has evolved over the past 5 years. During the initial phase of increased demand, three events occurred: (1) German imports entered the market at fairly traded prices, (2) production costs fell due to improved technology and dedicated facilities, and (3) price sensitive consumers entered the market. This initial phase is considered natural by Pfanstiehl, where a single producer (Pfanstiehl) faced market entry by fairly traded imports as demand for creatine surged. According to Pfanstiehl, market entry by the Chinese caused a substantial shift in the U.S. creatine market because the Chinese entered at significantly lower prices. During the preliminary phase of this investigation, both Pfanstiehl and respondents agreed that a two-tier market evolved consisting of (1) consumers primarily concerned with quality and (2) consumers primarily concerned with price. According to Pfanstiehl, the quality-conscious market segment, which prefers U.S. and European creatine, is dissipating as consumers are becoming increasingly price sensitive (Seth Kaplan, Vice President, Charles River Associates, Inc., conference transcript, pp. 30-33, and Pfanstiehl's postconference brief, exhibit 2).

Table V-1
Creatine: Weighted-average delivered prices and quantities as reported by U.S. producers and importers, and margins of underselling/(overselling), by quarters, January 1996-June 1999

Period	United States			China			
	Price	Quantity	Firms	Price	Quantity	Margin	Firms
	Per kg.	*1,000 kg.*	*Number*	*Per kg.*	*1,000 kg.*	*Percent*	*Number*
1996:							
January-March	$***	***	2	--	--	--	--
April-June	***	***	2	--	--	--	--
July-September	***	***	2	--	--	--	--
October-December	26.85	182	3	$***	***	***	1
1997:							
January-March	23.97	387	4	***	***	***	2
April-June	22.37	512	6	18.24	18	18.4	3
July-September	19.00	400	6	***	***	***	2
October-December	16.84	389	6	***	***	***	2
1998:							
January-March	14.19	654	5	14.33	74	(1.0)	5
April-June	13.34	669	5	11.23	159	15.8	6
July-September	12.62	488	6	10.54	154	16.5	6
October-December	12.98	327	3	9.20	373	29.2	5
1999:							
January-March	13.05	310	4	8.65	340	33.7	7
April-June	11.17	259	4	8.60	266	23.0	6

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

Figure V-2
Weighted-average delivered prices for creatine, as reported by U.S. producers and importers, by quarters, January 1996-June 1999

* * * * * * *

Purchasers' Data[8]

Weighted-average purchase prices for creatine showed similar overall price declines as compared with U.S. producer/importer data, although reported purchase prices for Chinese creatine were initially higher and less volatile (table V-2 and figure V-3). Purchase prices for U.S. and Chinese creatine fell by 62 and *** percent, respectively, from the second quarter of 1996 through the second quarter of 1999, and fell by 21 and *** percent, respectively, from the first quarter of 1998 through the second quarter of 1999.

Comparisons between the U.S. and Chinese purchase prices for creatine were possible in a total of 13 quarters. In 4 of these instances (mostly in 1996), the Chinese purchase prices were above U.S. purchase prices, with margins ranging from 11.9 to 16.8 percent. In the other 9 instances, Chinese purchase prices were below U.S. purchase prices, with margins ranging from 3.5 to 37.3 percent. The average margin of underselling between U.S. and Chinese purchase prices in those 9 quarters was 20.5 percent.

LOST SALES AND LOST REVENUES[9]

The Commission requested U.S. producers of creatine to report any instances of lost sales or revenues they experienced due to competition from imports of creatine from China from January 1996 through June 1999. Two of the 8 responding U.S. producers of creatine provided specific information on lost sales due to imports of creatine from China,[10] involving 7 firms to which they allegedly lost business. Additionally, 2 U.S. producers provided specific information regarding 2 allegations of lost revenues. Of the 10 specific lost sales/lost revenues allegations, 5 were fully confirmed or partially confirmed by purchasers, 3 were denied by purchasers, and in 2 instances it was impossible to obtain adequate information. The allegations for lost sales and lost revenues totaled approximately $9.6 million and involved approximately 700,000 kilograms of creatine. Of this, fully confirmed lost sales allegations totaled $*** and involved nearly *** kilograms of creatine. No lost revenues allegations were confirmed. Comments obtained by staff are detailed below.

*** named *** in a lost sales allegation totaling $*** and involving *** kilograms of creatine during ***. *** confirmed the specific lost sales data provided by *** and further stated that price was the determining factor in switching from U.S. creatine to the Chinese product. According to ***, price is the most important factor in supply decisions for creatine. The market for creatine is highly competitive, with Chinese producers competing among themselves and further depressing prices for the Chinese product, which is consistently $*** to $*** per kilogram lower than U.S. creatine. When asked about purity differences between U.S. and Chinese creatine, *** stated that both products are marketed as

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[8] Based on 1998 vendor identification requested in purchasers' questionnaires, *** purchased Chinese creatine from suppliers of nonsubject Chinese creatine. Price data from 4 of these 5 purchasers have been adjusted to account only for purchases from importers of entirely subject material. The remaining purchaser, ***, did not assist staff in extracting the relevant data from its original questionnaire response. Therefore, all purchase price data provided by *** have been deleted from table V-2 and figure V-3.

[9] With the exception of 1 lost revenues allegation from *** and 2 additional lost sales allegations from ***, information in this section of the report is identical to the preliminary report.

[10] *** did not wish to provide specific allegations due to customer relations and confidentiality issues. However, the company does believe it has lost sales because of lower-priced creatine from China. *** did not provide any additional lost sales/lost revenues information other than relaying that they have continued to lose sales and/or reduce prices due to competition from Chinese creatine. *** reported losing sales to Pfanstiehl and SKW, and *** did not provide any information on lost sales or lost revenues.

Table V-2
Creatine: Weighted-average delivered purchase prices and quantities as reported by U.S. purchasers, and margins of underselling/(overselling), by quarters, January 1996-June 1999

Period	United States			China			
	Price	Quantity	Firms	Price	Quantity	Margin	Firms
	Per kg.	*1,000 kg.*	*Number*	*Per kg.*	*1,000 kg.*	*Percent*	*Number*
1996:							
January-March	$30.67	78	6	--	--	--	--
April-June	31.04	181	5	$***	***	***	1
July-September	28.29	361	7	***	***	***	1
October-December	28.26	167	7	***	***	***	1
1997:							
January-March	24.57	380	8	***	***	***	1
April-June	23.93	368	8	***	***	***	1
July-September	19.87	287	8	***	***	***	1
October-December	17.63	365	8	***	***	***	1
1998:							
January-March	15.09	405	8	***	***	***	1
April-June	13.70	628	9	***	***	***	1
July-September	13.10	489	10	***	***	***	2
October-December	12.78	333	9	***	***	***	1
1999:							
January-March	12.73	228	7	***	***	***	2
April-June	11.92	201	6	***	***	***	2

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

Figure V-3
Weighted-average delivered purchase prices for creatine, as reported by U.S. purchasers, by quarters, January 1996-June 1999

* * * * * * *

equally pure, but pharmaceutical companies offer the best procedures and best manufacturing facilities, and thus tend to have a more consistently high-quality product. He stated that it is a "buyer beware" market for many chemical products originating from China, where quality may start off at a relatively low level and then become better over time.

*** named *** in a lost sales allegation totaling $*** and involving *** kilograms of creatine during ***. *** of *** did not confirm or deny the allegation, and stated that company policy prohibits comment on this type of inquiry.

*** named *** in a lost sales allegation totaling approximately $*** and involving approximately *** kilograms of creatine during ***. *** of *** denied the allegation, stating that *** has never purchased Chinese creatine because of quality concerns. According to ***, *** lost sales to *** creatine. European suppliers were more flexible on pricing than ***, and provided a similar level of quality. Therefore, *** switched suppliers.

*** named *** in a lost sales allegation totaling approximately $*** and involving approximately *** kilograms of creatine during ***. *** of *** partially confirmed the allegation, stating that *** priced itself out of the market as compared with both European and Chinese creatine during the past several years, and *** switched to Chinese creatine in order to remain competitive with sports nutrition companies that were purchasing low-cost Chinese creatine. *** believes that *** does supply a superior product, but few purchasers want to pay for that level of quality when their competitors are paying substantially less for Chinese material of adequate quality. *** was unable to completely validate this allegation because he could not confirm quantity, value, or time frame.

*** named *** in a lost sales allegation totaling $*** and involving *** kilograms of creatine during ***.[11] *** of *** confirmed the allegation. *** believes that U.S. producers are upset because quality differences between U.S. and Chinese creatine no longer exist. The Chinese now produce a good product at a much lower price than the domestic producers. According to ***, this is a case of pure, fair competition. *** stated that he originally bought U.S. creatine exclusively because the Chinese product's quality was inconsistent. However, with Chinese creatine now being equal in quality, he cannot afford to pay more for creatine than his competitors. Quality, not price, is the most important concern for ***. However, with quality no longer an issue, producers compete on price.

*** named *** in a lost sales allegation totaling $*** and involving *** kilograms of creatine during ***. *** of ***, to which *** is a customer, partially confirmed the allegation. *** could not remember the specific incident, but did state that there have been instances where he has turned down the U.S. product because of the high price relative to Chinese creatine. *** stated that his customers are very price sensitive, and that the quality of Chinese creatine has improved and is now equal to the U.S. product. Quality, not price, is the primary concern for *** when purchasing creatine.

*** named *** in a lost sales allegation totaling $*** and involving *** kilograms of creatine during ***. *** of *** denied the allegation, stating that *** has not purchased Chinese creatine. *** speculated that the allegation may have actually been an effort by *** to extract a better price from a U.S. producer by using Chinese creatine prices as leverage. *** favors U.S. creatine, stating that the Chinese product is inferior. He reports telling customers that U.S. creatine is a better product, and believes that the true competition for U.S. producers lies with European creatine because it is more comparable in quality. *** are all comparable in price and quality. According to ***, quality is more important than price in purchasing decisions. *** needs to deliver a consistent product in order to maintain and expand its customer base, so it will not buy Chinese creatine.

*** named *** in a lost sales allegation totaling $*** and involving *** kilograms of creatine during ***. *** of *** partially confirmed the allegation by saying that he was receiving creatine price

[11] With the exception of ***'s lost sales allegation concerning ***, all of its other allegations involved ***.

quotes below $*** per kilogram in *** as stated by the U.S. producer, and that all sources would have to compete against that price. *** noted that the order of precedence for factors affecting creatine purchasing decisions is (1) quality, (2) availability, and (3) price. If quality passes ***'s laboratory tests and availability is satisfactory, then *** will definitely buy the lowest-priced creatine. In some cases, this has been the Chinese product.

*** named *** in a lost revenues allegation. *** was unable to confirm or deny the allegation, which involved prices dropping ***. *** believes that Chinese creatine is being dumped in the U.S. market, and stated that even if *** purchased the raw materials at prices paid by Chinese producers, the firm still could not compete against Chinese prices. *** believes the Chinese government pays a rebate to creatine producers, which acts as a subsidy and allows the Chinese producers to sell at such low prices.

*** named *** in a lost revenues allegation ***. *** denied this allegation, stating that *** lost revenues not to competition from China, but to competition from ***. *** explained that *** was never a "player" in the creatine market because of unacceptable quality. In one instance, *** creatine purchased by *** was ***.

PART VI: FINANCIAL CONDITION OF THE U.S. INDUSTRY

BACKGROUND

Six producers (AMT, Chattem, Larchmont, NATRX, Pfanstiehl, and Stella),[1] which together accounted for the vast majority of all known U.S. production of creatine during the period of investigation, supplied financial data on their creatine operations.[2] By the ***, two of these producers (AMT and NATRX) had ceased production of creatine.

The questionnaire data of Pfanstiel were verified with official records at its corporate facility. Pfanstiel's verification adjustments were incorporated in this final report, but were not reflected in the prehearing report. The verification adjustments did not significantly alter the basic prehearing financial trends and resulted in changes of selling, general, and administrative (SG&A) expenses for all periods and sales value and quantity in one period each.

OPERATIONS ON CREATINE

The aggregate results of operations of the creatine producers are presented in table VI-1 and selected financial data based on per-kilogram analysis are shown in table VI-2. Total net sales volume increased substantially between 1996 and 1998, with several producers starting operations in 1997 and 1998 and with increased production/sales volumes from other producers. However, total operating income declined sharply between 1996 and 1998, with net sales revenues climbing from 1996 to 1997 but then declining between 1997 and 1998. Pfanstiehl accounted for *** percent of reported net sales dollars in 1998. Per-kilogram sales values for the combined firms decreased considerably (by $7.40 and 26.6 percent) from 1996 to 1997, and further decreased (by $6.94) from 1997 to 1998, while the cost of goods sold (COGS) for the combined firms increased in 1997 (by $0.46) and fell (by $2.89) in 1998. Accordingly, the gross margin per kilogram for the combined firms decreased by $7.85 from 1996 to 1997 and fell further (by $4.05) from 1997 to 1998. Despite continuously falling SG&A expenses, operating income per kilogram decreased by $6.35 from 1996 to 1997 and decreased again (by $2.32) from 1997 to 1998. In interim 1999, both net sales volume and value dropped by more than half and per-kilogram net sales values also declined (by $1.55) compared to interim 1998, while per-kilogram COGS and SG&A expenses both increased (by $1.37 and $0.84, respectively). This resulted in a considerably lower operating margin, i.e., from an operating income of $2.97 per kilogram in interim 1998 to an operating loss of $0.79 per kilogram in interim 1999, a decrease of $3.76 per kilogram. In summary, both per-kilogram net sales values and profitability decreased continuously and significantly from 1996 to 1998 and from interim 1998 to interim 1999.

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[1] The only producer whose fiscal year ends other than December 31 is Chattem (October 31).

[2] ***.

Table VI-1
Results of U.S. producers in the production of creatine, fiscal years 1996-98, January-June 1998, and January-June 1999

Item	Fiscal year			January-June	
	1996	1997	1998	1998	1999
	Quantity (*kilograms*)				
Net sales	966,533	1,736,487	2,201,138	1,329,810	615,142
	Value (*$1,000*)				
Net sales	26,907	35,493	29,724	18,221	7,471
COGS	11,631	21,696	21,136	12,499	6,623
Gross profit	15,276	13,797	8,588	5,722	848
SG&A expenses	5,290	6,878	4,942	1,775	1,334
Operating income (loss)	9,986	6,919	3,646	3,947	(486)
Interest expense	15	96	191	68	76
Other expense	0	14	18	29	33
Other income items	0	0	0	1	0
Net income (loss)	9,971	6,809	3,437	3,851	(595)
Depreciation/amortization	151	656	307	118	133
Cash flow	10,122	7,465	3,744	3,969	(462)
	Ratio to net sales (*percent*)				
COGS	43.2	61.1	71.1	68.6	88.6
Gross profit	56.8	38.9	28.9	31.4	11.4
SG&A expenses	19.7	19.4	16.6	9.7	17.9
Operating income (loss)	37.1	19.5	12.3	21.7	(6.5)
	Number of firms reporting				
Operating losses	1	0	3	2	***
Data	3	5	6	5	4

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

Table VI-2
Results of U.S. producers in the production of creatine (per kilogram), fiscal years 1996-98, January-June 1998, and January-June 1999

Item	Fiscal year			January-June	
	1996	1997	1998	1998	1999
	Value (*per kilogram*)				
Net sales	$27.84	$20.44	$13.50	$13.70	$12.15
COGS	12.03	12.49	9.60	9.40	10.77
Gross profit	15.80	7.95	3.90	4.30	1.38
SG&A expenses	5.47	3.96	2.25	1.33	2.17
Operating income (loss)	10.33	3.98	1.66	2.97	(0.79)
Source: Compiled from data submitted in response to Commission questionnaires.					

The results of operations by individual firms are presented in table VI-3. ***. All of the other reporting producers either started their creatine operations after January 1, 1996 and/or terminated their operations before June 30, 1999.[3] Pfanstiehl completed a new facility next to its main plant in Waukegan, IL in August 1997, which was dedicated to creatine production. *** of the producers had positive operating income for all periods. Average operating income and the percentage of operating income margin also decreased from 1996 to 1998 and especially dropped very substantially from interim 1998 to interim 1999.

***. In interim 1999, total aggregate operating income turned to operating losses. Two producers ceased their production in 1998. *** was the only producer whose profitability improved in interim 1999 compared to interim 1998.

Table VI-3
Results of U.S. producers (by firm) in the production of creatine, fiscal years 1996-98, January-June 1998, and January-June 1999

* * * * * * *

Selected cost data of the producers on their operations, i.e., unit COGS and unit SG&A expenses, on a dollar-per-kilogram basis, are presented in table VI-4. Total unit costs continuously decreased from 1996 through 1998, while COGS increased slightly from 1996 to 1997 and decreased substantially in 1998. SG&A expenses continuously decreased during the fiscal years. For the interim periods, both COGS and SG&A expenses went up in interim 1999 compared to interim 1998. Per-kilogram COGS increased by more than the increase of SG&A expenses in interim 1999. As a result, overall total unit costs increased by $2.21 in interim 1999.

[3] ***.

Table VI-4
Results (per kilogram) of U.S. producers in the production of creatine, fiscal years 1996-98, January-June 1998, and January-June 1999

Item	Fiscal year			January-June	
	1996	1997	1998	1998	1999
COGS:					
Raw materials	$9.08	$9.59	$8.60	$8.39	$8.94
Direct labor	0.83	0.39	0.22	0.21	0.30
Factory overhead	2.12	2.52	0.78	0.79	1.53
Total COGS	12.03	12.49	9.60	9.40	10.77
SG&A expenses:					
Selling expenses	1.65	1.39	0.43	0.24	0.38
G&A expenses	3.83	2.57	1.82	1.09	1.79
Total SG&A expenses	5.47	3.96	2.25	1.33	2.17
Total cost	17.51	16.46	11.85	10.73	12.94

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

In 1998, raw material costs for the reporting producers were in the range of $8.39 to $9.59 per kilogram of creatine. The cost of raw materials is the major cost element for producing creatine. There are several raw materials used in creatine production. They include ***, cyanamide, and sodium sarcosinate. However, the latter two are dominant and account for the majority of the total raw material costs. An analysis of the average purchase prices of two primary raw materials is presented in table VI-5. The sources of the producers' key raw materials are summarized in the tabulation below:

* * * * * * *[4][5]

Raw materials accounted for 75.5, 76.8, 89.6, 89.3, and 83.0 percent of the COGS in 1996, 1997, 1998, interim 1998, and interim 1999, respectively. The reason for the increase in the proportion of raw material costs in the COGS between 1996 and 1998 was not due to an increase in raw material costs, but was due to a decline in labor and overhead costs after a reduction in startup/expansion costs by *** in the market. As indicated in table VI-5, average prices of the two main ingredients used to manufacture creatine decreased steadily over the period, by an annual average of approximately $0.30 per kilogram for cyanamide and by an annual average of approximately $0.10 per kilogram for sodium sarcosinate. The creatine production process produces waste which has no practical usage. It cannot be reused or sold, and domestic producers must pay to have the waste removed from their facilities.

[4] ***.

[5] ***.

Table VI-5
Average purchase price of two primary raw materials of U.S. producers (by firm) in the production of creatine, fiscal years 1996-98 and January-June 1999

* * * * * * *

A variance analysis showing the effects of prices and volume on the producers' sales of creatine, and of costs and volume on their total cost, is shown in table VI-6. The analysis shows that an

Table VI-6
Variance analysis of U.S. producers in the production of creatine between fiscal years 1996 and 1998 and between January-June 1998 and January-June 1999

Item	Between fiscal years			January-June
	1996-98	1996-97	1997-98	1998-99
	Value (*$1,000*)			
Total sales:				
Price variance	(31,553)	(12,849)	(15,266)	(958)
Volume variance	34,370	21,435	9,497	(9,792)
Total sales variance	2,817	8,586	(5,769)	(10,750)
Cost of sales:				
Cost variance	5,352	(800)	6,365	(841)
Volume variance	(14,857)	(9,265)	(5,805)	6,717
Total cost variance	(9,505)	(10,065)	560	5,876
Gross profit variance	(6,688)	(1,479)	(5,209)	(4,874)
SG&A expenses:				
Expense variance	7,105	2,626	3,776	(513)
Volume variance	(6,757)	(4,214)	(1,840)	954
SG&A variance	348	(1,588)	1,936	441
Operating income variance	(6,340)	(3,067)	(3,273)	(4,433)
Summarized as:				
Price variance	(31,553)	(12,849)	(15,266)	(958)
Net cost/expense variance	12,457	1,827	10,142	(1,354)
Net volume variance	12,756	7,955	1,851	(2,121)

Note: Unfavorable variances are shown in parentheses; all others are favorable.

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

unfavorable price variance was the primary cause of the decline in operating income during 1996-98. The analysis is summarized at the bottom of the table. Operating income decreased by $3.0 million in 1997 from 1996 and further decreased by $3.3 million in 1998 from 1997. The analysis shows that the substantial decrease in operating income ($6.3 million) between 1996 and 1998 was attributable mainly to lower average prices (price variance), i.e., the negative effect of falling unit sales values (negative $31.6 million), which was offset somewhat by the combined positive effect of decreasing costs and expenses ($12.5 million) and higher volume (a positive $12.8 million of volume variance). Operating income in interim 1999 fell by $4.4 million from interim 1998 due to a lower sales price (a negative $1.0 million), increased costs and expenses (a negative $1.3 million), and lower sales volume ($2.1 million).

CAPITAL EXPENDITURES, R&D EXPENSES, AND INVESTMENT IN PRODUCTIVE FACILITIES

The U.S. producers' capital expenditures and R&D expenses, together with the value of their fixed assets, are presented in table VI-7. Capital expenditures increased substantially in 1997 from 1996 and decreased sharply in 1998 from 1997 and again in interim 1999 from interim 1998.

Four producers reported R&D expenses. However, the amount of R&D expenses spent by two producers was negligible. Aggregated R&D expenses increased in 1997 from 1996 and fell somewhat in 1998, and again fell in interim 1999 from interim 1998. The original cost and book value of fixed assets increased over the period, except for net book value in interim 1999 which decreased somewhat from interim 1998.

Table VI-7
Capital expenditures, R&D expenses, and assets utilized by U.S. producers in their production of creatine, fiscal years 1996-98, January-June 1998, and January-June 1999

Item	Fiscal year			January-June	
	1996	1997	1998	1998	1999
	Value (*$1,000*)				
Capital expenditures	685	1,817	759	616	78
R&D expenses	***	***	***	***	***
Fixed assets:					
Original cost	757	2,961	4,071	3,715	3,768
Book value	563	2,047	2,801	2,647	2,430

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

CAPITAL AND INVESTMENT

The Commission requested the producers to describe any actual or potential negative effects of imports of creatine from China on their growth, investment, ability to raise capital, and/or their development efforts (including efforts to develop a derivative or more advanced version of the product). The producers' comments are presented in appendix F.

PART VII: THREAT CONSIDERATIONS

The Commission analyzes a number of factors in making threat determinations (see 19 U.S.C. § 1677(7)(F)(i)). Information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V, and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows.

The Commission sent foreign producers/exporters' questionnaires directly to the five companies cited in the petition as probable Chinese creatine producers or exporters. Responses received indicate that none of the firms identified by the petitioner produce creatine in China. However, the China Chamber of Commerce of Medicines & Health Products Importers & Exporters also distributed copies of the Commission's foreign producer questionnaire to Chinese producers and exporters of creatine, and the Commission has since received responses from eight Chinese creatine producers and exporters.[1] The responses were received both directly from the producers or on their behalf from Chinese trading companies that act as exporters of their products, and through retained counsel.[2] Chinese creatine producers provided estimates of their percentage of total 1998 Chinese creatine production in 1998. Based on these responses, total 1998 Chinese creatine production was extrapolated to be in the range of 1.3 million to 1.5 million kilograms. Based on these constructed production estimates, Commission responses accounted for an approximate range of between 62 percent and 76 percent of 1998 Chinese creatine production.

THE INDUSTRY IN CHINA

The exact number of Chinese creatine producers is not known. According to information provided by the respondents, there are *** Chinese producers of creatine and another *** trading companies that export the product.[3] Pfanstiehl stated at the conference that as many as 20 producers of creatine now exist in China.[4]

In general, Chinese creatine producers are not involved in the export of their product. Instead, there are a number of Chinese trading companies that purchase creatine from the Chinese producers and proceed to export and market the product abroad. ***.[5]

Volume creatine production in China reportedly began in 1997.[6] Initially, Chinese creatine was considered to be of poor quality, including taste and color. According to respondents, current production from certain Chinese factories is believed to be equivalent in quality to the U.S. and European products,

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[1] ***.

[2] Responses were received from *** producers and *** trading companies as follows: ***.

[3] Postconference brief on behalf of MW international and GCI Nutrients, app. 10.

[4] Conference transcript, p. 59. At the conference, petitioner stated that subsequent to the filing of the petition, it had come to learn that as many as 20 creatine producers exist in China rather than the 5 listed in the petition. However, names of these 20 Chinese producers were not provided.

[5] Memo to record, March 3, 1999.

[6] Questionnaire responses of Chinese producers.

while the quality of product from other Chinese factories is still believed to be inferior.[7] Pfanstiehl has contended that, during 1998, Chinese producers moved along a production learning curve to the point where quality differences between Chinese and domestically produced creatine are imperceptible.[8]

Pfanstiehl maintains that Chinese producers have significant flexibility in product-shifting into creatine production.[9] In fact, Pfanstiehl asserts that Chinese producers likely increased creatine production capacity during the period of investigation by shifting resources in multi-product facilities.[10] Pfanstiehl argues that because creatine production requires no special machinery or equipment and can account for a small portion of a firm's total sales, it would be relatively simple for Chinese producers to increase creatine production by reallocating capacity in their multi-product facilities. Foreign producer/exporter questionnaire responses indicate that, for most Chinese producers, creatine accounts for a *** percentage of sales. Respondents assert that Chinese producers do not have the ability to quickly product-shift into creatine production.[11] They also contend that much of the Chinese production occurs with *** and that certain Chinese manufacturers are already producing in ***. As such, there would be limited opportunity to product-shift and any capacity increases would require significant time and capital investments.[12]

Total Chinese capacity of subject firms to produce creatine increased substantially during the period for which data were collected in the investigation. Starting from essentially zero in 1996, capacity grew from *** kilograms in 1997 to *** kilograms in 1998 and is expected to reach *** kilograms in 1999.[13] Pfanstiehl argues that Chinese capacity is increasing and that Chinese producers are targeting the U.S. market,[14] asserting that the United States accounts for over 80 percent of the global creatine market.[15]

Table VII-1 presents China's subject capacity, production, shipments, and inventories during 1996-June 1999 and projections for 1999-2000, as reported by respondents to the Commission's questionnaires.

Table VII-1
Creatine: China's subject production capacity, production, shipments, and inventories, 1996-98, January-June 1998, January-June 1999, and projected 1999-2000

* * * * * * *

[7] It was alleged that the creatine produced by *** contains very small amounts of "toxic waste" brought about by a chemical reaction of ***. ***.

[8] Conference transcript, p. 48.

[9] Petition, p. 38.

[10] Conference transcript, p. 42, and Pfanstiehl's postconference brief, p. 22.

[11] Technical Sourcing International Inc.'s postconference brief, p. 13.

[12] Ibid.

[13] Chinese producers' questionnaire responses.

[14] Pfanstiehl contends that certain Chinese creatine producers/exporters intend to circumvent any antidumping order which may result from this investigation ***. Pfanstiehl's posthearing brief, p. 14 and exhibits E and F.

[15] Pfanstiehl's postconference brief, "Part Two: Answers to Commission Staff Questions," p. 6.

U.S. INVENTORIES OF PRODUCT FROM CHINA

End of period inventories held by U.S. importers of creatine are shown in table VII-2.

Table VII-2
Creatine: U.S. importers' end-of-period inventories of imports from China, 1996-98, January-June 1998, and January-June 1999

Item	Calendar year			Jan.-June	
	1996	1997	1998	1998	1999
Inventories (*1,000 kilograms*)	0.8	34	349	86	246
Ratio to imports (*percent*)	5.4	26.9	29.4	13.6	21.0
Ratio to U.S. shipments of imports (*percent*)	5.5	36.4	40.0	16.2	17.9
Source: Compiled from data submitted in response to Commission questionnaires.					

APPENDIX A

FEDERAL REGISTER NOTICES

INTERNATIONAL TRADE COMMISSION

[Investigation No. 731–TA–814 (Final)]

Creatine Monohydrate From China

AGENCY: United States International Trade Commission.

ACTION: Scheduling of the final phase of an antidumping investigation.

SUMMARY: The Commission hereby gives notice of the scheduling of the final phase of antidumping investigation No. 731–TA–814 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of less-than-fair-value imports from China of creatine monohydrate, [1] provided for in subheading 2925.20.90 of the Harmonized Tariff Schedule of the United States.

For further information concerning the conduct of this phase of the investigation, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

EFFECTIVE DATE: July 30, 1999.

FOR FURTHER INFORMATION CONTACT: Cynthia Trainor (202–205–3354), Office of Investigations, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202–205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

SUPPLEMENTARY INFORMATION:

Background

The final phase of this investigation is being scheduled as a result of an affirmative preliminary determination by the Department of Commerce that imports of creatine monohydrate from China are being sold in the United States at less than fair value within the meaning of section 733 of the Act (19 U.S.C. 1673b). The investigation was requested in a petition filed on February 12, 1999, by Pfanstiehl Laboratories, Inc., Waukegan, IL.

Participation in the Investigation and Public Service List

Persons, including industrial users of the subject merchandise and, if the merchandise is sold at the retail level, representative consumer organizations, wishing to participate in the final phase of this investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11 of the Commission's rules, no later than 21 days prior to the hearing date specified in this notice. A party that filed a notice of appearance during the preliminary phase of the investigation need not file an additional notice of appearance during this final phase. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigation.

[1] Creatine monohydrate, with the chemical name of N-(aminoiminomethyl)-N-methylglycine, is commonly referred to as "creatine." In its pure form creatine is a white, tasteless, odorless powder that is a naturally occurring metabolite found in muscle tissue. The Chemical Abstracts Service registry number for creatine monohydrate is 6020–87–7.

Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List

Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in the final phase of this investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made no later than 21 days prior to the hearing date specified in this notice. Authorized applicants must represent interested parties, as defined by 19 U.S.C. 1677(9), who are parties to the investigation. A party granted access to BPI in the preliminary phase of the investigation need not reapply for such access. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Staff Report

The prehearing staff report in the final phase of this investigation will be placed in the nonpublic record on December 2, 1999, and a public version will be issued thereafter, pursuant to section 207.22 of the Commission's rules.

Hearing

The Commission will hold a hearing in connection with the final phase of this investigation beginning at 9:30 a.m. on December 16, 1999, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before December 1, 1999. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on December 6, 1999, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by sections 201.6(b)(2), 201.13(f), and 207.24 of the Commission's rules. Parties must submit any request to present a portion of their hearing testimony *in camera* no later than 7 days prior to the date of the hearing.

Written Submissions

Each party who is an interested party shall submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of section 207.23 of the Commission's rules; the deadline for filing is December 9, 1999. Parties may also file written testimony in connection with their presentation at the hearing, as provided in section 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of section 207.25 of the Commission's rules. The deadline for filing posthearing briefs is December 23, 1999; witness testimony must be filed no later than three days before the hearing. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before December 23, 1999. On January 11, 2000, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before January 13, 2000, but such final comments must not contain new factual information and must otherwise comply with section 207.30 of the Commission's rules. All written submissions must conform with the provisions of section 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of sections 201.6, 207.3, and 207.7 of the Commission's rules. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means.

In accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the investigation must be served on all other parties to the investigation (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: This investigation is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.21 of the Commission's rules.

Issued: August 13, 1999.

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-21535 Filed 8-18-99; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A-570-852]

Notice of Final Determination of Sales at Less Than Fair Value: Creatine Monohydrate From the People's Republic of China

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

EFFECTIVE DATE: December 20, 1999.

FOR FURTHER INFORMATION CONTACT: Blanche Ziv, Rosa Jeong, or Ryan Langan, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW, Washington, DC 20230; telephone: (202) 482-4207, (202) 482-3853, and (202) 482-1279, respectively.

Final Determination

We determine that creatine monohydrate ("creatine") from the People's Republic of China ("PRC") is being, or is likely to be, sold in the United States at less than fair value ("LTFV"). The estimated margins of sales at LTFV are shown in the "Continuation of Suspension of Liquidation" section of this notice.

The Applicable Statute

Unless otherwise indicated, all citations to the Tariff Act of 1930, as amended ("the Act"), are references to the provisions effective January 1, 1995, the effective date of the amendments made to the Act by the Uruguay Round Agreements Act ("URAA"). In addition, unless otherwise indicated, all citations to the Department of Commerce ("Department") regulations are to the regulations at 19 CFR Part 351 (April 1, 1998).

Case History

Since the preliminary determination (64 FR 41375, July 30, 1999), the following events have occurred:

During September and October 1999, we conducted verification of the questionnaire responses of the respondents: Blue Science International Trading (Shanghai) Co., Ltd. ("Blue Science"); Nantong Medicines and Health Products Import and Export Co., Ltd. d/b/a Nantong Foreign Trade Corporation Medicine and Health Products Department ("Nantong"); Shanghai Desano International Trading Co., Ltd. ("Desano"); Shanghai Freemen International Trading Co., Ltd./Shanghai Greenmen International Trading Co., Ltd. ("Freemen"); Suzhou Sanjian Fine Chemical Co., Ltd. ("Sanjian"); and Tianjin Tiancheng Pharmaceutical Co., Ltd. ("Tiancheng"). We also verified information provided by the producers who supplied the respondents with the subject merchandise during the POI, including Jiangsu Shuang Qiang Chemical Co. and Wuxian Agricultural Chemical Factory (collectively "SQ") and several other producers whose identities have been treated as business proprietary information and cannot be publicly summarized. We issued reports on our findings of these verifications during October and November 1999.

The petitioner, Pfanstiehl Laboratories, Inc., and the respondents filed case and rebuttal briefs on November 17, 1999, and November 23, 1999, respectively. On November 29, 1999, the Department held a public hearing. On November 30, 1999, pursuant to the Department's request, the petitioner submitted supplemental information regarding the surrogate value of one input. On December 1, 1999, the respondents commented on the supplemental information.

Scope of the Investigation

For purposes of this investigation, the product covered is creatine monohydrate, which is commonly referred to as "creatine." The chemical name for creatine monohydrate is N-(aminoiminomethyl)-N-methylglycine monohydrate. The Chemical Abstracts Service ("CAS") registry number for this product is 6020-87-7. Creatine monohydrate in its pure form is a white, tasteless, odorless powder, that is a naturally occurring metabolite found in muscle tissue. Creatine monohydrate is provided for in subheading 2925.20.90 of the Harmonized Tariff Schedule of the United States ("HTSUS"). Although the HTSUS subheading and the CAS registry number are provided for convenience and customs purposes, the written description of the merchandise under investigation is dispositive.

Period of Investigation

The period of this investigation ("POI") is July 1 through December 31, 1998, which corresponds to each exporter's two most recent fiscal quarters prior to the filing of the petition.

Nonmarket Economy Country and Market Oriented Industry Status

The Department has treated the PRC as a nonmarket economy ("NME") country in all past antidumping investigations. *See, e.g., Final Determination of Sales at Less Than Fair Value: Certain Preserved Mushrooms from the People's Republic of China*, 63 FR 72255 (December 31, 1998) ("*Mushrooms*"). Under section 771(18)(C) of the Act, this NME designation remains in effect until it is revoked by the Department.

The respondents in this investigation have not requested a revocation of the PRC's NME status and no further information has been provided that would lead to such a revocation. Therefore, we have continued to treat the PRC as an NME in this investigation.

Separate Rates

All responding exporters have requested separate, company-specific antidumping duty rates. Blue Science has stated, and we verified, that it is a trading company which is wholly-owned by persons in Hong Kong. Therefore, in accordance with our past practice, we determine that this exporter qualifies for a separate rate. *See, e.g., Notice of Final Determination of Sales*

at Less Than Fair Value: Disposable Pocket Lighters From the People's Republic of China, 60 FR 22359, 22360 (May 5, 1995). The other responding exporters have stated, and we verified, that they are privately owned companies with no element of government ownership or control.

The Department's separate rate test is not concerned, in general, with macroeconomic/ border-type controls, *e.g.*, export licenses, quotas, and minimum export prices, particularly if these controls are imposed to prevent dumping. The test focuses, rather, on controls over the investment, pricing, and output decision-making process at the individual firm level. *See Certain Cut-to-Length Carbon Steel Plate from Ukraine: Final Determination of Sales at Less than Fair Value*, 62 FR 61754, 61757 (Nov. 19, 1997); *Tapered Roller Bearings and Parts Thereof, Finished and Unfinished, from the People's Republic of China: Final Results of Antidumping Duty Administrative Review*, 62 FR 61276, 61279 (Nov. 17, 1997); and *Honey from the People's Republic of China: Preliminary Determination of Sales at Less than Fair Value*, 60 FR 14725, 14726 (March 20, 1995).

To establish whether a firm is sufficiently independent from government control to be entitled to a separate rate, the Department analyzes each exporting entity under a test arising out of the *Final Determination of Sales at Less Than Fair Value: Sparklers from the People's Republic of China*, 56 FR 20588 (May 6, 1991) ("*Sparklers*"), as modified by *Final Determination of Sales at Less Than Fair Value: Silicon Carbide from the People's Republic of China*, 59 FR 22585 (May 2, 1994). Under the separate rates criteria, the Department assigns separate rates in NME cases only if the respondents can demonstrate the absence of both *de jure* and *de facto* governmental control over export activities.

1. Absence of De Jure Control

The respondents have placed on the record a number of documents to demonstrate absence of *de jure* government control, including the "Foreign Trade Law of the People's Republic of China" and the "Company Law of the People's Republic of China."

The Department has analyzed these laws in prior cases and found that they establish an absence of *de jure* control. *See, e.g., Final Determination of Sales at Less Than Fair Value: Certain Partial-Extension Steel Drawer Slides with Rollers from the People's Republic of China*, 60 FR 54472 (October 24, 1995); *see also Notice of Final Results of New Shipper Review: Freshwater Crawfish Tail Meat from the People's Republic of China*, 64 FR 27961 (May 24, 1999). We have no new information in this proceeding which would cause us to reconsider this determination. Accordingly, we determine that, within the creatine industry, there is an absence of *de jure* government control over export pricing and marketing decisions of firms.

2. Absence of De Facto Control

As stated in previous cases, there is some evidence that certain enactments of the PRC central government have not been implemented uniformly among different sectors and/or jurisdictions in the PRC. *See, e.g., Sparklers*. Therefore, the Department has determined that an analysis of *de facto* control is critical in determining whether respondents are, in fact, subject to a degree of governmental control which would preclude the Department from assigning separate rates.

As discussed in the preliminary determination, the responding exporters claim to have the autonomy to set prices at whatever level they wish through independent price negotiations with their foreign customers without government interference. During verification, our examination of correspondence and sales documentation revealed no evidence that any of the responding exporters' export prices are set, or are subject to approval by, any governmental authority. Based on our review of written agreements and contracts, it appears that these exporters have the authority to negotiate and sign contracts and other agreements independent of any government authority. Moreover, we have determined that the responding exporters have autonomy from the central government in making decisions regarding the appointment of management. Finally, based on our examination of financial records and purchase invoices, we have concluded that the responding exporters retained proceeds from their export sales and made independent decisions regarding disposition of profits and financing of losses.

This information supports a finding that there is an absence of *de facto* governmental control of the export functions of Desano, Freemen, Nantong, Sanjian and Tiancheng. Consequently, we determine that the responding exporters in this investigation should be assigned individual dumping margins.

PRC-Wide Rate

As stated in the preliminary determination, information on the record of this investigation indicates that there may be producers and exporters of the subject merchandise in the PRC in addition to the companies participating in this investigation. Also, U.S. import statistics indicate that the total quantity of U.S. imports of creatine from the PRC is greater than the total quantity of creatine exported to the United States as reported by all PRC creatine exporters that submitted responses in this investigation. Given this discrepancy, it appears that not all PRC exporters of creatine responded to our questionnaire. Accordingly, we are applying a single antidumping deposit rate—the PRC-wide rate—to all exporters in the PRC, other than those specifically identified below under the "Continuation of Suspension of Liquidation" section of this notice. We apply this single rate based on our presumption that the export activities of the companies that failed to respond to the Department's questionnaire are controlled by the PRC government. *See, e.g., Final Determination of Sales at Less Than Fair Value: Bicycles from the People's Republic of China*, 61 FR 19026 (April 30, 1996) ("*Bicycles*").

Use of Facts Available

As explained in the preliminary determination, the PRC-wide antidumping rate is based on adverse facts available, in accordance with Section 776 of the Act. Section 776(a)(2) of the Act provides that "if an interested party or any other person—(A) withholds information that has been requested by the administering authority or the Commission under this title, (B) fails to provide such information by the deadlines for submission of the information or in the form and manner requested, subject to subsections (c)(1) and (e) of section 782, (C) significantly impedes a proceeding under this title, or (D) provides such information but the information cannot be verified as provided in section 782(i), the administering authority and the Commission shall, subject to section 782(d), use the facts otherwise available in reaching the applicable determination under this title." Use of facts available is warranted in this case because the exporters other than those under investigation have failed to respond to the Department's questionnaire.

Section 776(b) of the Act provides that adverse inferences may be used when a party has failed to cooperate by not acting to the best of its ability to comply with a request for information. The exporters that decided not to respond in any form to the Department's questionnaire failed to act to the best of

their ability in this investigation. Further, absent a response, we must presume government control of these and all other PRC companies for which we cannot make a separate rates determination. Thus, the Department has determined that, in selecting from among the facts otherwise available, an adverse inference is warranted.

As adverse facts available, we are assigning the highest margin in the petition, 153.70 percent, which is higher than any of the calculated margins.

Section 776(c) of the Act provides that where the Department selects from among the facts otherwise available and relies on "secondary information," such as the petition, the Department shall, to the extent practicable, corroborate that information from independent sources reasonably at the Department's disposal. The Statement of Administrative Action accompanying the URAA, H.R. Doc. No. 103–316 (1994) ("SAA"), states that "corroborate" means to determine that the information used has probative value. *See* SAA at 870. As discussed in the preliminary determination, we determine that the calculations set forth in the petition have probative value. *See also* Comment 2.

In addition to the PRC-wide rate, we have also used partial facts available in calculating the dumping margins for two responding exporters. As discussed below in comment 2, certain producers which supplied the subject merchandise Blue Science and Freemen did not provide complete factors of production information. We find that neither Blue Science, Freemen, nor the suppliers in question have cooperated to the best of their abilities in providing complete factors of production information.

Accordingly, as adverse facts available, we have applied a margin of 153.70 percent, the highest margin from the petition, to those sales for which factor information was not provided (*see* Comment 2).

Fair Value Comparisons

To determine whether sales of the subject merchandise by Blue Science, Desano, Freemen, Nantong, Sanjian and Tiancheng to the United States were made at LTFV, we compared the export price ("EP") to the normal value ("NV"), as described in the "Export Price" and "Normal Value" sections of this notice, below. In accordance with section 777A(d)(1)(A)(i) of the Act, we compared POI-wide weighted-average EPs to weighted-average NVs.

Export Price

We used EP methodology in accordance with section 772(a) of the Act, because the subject merchandise was sold directly to unaffiliated customers in the United States prior to importation and CEP methodology was not otherwise appropriate. We calculated EP based on packed c.i.f. or c&f prices to the first unaffiliated purchaser in the United States. Where appropriate, we made deductions from the starting price (gross unit price) for billing adjustments, inland freight from the plant/warehouse to port of exit, brokerage and handling in the PRC, marine insurance and ocean freight. Because certain domestic brokerage and handling, marine insurance, and inland freight were provided by NME companies, we valued those charges using surrogate rates from India (*see* "Normal Value" section for further discussion). In addition, we made corrections for certain clerical errors found at verification (*see* calculation memoranda for individual respondents).

Normal Value

1. Surrogate Country

Section 773(c)(4) of the Act requires the Department to value an NME producer's factors of production, to the extent possible, in one or more market economy countries that: (1) are at a level of economic development comparable to that of the NME, and (2) are significant producers of comparable merchandise. The Department has determined that India, Pakistan, Sri Lanka, Egypt, Indonesia, and the Philippines are countries comparable to the PRC in terms of overall economic development (*see* memorandum from Jeff May, Director, Office of Policy, to Susan Kuhbach, Senior Director, AD/CVD Enforcement, Office 1, March 26, 1999). Moreover, we have determined that both India and Indonesia are significant producers of comparable merchandise. As discussed in the preliminary determination, although we have no information to indicate that India and Indonesia produce creatine, they do produce other products within the same customs heading and other fine chemicals with nutritional characteristics.

For purposes of our final determination, we have continued to rely on India as our primary surrogate country for this investigation. Because India is frequently used as a surrogate in cases involving the PRC, its use in this proceeding enhances predictability, one of the Department's goals in administering the NME provisions (*see* preamble to proposed 19 CFR § 351.408, 61 FR 7308, 7344 (February 27, 1996)). Also, India produces and exports more merchandise than Indonesia under United National Standard International Trade Classification Revised number 514.82, "carboxyamide-function compounds (including saccharin and its salts) and imine-function compounds," the heading which includes creatine. Thus, we have relied primarily on Indian values to calculate NV. When Indian values were not available or determined to be aberrational, we used Indonesian values.

2. Factors of Production

In accordance with section 773(c) of the Act, we calculated NV based on factors of production reported by the companies in the PRC which produced creatine for the responding exporters during the POI.

To calculate NV, the verified per-unit factor quantities were multiplied by publicly available surrogate values. We then added amounts for labor, overhead, selling, general and administrative expenses (including interest) ("SG&A"), profit, and packing expenses incidental to placing the merchandise in packed condition and ready for shipment to the United States.

We calculated NV based on the same methodology used in the preliminary determination. In addition, we made corrections for certain clerical errors found at verification (*see* calculation memoranda for individual respondents).

3. Surrogate Values

In selecting the surrogate values, we considered the quality, specificity, and contemporaneity of the data. As appropriate, we adjusted input prices to make them delivered prices. Where a producer did not report the distance between the material supplier and the factory, as facts available, we used either the distance to the nearest seaport (if an import value was used as the surrogate value for the factor) or the farthest distance reported for a supplier. Where distances were reported, we added to Indian and Indonesian c.i.f. surrogate values a surrogate freight cost using the shorter of the reported distances from either the closest PRC port to the PRC factory, or from the domestic supplier to the factory. This adjustment is in accordance with the Court of Appeals for the Federal Circuit's decision in *Sigma Corp.* v. *United States*, 117 F.3d 1401 (Fed. Cir. 1997).

For those values not contemporaneous with the POI and quoted in a foreign currency, we adjusted for inflation using wholesale price indices published in the International Monetary Fund's *International Financial Statistics*.

(1) *Material Inputs:* Many of the inputs in the production and packing of

creatine are considered business proprietary data by the respondents. Thus, we are unable to discuss individual inputs in this notice. In general, the chemical inputs were valued using data reported in the following sources: *Monthly Statistics of the Foreign Trade of India*, the Indian publication *Indian Chemical Weekly* ("ICW") and *Monthly Statistics of the Foreign Trade of Indonesia*. For a complete analysis of surrogate values, see "Factors of Production Valuation" memoranda dated July 22, 1999 and December 13, 1999.

(2) *Labor:* We valued labor using the method described in 19 CFR § 351.408(c)(3).

(3) *Electricity:* To value electricity, we used the 1995 electricity rates reported in the publication *Energy Prices and Taxes*, 4th quarter 1998. We based the value of coal on prices reported in *Energy Prices and Taxes*, 2nd quarter 1998.

(4) *Overhead, SG&A and Profit:* We based factory overhead, SG&A, and profit on the financial statements of Sanderson Industries, Ltd. ("Sanderson"), an Indian chemical producer (*see* comments 1 and 4).

(5) *Inland Freight:* To value truck freight rates, we used price quotes obtained by the Department from Indian truck freight companies in November 1999. For inland water transportation, we valued boat and barge transportation using the surrogate values provided in an August 1993 cable from the US Embassy Bombay. With regard to rail freight, we based our calculation on price quotes obtained by the Department from an Indian rail freight company in November 1999.

(6) *Packing Materials:* For packing materials we used import values from the *Monthly Foreign Trade Statistics of India; Volume II Imports.*

(7) *Brokerage and Handling:* To value foreign brokerage and handling, we relied on public information reported in the case record for a new shipper review of stainless wire rod from India. *See Certain Stainless Steel Wire Rod From India; Preliminary Results of Antidumping Duty Administrative and New Shipper Reviews*, 63 FR 48184 (Sept. 9, 1998).

(8) *Marine Insurance:* For marine insurance, we used public information collected for *Tapered Roller Bearing and Parts Thereof, Finished and Unfinished, from the PRC; Final Results of 1996–1997 Antidumping Administrative Review*, 63 FR 63842, 63847 (Nov. 17, 1998) (*"TRBs–10"*), which was obtained through queries made directly to an international marine insurance provider.

(9) *Ocean Freight:* For ocean freight, we relied on public information used in *TRBs–10*, which was obtained through queries made directly to an international freight provider.

Critical Circumstances

In the preliminary determination, we found that critical circumstances, within the meaning of section 733(e)(1) of the Act, exist for Desano, Freemen and all other PRC exporters except Blue Science, Nantong, Sanjian and Tiancheng. Our decision was based on the analysis of shipment data submitted by the respondents and available import statistics, as well as evidence of importer knowledge of dumping and the likelihood of resultant material injury. As discussed in the preliminary determination, the Department normally considers margins of 25 percent or more and a preliminary International Trade Commission ("ITC") determination of material injury sufficient to impute knowledge of dumping and the likelihood of resultant material injury.

In the final determination, Desano's calculated dumping margin is less than 25 percent. Therefore, because there is no longer sufficient evidence to impute knowledge of dumping, we have reversed our preliminary finding of critical circumstances for Desano. With regard to other exporters, no new information has been provided to warrant a reconsideration of our finding. Therefore, we have determined that critical circumstances exist for Freemen and all other PRC exporters except Blue Science, Desano, Nantong, Sanjian and Tiancheng.

Verification

As provided in section 782(i) of the Act, we verified the information submitted by respondents for use in our final determination. We used standard verification procedures including examination of relevant accounting and production records, and original source documents provided by respondents.

Interested Party Comments

Comment 1: Surrogate Value for Overhead, SG&A and Profit

Blue Science, Freemen, Nantong, SQ and Sanjian argue that the Department should reject the data used in the preliminary determination to calculate factory overhead, SG&A, and profit. The respondents argue that these data from the *Reserve Bank of India Bulletin* ("RBI") are stale and unreliable because they relate to 1992–1993 and include data drawn from an aggregation of over 600 companies from dissimilar industries. The respondents claim that the Department has rejected the use of RBI data in past cases for these same reasons (*see, e.g., Tapered Roller Bearing and Parts Thereof, Finished and Unfinished, from the PRC; Final Results of Antidumping Administrative Review*, 62 FR 6189, 6206 (Feb. 11, 1997) and *Pure Magnesium from the PRC*, 63 FR 3085 (Jan. 21, 1998) (*"Magnesium"*)).

Instead, the respondents urge the Department to use the financial statement of an Indian producer of bulk drugs, Kopran Limited ("Kopran"), to derive overhead, SG&A, and profit. While Kopran does not produce creatine, the respondents assert that it is in the same general industry category as creatine and, thus, Kopran's experience is more comparable to the experience of PRC creatine producers.

In the alternative, the respondents argue that the Department should use the data from Sanderson, an Indian producer of sulfuric acid and other chemicals. Sanderson's ratios were used in *Notice of Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination: Persulfates from the PRC*, 61 FR 68232 (Dec. 27, 1996) (*"Persulfates (Preliminary)"*) (Sanderson's data were not used for the final determination). In that case, according to the respondents, the Department selected Sanderson's industry-specific data over the broad-based RBI data.

The petitioner contends that the Department should continue to use the RBI ratios used in the preliminary determination. The petitioner argues that the financial data of both Kopran and Sanderson are inappropriate because neither company produces creatine. Moreover, use of this data would be contrary to the Department's practice of using publicly available statistical averages rather than relying on company-specific data. *See TRBs-10.* Where the Department has relied on the financial data from a single producer or the average of a small group of surrogate producers, the petitioner contends that the producers involved have been producers of the like merchandise (*see, e.g., Mushrooms; Certain Cut-to-Length Carbon Steel Plate from the PRC*, 60 FR 61964 (Nov. 20, 1997); *Freshwater Crawfish Tail Meat from the PRC*, 62 FR 41347 (Aug. 1, 1997)).

Concerning *Persulfates (Preliminary)*, the petitioner contends that the Department used company-specific information in that case only after extensive information was placed on the record concerning the specific production processes of the Indian chemical producers. In the present case, according to the petitioner, no such evidence exists with respect to the

production processes. The petitioner adds that the respondents' "cherry-picking" one particular Indian company is inherently unreliable.

Department's Position

It is the Department's preference, where information is available, to derive the overhead, SG&A and profit values from producers of merchandise that is identical or comparable to the subject merchandise. *See* section 351.408(c)(4) of the Department's regulations. Because the RBI data cover a wide range of industries, and because we now information relating to a producer of a narrower category of products which includes comparable merchandise, we have determined that it would be inappropriate to rely on the RBI data used in the preliminary determination.

After reviewing publicly available information submitted for the record and available to the Department in this investigation, we have determined that Sanderson's financial data provide the best basis for valuing overhead, SG&A and profit. The products produced by Sanderson appear to be manufactured using bulk chemical processes, similar to the processes used by the PRC creatine producers. In contrast, Kopran produces high-grade pharmaceutical products. Given this, we have concluded that Sanderson better reflects the overhead, SG&A and profit levels that would be incurred by the producers of creatine.

We disagree with the petitioner's arguments against the use of company-specific data to calculate overhead, SG&A and profit. First, the Department does not require that these ratios be calculated using data from producers of a like product. As noted above, section 351.408(c)(4) of the Department's regulations establishes that, for purposes of valuing manufacturing overhead, general expenses, and profit, the Department normally will use "non-proprietary information gathered from producers of identical or *comparable* merchandise in the surrogate country" (emphasis added). Second, the petitioner's assertion that the Department's practice is to use publicly available statistical averages rather than relying on company-specific data is misplaced. While it is correct that we prefer average values for valuing inputs such as raw materials, we prefer producer- or industry-specific data for overhead, SG&A and profit. This is explained in the preamble to the Department's regulations:

> When compared to a publicly available price that reflects numerous transactions between many buyers and sellers, a single input price reported by a surrogate producer may be less representative of the cost of that input in the surrogate country. For these reasons, we have continued the general schema . . . of relying on publicly available data (which will not normally be producer-specific) for material inputs, while relying on producer- or industry-specific data for manufacturing overhead, general expenses, and profit.

62 FR 27296, 27366 (May 19, 1997). We note that in TRBs-10, cited by the petitioner, the value at issue was labor (prior to the Department's adoption of the present regression-based methodology), rather than overhead, SG&A and profit. Finally, regarding the petitioner's concern that the respondents may have submitted data favorable to them, we note that the petitioner also had the opportunity to submit data relating more specifically to creatine than the RBI data. In any case, since we have not used the Kopran data, the petitioner's point is moot.

Comment 2: Use of Partial Facts Available for Freemen and Blue Science

Freemen and Blue Science argue that the Department's use of adverse facts available for certain sales was overly punitive given that Freemen and Blue Science have cooperated fully in the investigation and that the sales in question account for a small percentage of their total U.S. sales. Freemen and Blue Science assert that section 351.308(a) of the Department's regulations requires that to warrant an adverse inference, the Department must find that the interested party has impeded the investigation. Moreover, Freemen and Blue Science contend that pursuant to section 351.308(e), the Department should consider the factors information submitted by other suppliers of the two exporters because the information meets all conditions of section 782(e) of the Act. The respondents assert that in cases such as *Allied-Signal Aerospace Co.* v. *United States*, 996 F.2d 1185 (Fed. Cir. 1994) and *Olympic Adhesives, Inc.* v. *United States*, 899 F.2d 1565 (Fed. Cir. 1990), the courts have consistently held that a company cannot be penalized for failing to provide information that it does not have.

The respondents also argue that the petitioner's petition data, on which the adverse facts available rate was based, cannot be corroborated because the petition data uses the price of a more expensive grade of one chemical input rather than the price of the less expensive industrial grade that is used by all respondents.

The petitioner contends that the Department should continue to apply adverse facts available to the sales for which Freemen and Blue Science have not provided complete and accurate production data. Citing *TRBs-10* (at 61846), the petitioner argues that the suppliers, who are interested parties, have failed to provide factors of production data and, thus, have not acted to the best of their ability. According to the petitioner, both *Allied-Signal* and *Olympic Adhesives* are distinguishable because the cases involved a genuine lack of ability on the part of interested parties to respond. In the instant case, the petitioner contends that there is no evidence on the record demonstrating that the non-responsive suppliers of Blue Science and Freemen were genuinely unable to respond.

Department's Position

We have continued to apply adverse facts available for those Freemen and Blue Science sales for which these exporters did not supply factors of production data. As noted above, in accordance with section 776(b) of the Act, an adverse inference is appropriate where a party "has failed to cooperate by not acting to the best of its ability to comply with a request for information." As further explained below, both Freemen and Blue Science and certain of their suppliers failed act to the best of their abilities in providing factors of production information from those certain suppliers.

As respondents are aware, our practice is to require convincing evidence from exporters claiming that their suppliers cannot supply requested factors of production information. *See Tapered Roller Bearings and Parts Thereof, Finished and Unfinished, From the People's Republic of China; Final Results of 1997–1998 Antidumping Duty Administrative Review and Final Results of New Shipper Review*, 64 FR 61837, 61846 (November 15, 1999) ("*TRBs–11s*") ("In this case, we determine that Premier has not acted to the best of its ability. Premier was unable to provide letters from all of its suppliers responding to Premier's request for information."). While Freemen and Blue Science argue that they did attempt to secure the requested factors information from their suppliers, their explanations are not persuasive. Specifically, Freemen claims that it made repeated demands for this information on one supplier, and that this supplier responded that it would not participate in the investigation. However, Freemen provided no documentation confirming its efforts, or the supplier's refusals. Similarly, Blue Science claims that its supplier only produced the subject merchandise on a trial basis. This is not an adequate

explanation, as the mere cessation of production of a particular product does not mean that relevant records are no longer available. We also emphasize that neither Freemen nor Blue Science provided any additional information regarding their efforts to obtain the requested information upon our application of adverse facts available for these sales in the preliminary determination.

As we explained in *TRBs–11*, suppliers to respondent exporters are interested parties, and their failure to provide factors information prevents the Department from calculating accurate dumping margins. Moreover, we must ensure that an exporter does not benefit by selectively providing factors of production information from low-cost producers. In cases such as this, we are precluded from measuring the costs of those suppliers who refused to cooperate, and cannot assume that their costs resemble those of other suppliers who did cooperate. For this reason, too, an adverse inference in warranted.

In the case of Freemen, even if it is true that the supplier in question refused to provide the necessary information, it is not acceptable for a producer to withhold such information. As there is no acceptable explanation on the record for the supplier's failure to provide factors of production information, an adverse inference in applying facts available is warranted due to the supplier's failure to act to the best of its ability. Similarly, there is no acceptable explanation on the record for the failure of Blue Science's supplier to provide the necessary factors of production information, and therefore, an adverse inference is warranted.

Freemen and Blue Science's argument concerning section 782(e) of the Act is misplaced. Section 782(e) directs the Department to use information submitted by a respondent, where possible, with respect to that respondent. In this case, we have used the factors of production information that was submitted to the extent that is applicable. Section 782(e) of the Act does not, however, direct the Department to apply one company's information to another company. Section 782(e) does not require us to substitute the suppliers' information we have on the record for those suppliers that failed to provide factors of production information.

Finally, we disagree with respondents' contentions that the petition data upon which the adverse facts available rate is based cannot be corroborated due to the fact that the petitioner uses a more expensive grade of one input than do respondents. Because there are a variety of production processes for creatine, it would be inappropriate to isolate the value of a single input in determining whether a petition rate is valid for facts available purposes. Furthermore, the constructed NV used in the petition is generally within close range of NVs calculated in this investigation, suggesting that the petition data do indeed have probative value.

Comment 3: Sales by Desano and Sanjian

Desano argues that certain sales of creatine supplied by Sanjian and exported by Desano should be considered Sanjian's sales and excluded from Desano's U.S. sales data. Desano asserts that the invoices from Sanjian to Desano indicate that Sanjian knew the merchandise was destined for the United States at the time it made the sale to Desano. Additionally, Desano argues out that the sales, which were denominated in U.S. dollars, are the first market-based sales in the chain of distribution for export to the United States. In support of its argument, Desano cites *Polyvinyl Alcohol from the PRC*, 61 FR 14057 (March 29, 1996) and *Fresh Garlic from the PRC*, 62 FR 23758 (May 1, 1997) ("*Garlic*"), where the Department based the exclusion or inclusion of the sale on whether the sale constituted the first market-based sale and whether the supplier had knowledge of the U.S. destination.

Sanjian contends that it properly reported all of its U.S. sales and the sales in question are Desano's sales. Sanjian asserts that its sales were reported based on the contract date as the date of sale because the contract date better reflects the date on which the material terms of its sales were established. According to Sanjian, there was no change in price, quantity or the terms of payment between the contract and the subsequent invoice. Sanjian argues that at the time of the sale to Desano (*i.e.*, the contract date), Sanjian did not know the merchandise was ultimately destined for the United States and was only asked to identify the port of destination on the invoice to Desano.

Department's Position

We agree with Sanjian that the sales in question should be considered Desano's U.S. sales. First, we disagree with Desano that the transaction between Sanjian and Desano is the first market-based transaction. Both Sanjian and Desano are companies located in the PRC, in terms of physical location, place of incorporation and the place of business. As discussed in *Garlic*, our knowledge test "is restricted with regard to NME cases, since we will not base export price on internal transactions between two companies located in the NME country." 62 FR at 23759. Whether Sanjian knew the merchandise was destined for the United States is irrelevant in this instance, as the appropriate starting point for the application of the knowledge test is the first transaction with a market-based entity (*i.e.*, Desano's transaction with the U.S. customer). Accordingly, we have continued to treat these sales as Desano's sales.

Comment 4: Factory Overhead and SG&A Labor

The petitioner asserts that the Department failed to include factory overhead and SG&A labor in its calculations.

The respondents disagree. According to the respondents, they included all relevant labor hours in their initial questionnaire responses. This is evidenced by the fact that at verification, the Department asked that indirect labor be broken down into indirect factory labor, overhead and SG&A labor. To adopt petitioner's position would effectively double-count the labor costs for overhead and SG&A, in respondents' view.

Department's Position

Based upon our verification, we have concluded that factory overhead and SG&A labor hours were not included in the total labor figures. For Tiencheng, although overhead and SG&A labor hours were included in the indirect labor amount used for the preliminary determination, this labor has since been reclassified and removed. Therefore, for our final determination, we have included overhead and SG&A labor in the overhead and SG&A ratios calculated from Sanderson's financial statement. Since only surrogate overhead and SG&A labor hours are included in normal value, there is no double-counting.

Comment 5: Indonesian Import Values

The respondents contend that the Department improperly adjusted Indonesian values. Because Indonesian import values were reported in U.S. dollars, they are not subject to Indonesian inflation and no adjustment is necessary.

The petitioner asserts that the Department has consistently adjusted source data for inflation in numerous NME cases using the wholesale price index ("WPI") of the country from which the source data is obtained. The petitioner claims that the Indonesian WPI is the best information available to

make this adjustment. Furthermore, the petitioner argues that the stability of the U.S. dollars is irrelevant because the dollar is also subject to inflationary forces.

Department's Position

We agree with the respondents that the Indonesian import statistics were improperly adjusted for inflation in the preliminary determination because we used the Indonesian WPI to make the adjustment. For the final determination, we have adjusted the data (which predates the POI by two-and-a-half years) using the U.S. WPI. This is consistent with our practice in several cases (*see, e.g., TRBs–10*).

Comment 6: Material Input "A'

The respondents contend that the Department should not use the ICW data to value material input A. First, they argue that the prices listed in ICW for material input A are aberrational when compared to a price quote obtained by the respondents. Second, the ICW data may, in fact, be for a different grade of material input than that used by the respondents. Third, the respondents claim that the ICW data are "highly suspect" because they are based on sales by a company with an interest in the outcome of this investigation. The respondents conclude, therefore, that the only public data available to value this input is unusable. For this reason, the respondents ask the Department to construct a surrogate value for material input A by valuing the various inputs used by one respondent in producing material input A.

The petitioner contends that the price quote obtained by the respondents does not prove the ICW data to be aberrational and may even support the ICW price. The petitioner notes that the price quote obtained by respondents is for a 12 percent solution and that the ICW price is for a 50 percent solution. According to the petitioner, when adjustments for differences in concentration are made, the resulting U.S. dollar per kilogram values do not differ enough to prove ICW data aberrational. The petitioner also contends that the respondents' accusation that the ICW data is highly suspect is entirely implausible. Finally, the petitioner asserts that the ICW data are based on sales executed by unrelated companies and reflect arms-length pricing.

Department's Position

We agree with the petitioner that the price quote obtained by the respondents does not prove ICW data to be aberrational. When appropriate adjustments are made to account for the differences in solution concentrations between the prices listed in ICW and in the price quote, the U.S. dollar per kilogram values for material input A are close. Moreover, additional ICW price quotes (provided to the Department by the petitioner upon the Department's request at the November 29, 1999 public hearing) refute the respondents' allegations concerning the legitimacy of the ICW data used in the preliminary determination. Thus, we have no reason to believe that the ICW data do not reflect sales made at arm's-length.

We note that, in a change from our preliminary determination, we have adjusted the ICW price to reflect the different solution concentrations used by the PRC respondents. With this adjustment, and because we have determined that the ICW prices are neither aberrational nor suspect, we do not believe that it is necessary to pursue the alternative methodology suggested by the respondents for valuing this input.

Comment 7: Under-Reported Labor at Tiancheng

The petitioner asserts that Tiancheng under-reported indirect labor due to a mathematical error in its June 2, 1999, questionnaire response. The petitioner further contends that Tiancheng did not report labor hours for one month during the POI and failed to report certain labor that was classified incorrectly as not being related to the production of the subject merchandise. The petitioner urges the Department to include any unreported labor in Tiancheng's labor calculations.

Department's Position

We agree with the petitioner that Tiancheng miscalculated indirect labor in its factors of production response and that labor data for one month of the POI were not reported. However, the two errors mentioned above were corrected during verification.

Concerning petitioner's claim that certain labor was not reported because it was improperly classified as not being related to production of the subject merchandise, we note that the verification exhibit upon which the petitioner has based its argument does not correspond to the factory in question.

Comment 8: Valuation of Inland Shipping Rates

The respondents argue that the surrogate value used by the Department for inland boat rates was incorrect because the rate used by the Department reflects the cost of shipping on large vessels while the respondents used small barges.

Department's Position

The only information on the record with respect to inland boat rates is the value used in the preliminary determination. No parties have submitted any alternative values. Therefore, in the absence of information, we have continued to value inland shipping rates in the same manner as that in the preliminary determination.

Other Comments

The respondents have raised several additional arguments concerning the calculation of inputs that are being treated as business proprietary information. The petitioner did not comment on these issues. We have agreed with the respondents' arguments and have made applicable changes to our calculations for the final determination. Because the proprietary nature of these inputs precludes any meaningful discussion of these comments, we have included the detailed discussion in the respective calculation memoranda for each company, rather than in this notice.

Continuation of Suspension of Liquidation

We are directing the Customs Service to continue to suspend liquidation of all imports of subject merchandise from the PRC, except for subject merchandise exported by Nantong and produced by its proprietary producer and merchandise produced and exported by Tianjin (which have zero weighted-average margins), that are entered, or withdrawn from warehouse, for consumption on or after July 30, 1999, the date of publication of the preliminary determination in the **Federal Register**. In addition, for Freemen, as well as for companies subject to the PRC-wide rate, we are directing Customs to continue suspending liquidation of any unliquidated entries of subject merchandise entered, or withdrawn from warehouse, for consumption on or after May 1, 1999, the date 90 days prior to the date of publication of the preliminary determination in the **Federal Register**, in accordance with our critical circumstances finding. Furthermore, we will instruct the Customs Service to refund all bonds and cash deposits posted on subject merchandise exported by Desano that was entered or withdrawn from warehouse for consumption prior to July 30, 1999.

The Customs Service shall continue to require a cash deposit or the posting of a bond equal to the weighted-average amount by which the NV exceeds the EP, as indicated in the chart below. These suspension of liquidation instructions will remain in effect until further notice.

Exporter/manufacturer	Weighted-average margin percentage	Critical circumstances
Blue Science International Trading (Shanghai) Co., Ltd	58.10	No
Nantong Medicines and Health Products Import and Export Co., Ltd	0.00	No
Shanghai Desano International Trading Co., Ltd	24.84	No
Shanghai Freemen International Trading Co., Ltd and Shanghai Greenmen International Trading Co., Ltd	44.43	Yes
Suzhou Sanjian Fine Chemical Co., Ltd	50.32	No
Tianjin Tiancheng Pharmaceutical Co., Ltd	0.00	No
PRC-wide Rate	153.70	Yes

The PRC-wide rate applies to all entries of the subject merchandise except for entries from exporters that are identified individually above.

ITC Notification

We have notified the ITC of our determination. As our final determination is affirmative, the ITC will, within 45 days, determine whether these imports are materially injuring, or threaten material injury to, the U.S. industry. If the ITC determines that material injury, or threat of material injury does not exist, the proceeding will be terminated and all securities posted will be refunded or canceled. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order.

This determination is issued and published in accordance with sections 735(d) and 777(i)(1) of the Act.

Dated: December 13, 1999.

Robert S. LaRussa,

Assistant Secretary for Import Administration.

[FR Doc. 99–32916 Filed 12–17–99; 8:45 am]

BILLING CODE 3510–DS–P

APPENDIX B

WITNESSES APPEARING AT THE COMMISSION'S HEARING

CALENDAR OF PUBLIC HEARINGS

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject:	Creatine Monohydrate from China
Inv. No.:	731-TA-814 (F)
Date and Time:	December 16, 1999 - 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room, 500 E Street, SW, Washington, DC.

In Support of the Imposition of Antidumping Duties:

Fulbright & Jaworski L.L.P.
Washington, DC
on behalf of

Pfanstiehl Laboratories, Incorporated

Edward S. Holstein, Executive Vice President and Treasurer, Pfanstiehl Laboratories, Incorporated

Ken Thomson, Vice President, Scientific Affairs, Pfanstiehl Laboratories, Incorporated

Seth T. Kaplan, Vice President, Charles River Associates, Incorporated

Craig T. Redinger--OF COUNSEL

APPENDIX C

SUMMARY TABLES

Table C-1
Creatine monohydrate: Summary data concerning the U.S. market, 1996-98, January-June 1998, and January-June 1999

(Quantity=kilograms, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per kilogram; period changes=percent, except where noted)

	Reported data					Period changes			
				January-June					Jan.-June
Item	1996	1997	1998	1998	1999	1996-98	1996-97	1997-98	1998-99
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***
Importers' share (1):									
China (subject)	***	***	***	***	***	***	***	***	***
China (nonsubject)	***	***	***	***	***	***	***	***	***
China (total)	***	***	***	***	***	***	***	***	***
Other sources	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***
Importers' share (1):									
China (subject)	***	***	***	***	***	***	***	***	***
China (nonsubject)	***	***	***	***	***	***	***	***	***
China (total)	***	***	***	***	***	***	***	***	***
Other sources	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***
U.S. shipments of imports from:									
China (subject):									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
China (nonsubject):									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
China (total):									
Quantity	14,442	93,408	871,178	264,870	687,793	(2)	546.8	832.7	159.7
Value	462	1,726	9,176	3,269	5,976	(2)	273.9	431.5	82.8
Unit value	$31.97	$18.48	$10.53	$12.34	$8.69	-67.1	-42.2	-43.0	-29.6
Ending inventory quantity	797	34,033	348,810	85,913	246,405	(2)	(2)	924.9	186.8
Other sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	1,091,000	5,313,000	6,066,400	3,072,200	2,739,200	456.0	387.0	14.2	-10.8
Production quantity	970,473	2,001,367	2,138,952	1,335,588	589,564	120.4	106.2	6.9	-55.9
Capacity utilization (1)	89.0	37.7	35.3	43.5	21.5	-53.7	-51.3	-2.4	-22.0
U.S. shipments:									
Quantity	936,182	1,675,503	2,127,331	1,330,454	568,901	127.2	79.0	27.0	-57.2
Value	25,987	34,179	28,203	18,243	6,901	8.5	31.5	-17.5	-62.2
Unit value	$27.76	$20.40	$13.26	$13.71	$12.13	-52.2	-26.5	-35.0	-11.5
Export shipments:									
Quantity	30,351	80,984	112,984	60,175	46,741	272.3	166.8	39.5	-22.3
Value	920	1,695	1,599	824	582	73.9	84.3	-5.6	-29.4
Unit value	$30.31	$20.93	$14.16	$13.70	$12.46	-53.3	-30.9	-32.4	-9.1
Ending inventory quantity	78,529	325,409	224,046	270,368	197,268	185.3	314.4	-31.1	-27.0
Inventories/total shipments (1)	8.1	18.5	10.0	9.7	16.0	1.9	10.4	-8.5	6.3
Production workers	36	57	39	31	20	8.3	58.3	-31.6	-35.5
Hours worked (1,000s)	75	109	67	32	19	-11.0	45.3	-38.8	-41.1
Wages paid ($1,000s)	1,431	2,124	952	481	377	-33.5	48.4	-55.2	-21.6
Hourly wages	$19.08	$19.49	$14.26	$14.93	$19.86	-25.3	2.1	-26.8	33.0
Productivity (kilograms per hour	12.9	18.4	32.0	41.4	31.0	147.6	41.9	74.5	-25.1
Unit labor costs	$1.47	$1.06	$0.45	$0.36	$0.64	-69.8	-28.0	-58.1	77.6
Net sales:									
Quantity	966,533	1,736,487	2,201,138	1,329,810	615,142	127.7	79.7	26.8	-53.7
Value	26,907	35,493	29,724	18,221	7,471	10.5	31.9	-16.3	-59.0
Unit value	$27.84	$20.44	$13.50	$13.70	$12.15	-51.5	-26.6	-33.9	-11.4
Cost of goods sold (COGS)	11,631	21,696	21,136	12,499	6,623	81.7	86.5	-2.6	-47.0
Gross profit or (loss)	15,276	13,797	8,588	5,722	848	-43.8	-9.7	-37.8	-85.2
SG&A expenses	5,290	6,877	4,942	1,775	1,334	-6.6	30.0	-28.1	-24.8
Operating income or (loss)	9,986	6,920	3,646	3,947	(486)	-63.5	-30.7	-47.3	(3)
Capital expenditures	685	1,817	759	616	78	10.8	165.3	-58.2	-87.3
Unit COGS	$12.03	$12.49	$9.60	$9.40	$10.77	-20.2	3.8	-23.1	14.5
Unit SG&A expenses	$5.47	$3.96	$2.25	$1.33	$2.17	-59.0	-27.6	-43.3	62.5
Unit operating income or (loss)	$10.33	$3.98	$1.66	$2.97	($0.79)	-84.0	-61.4	-58.4	(3)
COGS/sales (1)	43.2	61.1	71.1	68.6	88.6	27.9	17.9	10.0	20.1
Operating income or (loss)/ sales (1)	37.1	19.5	12.3	21.7	-6.5	-24.8	-17.6	-7.2	-28.2

(1) "Reported data" are in percent and "period changes" are in percentage points.
(2) Increase greater than 1,000 percent.
(3) Undefined.

Note.--Financial data are reported on a fiscal year basis and may not necessarily be comparable to data reported on a calendar year basis.

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

Table C-2
Creatine Citrate: Summary data concerning the U.S. market, 1996-98, January-June 1998, and January-June 1999

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Table C-3
Creatine monohydrate and citrate: Summary data concerning the U.S. market, 1996-98, January-June 1998, and January-June 1999

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APPENDIX D

MODEL RESULTS

Table D-1
COMPAS model inputs and results

Item	Scenario #1	Scenario #2	Scenario #3	Scenario #4	But-for Imports:
Inputs (elasticities):					
Substitution	3.0	3.0	3.0	3.0	--
Demand	-1.0	-1.0	-2.0	-2.0	--
Supply	3.0	5.0	3.0	5.0	3.0
Estimated impact of dumping on the U.S. creatine market (*in percent*):					
Domestic price	-3.1	-2.1	-1.4	-1.0	-4.1
Domestic output	-9.1	-10.1	-4.1	-4.8	-11.9
Domestic revenues	-11.9	-12.0	-5.4	-5.8	-15.5
But-for estimations (*in percent*):					
Domestic Share	57.1	57.0	57.6	57.5	62.1
Subject Import Share	***	***	***	***	--
Nonsubject Import Share	***	***	***	***	***
Capacity Utilization	38.8	39.3	36.8	37.1	40.1
Estimated impact of dumping on imports (*in percent*):					
Subject import price	***	***	***	***	--
Subject import output	***	***	***	***	--
Subject import revenues	***	***	***	***	--
Nonsubject price	***	***	***	***	***
Nonsubject output	***	***	***	***	***
Nonsubject revenues	***	***	***	***	***

APPENDIX E

SALIENT DATA OF U.S. PRODUCERS, BY FIRM

Table E-1
Creatine monohydrate: U.S. producers' capacity, production, and capacity utilization, by firm, 1996-98, January-June 1998, and January-June 1999

* * * * * * *

Table E-2
Creatine monohydrate: U.S. producers' U.S. shipments, by firm, 1996-98, January-June 1998, and January-June 1999

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APPENDIX F

EFFECTS OF IMPORTS ON PRODUCERS' EXISTING DEVELOPMENT AND PRODUCTION EFFORTS, GROWTH, INVESTMENT, AND ABILITY TO RAISE CAPITAL

The Commission requested U.S. producers to describe any actual or potential negative effects on their return on investment, growth, investment, ability to raise capital, existing development and production efforts (including efforts to develop a derivative or more advanced version of the product), or the scale of capital investments as a result of imports of creatine monohydrate from China. (Questions III-9 and 10). Their responses are as follows:

Actual Negative Effects

* * * * * * *

Anticipated Negative Effects

* * * * * * *