Slip Op. 26-102

UNITED STATES COURT OF INTERNATIONAL TRADE

ZOETIS SERVICES LLC Plaintiff, v. UNITED STATES Defendant.	Before: Joseph A. Laroski, Jr., Judge Court No. 22-00056

OPINION

[In a Customs matter regarding classification of feed-grade chlortetracycline concentrate, plaintiff's motion for summary judgment is granted and defendant's cross-motion for summary judgment is denied.]

Dated: September, 02, 2026

William R. Rucker, Faegre Drinker Biddle & Reath, LLP of Chicago, IL, argued for plaintiff Zoetis Services LLC.

Marcella Powell, Senior Trial Counsel, International Trade Field Office, Civil Division, U.S. Department of Justice, of Washington, D.C., argued for defendant United States Government. On the brief were Luke Mathers, Trial Attorney Commercial Litigation Branch, Civil Division, U.S. Department of Justice, Brett A. Shumate, Assistant Attorney General, Patricia M. McCarthy, Director, Justin R. Miller, Attorney-In-Charge, International Trade Field Office, and Aimee Lee, Assistant Director. Of counsel, arguing for defendant and on the brief, was Michael A. Anderson, Office of the Assistant Chief Counsel, International Trade Litigation, U.S. Customs and Border Protection.

Laroski, Judge: The actions before the court are cross-motions for summary judgment pursuant to U.S. Court of International Trade ("USCIT") Rule 56(a). Pl.

Mot. for Sum. J., ECF No. 41 (Mar. 19, 2025) ("Zoetis Br."); Def. Mem. in Supp. of Cross-Mot. for Sum. J., ECF No. 51 (June 30, 2025) ("Gov. Br."). Plaintiff Zoetis Services LLC ("Zoetis") challenges the U.S. Customs and Border Protection's classification of feed-grade chlortetracycline concentrate under heading 2309 of the Harmonized Tariff Schedule of the United States ("HTSUS"). Zoetis contends that the imported merchandise is an antibiotic under heading 2941 because its only active ingredient is chlortetracycline, a recognized antibiotic, and its inactive ingredients [hereinafter "non-antibiotic substances"] are permissible impurities resulting from the manufacturing process. Zoetis Br. at 1–2. Alternatively, Zoetis argues that the imported merchandise is classifiable as a medicament under heading 3003 given its therapeutic and prophylactic uses. Id. Meanwhile, the Government argues that the imported merchandise should be classified under heading 2309 as a preparation for animal feed. Gov Br. at 2. For the reasons laid out below, the court holds that the imported merchandise is properly classified as an antibiotic under subheading 2941.30.00 which provides for "Antibiotics: Tetracyclines and their derivatives; salts thereof."

BACKGROUND

I. Procedural Background

There are no material facts in dispute in this case. Zoetis Br. at 2; Gov. Br. at 15. The merchandise in question consists of feed-grade chlortetracycline concentrate powder ("CTC-FG") manufactured in China by Jinhe Biotechnology Co., Ltd. and imported by Zoetis Services LLC ("Zoetis"). Joint Statement of Undisputed

Facts, ECF No. 38, ¶¶ 1, 5 (Mar. 14, 2025) ("JSUF"). Zoetis made two entries at the Port of Chicago, Illinois: one on December 26, 2019, and the other on January 22, 2020. Id. ¶ 1. U.S. Customs and Border Protection ("Customs") classified the imported merchandise in both entries under subheading 2309.90.10 (2020 ed.)[1], a duty-free provision, and assessed Section 301 duties under subheading 9903.88.03 at 25 percent *ad valorem*. Id. ¶ 2. Zoetis protested Customs's liquidation and paid all liquidated duties, taxes, and charges. Id. ¶¶ 3–4. Customs denied the protests, and Zoetis filed summonses. Id. ¶ 4. Zoetis commenced this action requesting reliquidation of the imported merchandise under subheading 2941.30.00, or alternatively, under subheading 3003.20.00. Zoetis Br. at 2. The court held oral argument on May 28, 2026.

II. Description of Imported Merchandise

CTC-FG is an active pharmaceutical ingredient ("API") composed of a broad-spectrum antibiotic, chlortetracycline (also known by the trade name "Aureomycin"). JSUF ¶¶ 5–7.

The production of CTC-FG begins with the biomass fermentation process in which bacteria Streptomyces aureofaciens is "aerobically fermented in an aqueous culture medium" (*i.e.*, a fermentation "broth") to produce chlortetracycline. Id.

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[1] The relevant portion of Chapter 23 reads:

2309 (HTSUS 2020)

	Preparations of a kind used in animal feeding:
2309.90	Other:
2309.90.10	Mixed feeds or mixed feed ingredients
2309.90.1050	Other

¶¶ 9–10. The fermentation process lasts until the desired chlortetracycline concentration has been reached. Id. ¶ 12. Second, calcium carbonate is mixed into the fermentation broth to create a chlortetracycline calcium complex which stabilizes the product so that it does not degrade when incorporated into animal feed. Pl.'s Statement of Material Facts ¶ 18 ("PSMF") (citation omitted); Def.'s Resp. to Pl.'s Statement of Material Facts ¶ 18 ("Def. Resp. Facts"). Third, "the entire contents of the fermentation vessel the bacterial colony, the chlortetracycline that it produced, and the remaining culture medium—are filtered and dried." JSUF ¶ 12. Finally, the dried contents are sieved and ground into a "fine brown powder or granular substance" which Zoetis imports in bulk in 750-kilogram bags. Id. ¶ 14. At importation, the CTC-FG has a chlortetracycline concentration of 23.8 to 24.7 percent, id. ¶¶ 5–6, and includes the following non-antibiotic substances: "mycelial cake, microbial cells, residual nutrients, other fermentation components, and metabolic products." PSMF ¶ 17; Def. Resp. Facts ¶ 17. The only active ingredient in the imported merchandise is the chlortetracycline. PSMF ¶ 2; Def. Resp. Facts ¶ 2. The imported merchandise "is not a significant source of nutrients for animals," nor is it directly fed to animals. JSUF ¶ 17–18.

CTC-FG is a "microingredient" which undergoes post-importation processing in order to be added to animal feed. JSUF ¶ 19. After importation, the CTC-FG is used exclusively by Zoetis to manufacture four Type A Medicated Articles. Id. ¶ 20–21. Zoetis's Type A Medicated Articles are manufactured by blending the imported merchandise with "multiple diluents, including rice hulls, calcium sulfate, or

calcium carbonate." Id. ¶ 23. The diluents are "not intended to provide a significant source of nutrition to the animal diet." Id. ¶ 24. The resulting Type A Medicated Articles have a chlortetracycline concentration ranging between 7.7 and 22 percent. Id. ¶ 25.

The FDA has approved Zoetis's Type A Medicated Articles for "maintaining the health of livestock (poultry, swine, and cattle), including the treatment, prevention, and control of a wide range of respiratory and enteric diseases, such as bacterial pneumonia, bacterial enteritis, anaplasmosis, and other diseases, as well as aiding in the maintenance of weight gain in the presence of disease." Id. ¶ 31. Zoetis's Type A Medicated Articles are labeled and marketed in accordance with their FDA-approved uses. Id. ¶ 32.

Zoetis primarily sells its Type A Medicated Articles to "feed mills, farmers, and manufacturers of Type B Medicated Feed and Type C Medicated Feed articles, . . . for ultimate use in livestock feeds." Id. ¶ 33. To legally feed the Type B and Type C Medicated Feeds to animals, a licensed veterinarian must issue a veterinary feed directive ("VFD"). Id. ¶ 30.

JURISDICTION AND STANDARD OF REVIEW

The court exercises exclusive jurisdiction over "any civil action commenced to contest the denial of a protest, in whole or in part, under section 515 of the Tariff Act of 1930" ("the Act"), as amended. 28 U.S.C. § 1581(a). Actions to contest the denial of a protest are adjudicated by the court *de novo*, and the court determines the correct classification "upon the basis of the record made before the court." 28

U.S.C. § 2640(a)(1); see Universal Elec. Inc. v. United States, 112 F.3d 488, 493 (Fed. Cir. 1997) (noting that the court has been "tasked by Congress to conduct a *de novo* review, and to determine the correct classification based on the record made before it").

The court will grant summary judgment if "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." USCIT R. 56(a). Summary judgment is appropriate in tariff classification cases where "there is no genuine dispute as to the nature of the merchandise and the classification determination turns on the proper meaning and scope of the relevant tariff provisions." Deckers Outdoor Corp. v. United States, 714 F.3d 1363, 1371 (Fed. Cir. 2013) (citations omitted).

DISCUSSION

I. Legal Framework

The plaintiff bears the burden of demonstrating that the Government's classification of the imported merchandise was incorrect, but the court has an independent duty to "reach a correct result." Jarvis Clark Co. v. United States, 733 F.2d 873, 878 (Fed. Cir. 1984). After the plaintiff meets its initial burden, the court undertakes a two-step analysis to determine the correct result. Faus Group, Inc. v. United States, 581 F.3d 1369, 1371 (Fed. Cir. 2009). First, the court must construe the meaning of tariff terms, which is a question of law. Id. Second, the court must determine if the merchandise at issue falls within the tariff provision as construed,

which is a question of fact. Id. at 1371–72 (citing Orlando Food Corp. v. United States, 140 F.3d 1437, 1439 (Fed. Cir. 1998)).

Classification under the HTSUS is guided by the General Rules of Interpretation ("GRIs"), and, if necessary, the Additional U.S. Rules of Interpretation ("ARIs"). Orlando Food Corp., 140 F.3d at 1439. The court applies the GRIs in numerical order and only continues to a subsequent GRI if "proper classification of the imported goods cannot be accomplished by reference to a preceding GRI." Irwin Indus. Tool Co. v. United States, 920 F.3d 1356, 1359–60 (Fed. Cir. 2019) (citations omitted). GRI 1 requires classification to "be determined according to the terms of the headings and any relative section or chapter notes." GRI 1, HTSUS. The section and chapter notes are considered binding statutory law. BenQ Am. Corp. v. United States, 646 F.3d 1371, 1376 (Fed. Cir. 2011). GRIs 2 through 5 apply "provided such headings or notes do not otherwise require." Irwin Indus. Tool Co., 920 F.3d at 1359–60. Finally, the court determines the correct subheading, each contained within a four-digit heading, by applying GRI 6. GRI 6, HTSUS.

"Absent contrary legislative intent, HTSUS terms are to be construed according to their common and commercial meanings, which are presumed to be the same." Carl Zeiss, Inc. v. United States, 195 F.3d 1375, 1379 (Fed. Cir. 1999). The court "may consult lexicographic and scientific authorities, dictionaries, and other reliable information sources." Id. (citing Baxter Healthcare Corp. of P.R. v. United States, 182 F.3d 1333, 1337–38 (Fed. Cir. 1999)). The court may also consult the

Explanatory Notes ("ENs") published by the World Customs Organization ("WCO") accompanying each chapter. See Dependable Packaging Solutions, Inc. v. United States, 757 F.3d 1374, 1377 (Fed. Cir. 2014) (citations omitted). While not legally binding, the ENs are considered "generally indicative of the proper interpretation of the tariff provision." Id. (citations omitted).

II. Competing Tariff Provisions

The parties have identified three candidate headings, and the court has not identified any additional headings. Customs classified the imported merchandise under subheading 2309.90.1050, HTSUS,[2] a duty-free provision, and assessed Section 301 duties under subheading 9903.88.03, HTSUS, with a duty rate of 25 percent *ad valorem*. JSUF ¶ 2.[3] The Government seeks summary judgment under the same heading; however, it now argues that the appropriate subheading is 2309.90.95, with a duty rate of 1.4 percent *ad valorem*. Gov. Br. at 28 n.4. The relevant portion of Chapter 23 reads:

2309 (HTSUS 2020)

	Preparations of a kind used in animal feeding:
2309.90	Other:
2309.90.95	Other

[2] The product at issue was subject to the tariff provisions set forth in the version of the HTSUS that was in effect on the dates of entry. References to the HTSUS herein are to the 2020 version.

[3] Additional U.S. Note 1 to Chapter 23 provides that "[t]he term "mixed feeds and mixed-feed ingredients" in subheading 2309.90.10 embraces products of heading 2309 which are admixtures of grains (or products, including byproducts, obtained in milling grains) with molasses, oilcake, oil-cake meal or feedstuffs, and which consist of not less than 6 percent by weight of grain or grain products." Both parties agree that the CTC-FG is not a mixed feed or mixed-feed ingredient. JSUF ¶ 6. The imported merchandise does not contain grain and is not an admixture of grains, thus, the court need not consider Customs's initial classification any further.

Zoetis moves for summary judgment seeking classification under subheading 2941.30.00, HTSUS, or alternatively, subheading 3003.20.00, HTSUS, both of which are duty-free. The relevant portion of Chapter 29 reads:

2941 (HTSUS 2020)	
	Antibiotics:
2941.30.00	Tetracyclines and their derivatives; salts thereof

The relevant portion of Chapter 30 reads:

3003 (HTSUS 2020)	
	Medicaments (excluding goods of heading 3002, 3005 or 3006) consisting of two or more constituents which have been mixed together for therapeutic or prophylactic uses, not put up in measured doses or in forms or packings for retail sale:
3003.20.00	Other, containing antibiotics

As set forth above, there are three competing tariff provisions. Heading 2941 is an *eo nomine* provision – that is, a provision that describes an article by a specific name, not by use. See Aromont, 671 F.3d at 1312 (citing CamelBak Prods., LLC v. United States, 649 F.3d 1361, 1364 (Fed. Cir. 2011)). "Absent limitation or contrary legislative intent, an *eo nomine* provision "include[s] all forms of the named article[,] even improved forms." CamelBak Prods., 649 F.3d at 1364–65 (citing Carl Zeiss, 195 F.3d at 1379. By contrast, headings 2309 and 3003 are principal use provisions, thus implicating ARI 1(a). See Aromont, 671 F.3d at 1312. ARI 1(a) states:

> In the absence of special language or context which otherwise requires . . . a tariff classification controlled by use (other than actual use) is to be

> determined in accordance with the use in the United States at, or immediately prior to, the date of importation of goods of that class or kind to which the imported goods belong, and the controlling use is the principal use.

To determine "the use of the class or kind of merchandise to which the imported merchandise belongs," the court asks whether the imported goods are "commercially fungible" with the class or kind of goods described. Aromont, 671 F.3d at 1312–13 (citing Primal Lite, Inc. v. United States, 182 F.3d 1362, 1365 (Fed. Cir. 1999)).[4]

III. The imported merchandise cannot be classified under heading 2309

Because the plaintiff bears the burden of demonstrating that the Government's classification of the imported merchandise was incorrect, Jarvis Clark Co., 733 F.2d at 878, the court begins its analysis with heading 2309, the heading under which the Government classified the imported merchandise.

Zoetis argues that the manufacturing, composition, and intended use of the imported merchandise preclude classification under heading 2309. Zoetis Br. at 36. The Government disagrees, asserting that the imported merchandise is a "preparation" clearly intended for use in animal feed. Gov. Br. at 17. For the reasons set forth below, this court holds that by operation of GRI 1, the imported

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[4] As part of its analysis, the court may consider the Carborundum factors which "provide guidance in determining what goods are commercially fungible with the imported goods." Aromont, 671 F.3d at 1312–1313 (citing BenQ Am. Corp., 646 F.3d at 1377). The factors include: "[the] use in the same manner as merchandise which defines the class; the general physical characteristics of the merchandise; the economic practicality of so using the import; the expectation of the ultimate purchasers; the channels of trade in which the merchandise moves; the environment of the sale, such as accompanying accessories and the manner in which the merchandise is advertised and displayed; and the recognition in the trade of this use." Id. (citing United States v. Carborundum Co., 536 F.2d 373, 377 (CCPA 1976)).

merchandise is not classifiable under HTSUS heading 2309 as a "preparation[] of a kind used in animal feed."

(A) The imported merchandise is not a preparation for animal feed

Zoetis asserts that the imported merchandise is not a "preparation[] of a kind used in animal feed" because, as the parties have already jointly stipulated, none of the categories of animal feed preparations outlined in EN 23.09 apply. Zoetis Br. at 39 (citing JSUF ¶ 15). Zoetis describes CTC-FG as "essential medicine," id. at 33, and emphasizes that "[a]ny nutrition related benefits that may occur from the use of [CTC-FG] at the time an animal is eating its food ration is [sic] purely incidental and is [sic] not the reason such a potent drug product is purchased for further processing." Pl.'s Reply to Def.'s Cross-Mot. For Summ. J., ECF No. 59, at 17 (Sep. 19, 2025) ("Zoetis Reply"); see also JSUF ¶ 17.

The Government relies heavily on EN 23.09 to demonstrate that because of the CTC-FG's manufacturing process and composition, the imported merchandise is a "[p]reparation[] of a kind used in animal feeding." The Government maintains that the merchandise is classifiable under heading 2309 pursuant to GRI 1. Gov. Br. at 14. Nonetheless, the Government asserts that a principal use analysis would support the same conclusion because the Carborundum factors demonstrate that the imported merchandise is fungible with the antibiotic microingredients added to animal feed described in EN 23.09. Id. (citing Carborundum, 536 F.2d 373).

EN 23.09 indicates that preparations consisting of an active substance with a carrier are classifiable under heading 2309. The Explanatory Note provides, as an

example: "products of the antibiotics manufacturing process obtained by simply drying the mass, i.e. the entire contents of the fermentation vessel" with an "antibiotic content ranging generally between 8% and 16%." EN 23.09(II)(C). According to the Government, the imported merchandise is "virtually indistinguishable" from the example provided in EN 23.09(II)(C) in three distinct ways. Gov. Br. at 33. First, both the example in EN 23.09 and the imported merchandise are "[p]reparations consisting of an active substance … with a carrier.[5]" Id. at 19. Second, like EN 23.09's example, the imported merchandise consists of "the dried product of the 'entire contents of the fermentation vessel—the bacterial colony, the chlortetracycline that it produced, and the remaining culture medium.'" Id. at 19–20 (quoting JSUF ¶ 12). Third, the imported merchandise has an antibiotic content between 23.8 to 24.7 percent, which the Government contends is, "just above the general range" indicated by EN 23.09 of 8 to 16 percent. Id. at 20 (citing JSUF ¶ 6). And, after the CTC-FG is imported and manufactured into Type A Medicated Articles, "its potency is standardized from anywhere between 7.7 to 22 percent, which falls within (and slightly above) that same general range." Id. at 23 (citing JSUF ¶¶ 13, 25).

Lastly, the Government underscores that like the premixes described in EN 23.09(II)(C), "the characteristics of the antibiotic contained in the subject

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[5] While the Government's briefs did not name a particular non-antibiotic substance as the carrier, at oral argument, the Government identified "the [mycelial] cake" as the carrier in the imported merchandise. See Oral Arg. Tr., ECF No. 76 at 33:14–15.

merchandise and ultimately included in animal feed after post-importation processing and mixing, have the effect of promoting an animal's growth and 'safeguard[ing] its health.'" Id. at 22 (citing EN 23.09(II)(C)). In sum, the Government identifies purported similarities in the manufacturing process and composition of the CTC-FG and the premixes in EN 23.09(II)(C) in support of its argument that the imported merchandise's composition and principal use support classification under heading 2309.

The court begins its analysis with GRI 1, which requires classification to "be determined according to the terms of the headings and any relative section or chapter notes." GRI 1, HTSUS. According to EN 23.09, "preparations of a kind used in animal feed" includes: (I) sweetened forage; and (II) prepared animal feeding stuffs consisting of a mixture of several nutrients. EN 23.09. EN 23.09(II) divides "animal feeding stuffs" into three categories of feed preparations:

> (A) PREPARATIONS DESIGNED TO PROVIDE THE ANIMAL WITH ALL THE NUTRIENT ELEMENTS REQUIRED TO ENSURE A RATIONAL AND BALANCED DAILY DIET (COMPLETE FEEDS)
>
> (B) PREPARATIONS FOR SUPPLEMENTING (BALANCING) FARM-PRODUCED FEED (FEED SUPPLEMENTS)
>
> (C) PREPARATIONS FOR USE IN MAKING THE COMPLETE FEEDS OR SUPPLEMENTARY FEEDS DESCRIBED IN (A) AND (B) ABOVE.

EN 23.09. The imported merchandise evidently cannot be (A) a complete feed or (B) a feed supplement because it cannot be fed directly to animals and is not a significant source of nutrients for animals. See JSUF ¶¶ 17–18; EN 23.09(II)(A)–

(B). Thus, whether the imported merchandise is a "preparation[] of a kind used in animal feed" turns on whether it is (C) "for use in making complete or supplementary feeds," otherwise known as a "premix."[6] EN 23.09(II)(C).

EN 23.09 describes premixes used in animal feed as "compound compositions" consisting of active substances (otherwise referred to as "microingredients") such as vitamins, minerals, amino acids, or antibiotics with a carrier. EN 23.09(II)(C). For example:

> [P]roducts of the antibiotics manufacturing process obtained by simply drying the mass, i.e. the entire contents of the fermentation vessel (essentially mycelium, the culture medium and the antibiotic). The resulting dry substance, whether or not standardised by adding organic or inorganic substances, has an antibiotic content ranging generally between 8 % and 16 % and is used as basic material in preparing, in particular, "premixes".

EN 23.09(II)(C). Contrary to the Government's assertion, the description in EN 23.09(II)(C) does not provide a close analogy to the imported merchandise for two reasons: (1) the CTC-FG does not contain a carrier at importation; and (2) the antibiotic content exceeds the general range.

First, in its imported condition, the CTC-FG does not contain a carrier. In the context of animal feed, a "carrier" is defined as "[a]n edible material to which ingredients are added to facilitate uniform incorporation of the latter into feeds…." Association of American Feed Control Officials, Feed Inspector's Manual (8th ed.

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[6] According to its common or commercial meaning, a premix is "[a] uniform mixture of one or more micro-ingredients with diluent and/or carrier." Association of American Feed Control Officials, Feed Inspector's Manual (8th ed. 2020).

2020). The calcium carbonate in the imported merchandise does not perform such a function. Rather, calcium carbonate is added to the fermentation broth to create a complex which stabilizes the product and prevents it from degrading upon importation. PSMF ¶ 18 (citation omitted); Def. Resp. Facts ¶ 18. The calcium carbonate added pre-importation should not be confused with the diluents "including rice hulls, calcium sulfate, or [additional] calcium carbonate," which are added to CTC-FG post-importation to manufacture Type A Medicated Articles with "consistent potency and particle size." JSUF ¶¶ 21, 23.

Second, the court is not persuaded by the Government's assertion that the percentage of chlortetracycline is "not far off" from the general range identified in EN 23.09. The discrepancy between the antibiotic content of the imported merchandise (23.8 to 24.7 percent) and EN 23.09's general range (8 to 16 percent) is, at a minimum, 7.8 percent. Id. ¶ 6; EN 23.09. The considerable difference in antibiotic concentration indicates that heading 2309 is not the appropriate classification. That the Type A Medicated Articles Zoetis manufactures using its imported CTC-FG have an antibiotic concentration between 7.7 to 22 percent, see JSUF ¶ 25, which is closer to EN 23.09's general range, is not relevant for classification purposes. See e.g., Mita Copystar Am.v. United States, 21 F.3d 1079, 1082 (Fed. Cir. 1994) ("It is well settled law that merchandise is classified according to its condition when imported.") (citation omitted).

Lastly, the Government misplaces emphasis on the growth-promoting effects of medicated feeds containing CTC-FG to support classification under heading 2309.

See e.g., Gov. Br. at 10 (quoting Schroeder Dep. at 69:7–18) ("the subject merchandise contained in the [Type A Medicated Articles] 'will still have a growth promoting [e]ffect even though it is used at a therapeutic level.'")); see also Def.'s Statement of Additional Undisputed Material Facts ¶¶ 12–14. There is no record evidence identifying CTC-FG as a nutritional source. The fact that in addition to delivering medicine, medicated feeds with CTC-FG can also "aid[] in the [animal's] maintenance of weight gain in the presence of disease," JSUF ¶ 31, is not enough to bring the merchandise within the scope of heading 2309.

(B) The imported merchandise is a preparation for veterinary use

Heading 2309 also does not apply to the imported merchandise because EN 23.09 explicitly excludes "preparations for veterinary uses." EN 23.09.

According to Zoetis, EN 23.09's exclusion for "preparations for veterinary uses" applies to the imported merchandise because it is not incorporated into medicated feeds as a nutritional source and can only be administered to animals with veterinary oversight – namely in the form of a VFD. Zoetis Br. at 30; Zoetis Reply at 16–17.

The Government responds that while "ultimately used under veterinary oversight, the subject merchandise is not used by veterinarians but rather by those in the animal feed distribution chain." Gov. Br. at 20 (citing JSUF ¶ 33) (citations omitted). According to the Government, veterinarians are "on the sidelines of the animal-feed process." Id. (citing JSUF ¶ 33) (citations omitted). Furthermore, the Government contends that the imported merchandise is distinguishable from

"preparations for veterinary uses" because it "has a lower concentration as administered when compared to injectable antibiotics" and as a feed additive, is "put up differently from [Zoetis's] dosage products [(i.e., products administered in specific doses)]." Id. (citation omitted); EN 23.09.

The court concludes that the imported merchandise qualifies under the exclusion in EN 23.09. The Government takes an overly narrow view of "preparations for veterinary uses," seemingly implying that this exclusion applies only to "dosage products" such as injectable antibiotics and therefore cannot include the imported merchandise. See Gov. Br. at 12 (citing EN 23.09). EN 23.09 does not make such a distinction – it merely provides that "preparations for veterinary uses" are "generally identifiable by the medicinal nature and much higher concentration of the active substance, and are often put up in a different way." EN 23.09. As previously indicated, the imported merchandise is distinguishable from preparations classifiable under heading 2309 based on EN 23.09's exclusion criteria. First, the imported merchandise is a medicinal preparation used to treat animal diseases; it is not incorporated into animal feeds for nutritional value. See JSUF ¶¶ 17, 24. Second, the CTC-FG has a higher antibiotic concentration (23.8 to 24.7 percent) than EN 23.09's general range (8 to 16 percent). Id. ¶ 6; EN 23.09. Lastly, the Government's argument that EN 23.09 only excludes so-called "dosage products," and not an antibiotic feed additive like CTC-FG, is unavailing. See Gov. Br. at 15. The language in EN 23.09 does not limit the exclusion to "dosage

products"; it merely provides that preparations with veterinary uses "are often put up in a different way." EN 23.09.

Here, "veterinary use[]" is further evident from the fact that the imported merchandise is only incorporated into products that "require a veterinary feed directive (VFD) issued by a licensed veterinarian" to be fed to animals. JSUF ¶ 30; see also Schroeder Dep. at 27:17–19, 29:11 (the "Veterinary Feed Directive is necessary [] when a producer actually takes that Type C Medicated Feed and feeds it to the animal … So veterinarians are in the process, but only at the end").

In sum, based on its manufacturing process, composition, and veterinary use, the imported merchandise does not meet the terms of heading 2309.

IV. The imported merchandise properly falls under heading 2941

Having determined that the imported merchandise cannot be classified under heading 2309, the court turns to Zoetis's first proposed classification under heading 2941, which provides for "antibiotics." It is undisputed that chlortetracycline is a tetracycline antibiotic. Association of American Feed Control Officials, Feed Inspector's Manual (8th ed. 2020). Therefore, to classify the imported merchandise as an "antibiotic" *eo nomine*, the court must determine whether HTSUS Chapter 29 covers a product comprised of both antibiotic and non-antibiotic substances. For the reasons set forth below, the court concludes that the imported merchandise is an antibiotic with permissible non-antibiotic substances within the meaning of heading 2941.

Zoetis argues that the non-antibiotic substances in the CTC-FG are permissible for classification under heading 2941 because Note 1(a) to Chapter 29 provides for classification of "[s]eparately chemically defined organic compounds, whether or not containing impurities." Zoetis Br. at 13. According to the General EN to Chapter 29:

> The term "impurities" applies exclusively to substances whose presence in the single chemical compound results solely and directly from the manufacturing process (including purification). These substances may result from any of the factors involved in the process and are principally the following:
>
> (a) Unconverted starting materials.
> (b) Impurities present in the starting materials.
> (c) Reagents used in the manufacturing process (including purification).
> (d) By-products.

EN 29. Zoetis asserts that along with chlortetracycline – the separately chemically defined organic compound – the non-antibiotic substances in the imported merchandise are "solely the result of the fermentation manufacturing process." Zoetis Br. at 14 (citation omitted). Specifically, Zoetis identifies the "mycelial cake, microbial cells, residual nutrients, other fermentation components, and metabolic products" as "leftover starting materials and byproducts from the fermentation process" and calcium carbonate as an additional "recognized reagent."[7] Id. (citation omitted).

[7] Reagent is defined as "[a]ny substance, added to a solution, that participates in a chemical reaction, especially one employed in chemical analysis for the detection of biologic constituents." See Ida G. Dox, et al., Attorney's Illustrated Medical Dictionary at R8 (2002 3d Series).

The Government disagrees, arguing that the non-antibiotic substances are intended for a "specific use" outside the scope of impurities contemplated by Note 1(a). The Government invokes the General EN to Chapter 29 which clarifies that "substances [] deliberately left in the product with a view to rendering it particularly suitable for specific use rather than for general use, … are not regarded as permissible impurities." Id. (quoting EN 29). As evidence of "specific use," the Government notes that the "largely proteinaceous material" in the imported merchandise – the 'mycelial cake, microbial cells, residual nutrients, other fermentation components, and metabolic products,' id. (quoting PSMF ¶ 17) – is "deliberately left in" and is "not removed during any step of the pre- or post-importation processing." Id. at 35–36 (citing H. Reisman Corp. v. United States, 17 CIT 1260, 1263 (1993) ("The proteinaceous material is not simply an impurity in the vitamin B–12 product. The addition of proteinaceous material is a natural part of the manufacturing process and there is no need or desire to eliminate the material from this animal food product.")). Additionally, the Government asserts that calcium carbonate is added to the fermentation broth "to specifically prepare the merchandise for use in animal feed" upon importation. Id. at 36 (citing PSMF ¶ 18; Schroeder Dep. at 47:5–14 ("[I]t makes it stable so it doesn't degrade when you mix it into feed")). Given that the non-antibiotic substances are deliberately left in the product for use-specific benefits, the Government asserts that Note 1(a) precludes classification under Chapter 29. Id. at 35.

The court concludes that the imported merchandise satisfies the requirements of Note 1(a) and the non-antibiotic substances are consistent with the guidance set forth in the General EN to Chapter 29 regarding permissible impurities. First, the CTC-FG contains a separate organic compound of a known chemical structure, chlortetracycline. PSMF ¶ 14; Def. Resp. Facts ¶ 14. Second, the non-antibiotic substances, all "result[] solely and directly from the manufacturing process," and are identified by one of the four principal categories of impurities listed in the General EN to Chapter 29: (a) Unconverted starting materials; (b) Impurities present in the starting materials; (c) Reagents used in the manufacturing process (including purification); and (d) By-products. EN 29. As the parties stipulate, the fermentation vessel consists of "the bacterial colony, the chlortetracycline that it produced, and the remaining culture medium." JSUF ¶12. The "bacterial colony" and "culture medium" refer to "mycelial cake, microbial cells, residual nutrients, other fermentation components, and metabolic products," all of which are either leftover starting materials or fermentation by-products. See PSMF ¶ 17; Def. Resp. Facts ¶ 17. Calcium carbonate is added to the fermentation broth and functions as a reagent, which the General EN to Chapter 29 explicitly identifies as a permissible impurity. See PSMF ¶ 18; Def. Resp. Facts ¶ 18; EN 29(c).

The Government erroneously relies on Reisman to argue that the non-antibiotic substances are not permissible impurities. See Gov. Br. at 35–36. In Reisman, the court rejected classification under Chapter 29 and acknowledged that "[t]he proteinaceous material is not simply an impurity in the vitamin B–12

product." Reisman, 17 CIT at 1263. However, the Government's assertion that the proteinaceous material in the CTC-FG likewise precludes classification under heading 2941 belies the broader context in which the Reisman court ruled out Chapter 29. See id. In Reisman, the court found that the non-vitamin "proteinaceous material" could not be accounted for under any of Note 1's provisions. See id. ("The court cannot find a way to squeeze this multi-ingredient merchandise into the terms of Note 1…"). For example, Note 1(a)'s requirement could not be satisfied because the merchandise consisted of "a combination of two organic compounds and substantial amounts of proteinaceous material and other substances." Id. at 1262. The same cannot be said here, where the imported merchandise contains a single organic compound and impurities consistent with the categories identified in the General EN to Chapter 29.

Furthermore, the calcium carbonate added to the fermentation broth also satisfies Note 1(f) to Chapter 29. Note 1(f) permits classification of a product that meets the terms of Note 1(a) "with an added stabilizer (including an anticaking agent) necessary for their preservation or transport." Here, calcium carbonate is added to form a chlortetracycline calcium complex which stabilizes the CTC-FG and prevents its degradation. PSMF ¶ 18 (citation omitted); Def. Resp. Facts ¶ 18. There is no indication that the calcium carbonate is present in a greater quantity than is necessary for preservation or transport. See Roche Vitamins, Inc. v. United States, 772 F.3d 728, 732 (Fed. Cir. 2014) ("Note 1(f) to Chapter 29 permits the

addition of stabilizer ingredients … as long as the amount of stabilizer added is not more than necessary for preservation or transport").

The Government's argument that the non-antibiotic substances are outside the scope of Note 1 to Chapter 29 because they are "deliberately" kept in the CTC-FG to render the product "particularly suitable for specific use rather than for general use" is unavailing. EN 29.[8] The General EN to Chapter 29 describes a methyl acetate product "with methanol deliberately left in with a view to improving its suitability as a solvent," and hence, serving a "specific use" that precludes classification under Chapter 29. In Roche Vitamins, the Federal Circuit affirmed classification of a beta-carotene mixture which had to be combined with other ingredients, including a stabilizer, to make the product "commercially usable" under Chapter 29. Roche Vitamins,772 F.3d at 728. The court found that the stabilizing agents were permissible because they rendered the product suitable for "general use" in food, beverages, and vitamin products, and did not "specifically prepare" the merchandise for use in dietary supplement tablets. Id. at 732.

Here, it is evident that the non-antibiotic substances are deliberately left in the CTC-FG. See Zoetis Reply at 18 ("Any residual materials from the fermentation process are left in the CTC-FG as a result of manufacturing convenience and to stabilize the product for its future use in making specific drug products."). However, the court is unpersuaded by the argument that the non-antibiotic

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[8] At oral argument, when asked what distinguishes a "general use" from a "specific use," Government counsel was unable to provide an example of a "general use." Oral Arg. Tr. at 28:13–14.

substances are kept in the imported merchandise in service of a "specific use" within the meaning of the General EN to Chapter 29. See EN 29. Rather, the court finds that the non-antibiotic substances are left in the CTC-FG for the general purpose of facilitating post-importation processing. As indicated on the packaging, the CTC-FG is designed for use in "manufacturing, processing or repacking." See Zoetis Reply at 4 (citing Ex. 32, CTC Concentrate Packaging Label). Zoetis imports the CTC-FG to manufacture four different Type A Medicated Articles, which, in turn, are added to various Type B and Type C Medicated Feeds. JSUF ¶¶ 20–21. The Type B and Type C Medicated Feeds are administered to animals to treat, prevent, and control "a wide range of respiratory and enteric diseases, such as bacterial pneumonia, bacterial enteritis, anaplasmosis, and other diseases, as well as aiding in the maintenance of weight gain in the presence of disease." Id. ¶¶ 20, 31. The fact that the non-antibiotic substances provide stability, thereby facilitating post-importation use in medicated animal feeds, is not enough to qualify as a "specific use." See EN 29. In the absence of a "specific use," the court concludes that the non-antibiotic substances render the product suitable for "general use."

V. The imported merchandise cannot be classified under heading 3003

By operation of GRI 1, the court must dismiss Zoetis's alternative classification under heading 3003. Heading 3003 is limited to mixed products "not put up in measured doses or in forms or packings for retail sale." Note 3 to Chapter 30 states, in relevant part, that:

> 3. For the purposes of headings 3003 ... the following are to be treated—
>
> (a) As unmixed products:
> ...
> (2) All goods of chapter 28 or 29[.]

Chapter 30 Note 3(a)(2), HTSUS.

Because the court has determined that the appropriate classification is as an antibiotic under Chapter 29, Note 3(a)(2) to Chapter 30 requires that the imported merchandise be treated as an unmixed product for the purpose of heading 3003. Given that heading 3003 is limited to mixed products, the imported merchandise cannot meet the terms of the heading 3003. See Janssen Ortho LLC v. United States, 425 F. Supp. 3d 1352, 1363 (CIT 2020) ("Because the court has determined that the subject merchandise is classifiable under Chapter 29, the notes to Chapter 30 require that the subject merchandise be treated as an unmixed product for the purposes of HTSUS Heading 3003."), aff'd, 995 F.3d 981 (Fed. Cir. 2021).

VI. The imported merchandise is properly classified under HTSUS subheading 2941.30.00

Having determined the proper heading, this court must now determine the proper subheading for the subject merchandise. GRI 6, HTSUS.

Subheading 2941.30.00 provides for "Tetracyclines and their derivatives; salts thereof." And EN 29.41 explicitly identifies "chlortetracycline (INN)" as a tetracycline derivative. See EN 29.41(3). As such, the court finds that the imported merchandise's proper classification is under HTSUS 2941.30.00.

CONCLUSION

For the foregoing reasons, the court grants Zoetis's motion for summary judgment, denies the Government's cross-motion for summary judgment, and holds that the subject merchandise is properly classified under HTSUS 2941.30.00. Judgment will be entered accordingly.

/s/ Joseph A. Laroski, Jr.
Judge

Dated: September 2, 2026
New York, New York