

Authority: 21 U.S.C. 811, 812, 871(b), unless otherwise noted.

2. Section 1308.11(d)(27) is revised to read as follows:

§ 1308.11 Schedule I.

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(d) * * *

(27) Tetrahydrocannabinols—7370

Meaning tetrahydrocannabinols naturally contained in a plant of the genus *Cannabis* (cannabis plant), as well as synthetic equivalents of the substances contained in the cannabis plant, or in the resinous extractives of such plant, and/or synthetic substances, derivatives, and their isomers with similar chemical structure and pharmacological activity to those substances contained in the plant, such as the following:

- 1 cis or trans tetrahydrocannabinol, and their optical isomers
- 6 cis or trans tetrahydrocannabinol, and their optical isomers
- 3, 4 cis or trans tetrahydrocannabinol, and its optical isomers

(Since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered.)

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Dated: March 18, 2003.

John B. Brown III,

Acting Administrator.

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DEPARTMENT OF JUSTICE

Drug Enforcement Administration

21 CFR Part 1308

[DEA-206F]

RIN 1117-AA55

Exemption From Control of Certain Industrial Products and Materials Derived From the Cannabis Plant

AGENCY: Drug Enforcement Administration, Department of Justice.

ACTION: Final rule.

SUMMARY: The Drug Enforcement Administration (DEA) is adopting as final an interim rule exempting from control (*i.e.*, exempting from all provisions of the Controlled Substances Act (CSA)) certain items derived from the cannabis plant and containing tetrahydrocannabinols (THC). Specifically, the interim rule exempted THC-containing industrial products,

processed plant materials used to make such products, and animal feed mixtures, provided they are not used, or intended for use, for human consumption (and therefore cannot cause THC to enter the human body).

DATES: This final rule becomes effective on April 21, 2003.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

What Does This Rule Accomplish and by What Authority Is It Being Issued?

This final rule revises the DEA regulations to add a provision exempting from CSA control certain THC-containing industrial products, processed plant materials used to make such products, and animal feed mixtures, provided such products, materials, and feed mixtures are made from those portions of the cannabis plant that are excluded from the definition of marijuana and are not used, or intended for use, for human consumption. Among the types of industrial products that are exempted as a result of this final rule are: (i) Paper, rope, and clothing made from cannabis stalks; (ii) processed cannabis plant materials used for industrial purposes, such as fiber retted from cannabis stalks for use in manufacturing textiles or rope; (iii) animal feed mixtures that contain sterilized cannabis seeds and other ingredients (not derived from the cannabis plant) in a formulation designed, marketed, and distributed for animal (nonhuman) consumption; and (iv) personal care products that contain oil from sterilized cannabis seeds, such as shampoos, soaps, and body lotions (provided that using such personal care products does not cause THC to enter the human body).

This rule is being issued pursuant to 21 U.S.C. 811, 812, and 871(b). Sections 811 and 812 authorize the Attorney General to establish the schedules in accordance with the CSA and to publish amendments to the schedules in the Code of Federal Regulations, part 1308 of Title 21. Section 871(b) authorizes the Attorney General to promulgate and enforce any rules, regulations, and procedures which he may deem necessary and appropriate for the efficient enforcement of his functions under the CSA. In addition, the Attorney General is authorized to exempt, by regulation, any compound, mixture, or preparation containing any controlled substance from the

application of all or any part of the CSA if he finds such compound, mixture, or preparation meets the requirements of section 811(g)(3). These functions vested in the Attorney General by the CSA have been delegated to the Administrator and Deputy Administrator of DEA. 21 U.S.C. 871(a); 28 CFR 0.100(b) and 0.104, appendix to subpart R, sec. 12.

Why Is DEA Exempting From Control Certain THC-Containing Substances Not Intended for Human Consumption?

Without the exemptions made by the interim rule, which are adopted as final in this rule, a wide variety of legitimate industrial products derived from portions of the cannabis plant would be considered schedule I controlled substances. For example, paper, rope, and clothing (made using fiber from cannabis stalks) and industrial solvents, lubricants, and bird seed mixtures (made using sterilized cannabis seeds or oil from such seeds) would, in the absence of the interim rule, be considered schedule I controlled substances if they contained THC. If such products were considered schedule I controlled substances, their use would be severely restricted.¹ Under the interim rule, however, which DEA is adopting as final here, DEA exempted such legitimate industrial products from control, provided they are not used, or intended for use, for human consumption. As explained below, DEA believes this approach protects the public welfare within the meaning of the CSA while striking a fair balance between the plain language of the Act and the intent of Congress under prior marijuana legislation.

THC is an hallucinogenic substance with a high potential for abuse. Congress recognized this fact by placing it in schedule I of the CSA. Because of this, there are only two ways that THC may lawfully enter a person's body: (1) If the THC is contained in a drug product that has been approved by the Food and Drug Administration (FDA) as being safe and effective for human use;²

¹ The CSA and DEA regulations permit industrial use of schedule I controlled substances, but only under strictly regulated conditions.

² 21 U.S.C. 331, 355, 811(b), 812(b). At present, Marinol® is the only THC-containing drug product that has been approved for marketing by FDA. Marinol® is the brand name of a product containing synthetic dronabinol (a form of THC) in sesame oil and encapsulated in soft gelatin capsules that has been approved for the treatment of nausea and vomiting associated with cancer chemotherapy as well as the treatment of anorexia associated with weight loss in patients with AIDS. Because Marinol® is the only THC-containing drug approved by FDA, it is the only THC-containing substance listed in a schedule other than schedule

Continued

or (2) if an experimental drug containing THC is provided to a research subject in clinical research that has been approved by FDA and conducted by a researcher registered with DEA.³ Disallowing human consumption of schedule I controlled substances except in the foregoing limited circumstances is an absolute necessity to conform with the CSA and protect the public welfare within the meaning of the Act.⁴

Where, however, a schedule I controlled substance is contained in a product not used for human consumption, the CSA provides DEA with discretionary authority to issue regulations exempting such product from control.⁵ DEA has carefully considered whether it is appropriate to exercise this discretionary authority when it comes to industrial "hemp" products (*i.e.*, products made from portions of the cannabis plant excluded from the CSA definition of marijuana). The text of the CSA and its legislative history make no mention of industrial uses of the cannabis plant. However, DEA has taken into account that, under prior legislation (the Marihuana Tax Act of 1937), Congress intended to permit the use of certain cannabis-derived industrial products. The Senate Report accompanying the 1937 Act stated:

The [cannabis] plant * * * has many industrial uses. From the mature stalks, fiber is produced which in turn is manufactured into twine, and other fiber products. From the seeds, oil is extracted which is used in the manufacture of such products as paint, varnish, linoleum, and soap. From hempseed cake, the residue of the seed after the oil has been extracted, cattle feed and fertilizer are manufactured. In addition, the seed is used as a special feed for pigeons.

S. Rep. No. 900, 75th Cong., 1st Sess., at 2-3 (1937). DEA recognizes that the intent of Congress in 1937 to allow the foregoing industrial "hemp" products is no longer controlling because the CSA (enacted in 1970) repealed and superseded the 1937 Marihuana Tax Act. DEA further recognizes that the allowance that Congress made for such

¹ DEA recently transferred Marinol® from schedule II to schedule III, thereby lessening the CSA regulatory requirements governing its use as medicine. See 64 FR 35928 (1999).

² 21 U.S.C. 823(f); 21 CFR 5.10(a)(9), 1301.18, 1301.32.

³ In enacting the CSA, Congress stated: "The illegal importation, manufacture, distribution, and possession and improper use of controlled substances have a substantial and detrimental effect on the health and general welfare of the American people." 21 U.S.C. 801(2).

⁴ See 21 U.S.C. 811(g)(3); see also 21 U.S.C. 871(b) (providing discretionary authority to DEA Administrator to "promulgate and enforce any rules, regulations, and procedures which he may deem necessary and appropriate for the efficient execution of his functions under [the CSA].").

products under the now-rescinded Marihuana Tax Act was based on a 1937 assumption (now refuted) that such products contained none of the psychoactive drug now known as THC. (In contrast, when Congress enacted the CSA in 1970, it expressly declared that anything containing THC is a schedule I controlled substance.)⁶ Still, for the reasons provided below, DEA believes it is an appropriate exercise of the Administrator's discretionary authority under the CSA to issue an exemption allowing the legitimate industrial uses of "hemp" that were allowed under the 1937 Act. At the same time, DEA has been careful to ensure that this exemption comports with the CSA by maintaining the rule that no humans may lawfully take THC into their bodies except when they are (i) using an FDA-approved drug product or (ii) the subjects of FDA-authorized research.

DEA may not arbitrarily exempt a controlled substance from application of the CSA. Rather, such an exemption must be based on a provision of the CSA. As cited above, the exemption of certain "hemp" products under this final rule is issued pursuant to two CSA provisions: 21 U.S.C. 811(g)(3)(B) and 871(b).

Pursuant to 811(g)(3)(B), the Administrator of DEA may exempt from control "[a] compound, mixture, or preparation which contains any controlled substance, which is not for administration to a human being or animal, and which is packaged in such form or concentration, or with adulterants or denaturants, so that as packaged it does not present any significant potential for abuse." This provision, which was added to the CSA in 1984, was aimed primarily at analytic standards and preparations which are not for use in humans and pose no significant abuse threat by nature of their formulation. It bears emphasis, however, that Congress did not mandate that DEA exempt from control all mixtures and preparations that DEA determines meet the criteria of section 811(g)(3)(B). Rather, as the word "may" in the first line of section 811(g)(3) indicates, Congress gave DEA discretionary authority to issue such exemptions.

The DEA regulation that implements section 811(g)(3)(B) is 21 CFR 1308.23. Section 1308.23(a) provides that the Administrator may exempt from control a chemical preparation or mixture containing a controlled substance that is "intended for laboratory, industrial,

educational, or special research purposes and not for general administration to a human being or other animal" if it is packaged in such a form or concentration, or with adulterants or denaturants, so that the presence of the controlled substance does not present any significant potential for abuse.

DEA believes that industrial "hemp" products such as paper, clothing, and rope, when used for legitimate industrial purposes (not for human consumption) meet the criteria of section 811(g)(3)(B) and § 1308.23. Legitimate use of such products cannot result in THC entering the human body. Moreover, allowing these products to be exempted from CSA control in no way hinders the efficient enforcement of the CSA. Accordingly, DEA believes that these types of industrial products should be exempted from application of the CSA, provided they are not used, or intended for use, for human consumption. For the same reasons, processed cannabis plant materials that cannot readily be converted into any form that can be used for human consumption, and which are used in the production of such legitimate industrial products, are being exempted from control under this final rule.

The use of sterilized cannabis seeds⁷ that contain THC in animal feed fails to meet the criteria of section 811(g)(3)(B) and section 1308.23 because this involves the use of a controlled substance (THC) in animals.⁸ Nonetheless, pursuant to 21 U.S.C. 871(b), DEA believes it is appropriate to exempt from application of the CSA animal feed mixtures containing such seeds, provided the seeds are mixed with other ingredients that are not derived from the cannabis plant in a formulation designed, marketed and distributed for animal consumption (not for use in humans). Section 871(b) authorizes the Attorney General to promulgate and enforce any rules, regulations, and procedures which he may deem necessary and appropriate for the efficient enforcement of his functions under the CSA. It should be underscored that section 871(b) is not a catchall provision that can be used to justify any exemption. For the following

⁷ Unless otherwise indicated, all references in this document to "cannabis seeds" or "hemp seeds" refer to sterilized seeds (incapable of germination). In contrast to sterilized cannabis seeds, unsterilized cannabis seeds fit within the CSA definition of marijuana and are not exempted from control under this interim rule.

⁸ If, however, the "hemp" seeds used in animal feed are sterilized cannabis seeds that contain no THC, such seeds are not a controlled substance. Under such circumstances, there is no need to exempt such seeds from control.

⁶ A detailed comparison of the 1937 Marihuana Tax Act and the CSA is provided in the October 9, 2001 interpretive rule. 66 FR at 51530-51531.

reasons, however, DEA believes that the use of sterilized cannabis seeds in animal feed mixtures is a unique situation that warrants an exemption pursuant to section 871(b).

As stated above and in the interpretive rule, the legislative history of the 1937 Marihuana Tax Act reveals that Congress expressly contemplated allowing “hemp” animal feed. The 1937 Congress categorized such use of “hemp” as a legitimate “industrial” use. It is true that the intent of the 1937 Congress is no longer controlling since the CSA repealed the 1937 Act and declared anything containing THC to be a schedule I controlled substance. However, because neither the text nor the legislative history of the CSA addresses the legality of using sterilized cannabis seeds in animal feed, or the possibility that such seeds might contain THC, what was viewed under the 1937 Act as “legitimate industrial use” of such seeds in animal feed continued uninterrupted following the enactment of the CSA in 1970.

The historical lack of federal regulation of some THC-containing products (whether based on differences between prior law and the CSA, lack of awareness of the THC content of such product, or other considerations) does not—by itself—justify exempting such product from control under the CSA. DEA remains obligated to apply the provisions of the CSA to all controlled substances absent a statutory basis to exempt a particular substance from control. However, with respect to animal feed mixtures containing sterilized cannabis seeds, additional factors (combined with Congress’ express desire under prior legislation to allow such products) justify an exemption pursuant to section 871(b). The presence of a controlled substance in animal feed poses less potential for abuse than in a product intended for human use and does not entail the administration of THC to humans. Moreover, when sterilized cannabis seeds are mixed with other animal feed ingredients and not designed, marketed, or distributed for human use, there is minimal risk that they will be converted into a product used for human consumption. Therefore, such legitimate use in animal feed mixtures poses no significant danger to the public welfare. Accordingly, given the unique circumstances and history surrounding the use of sterilized cannabis seeds in animal feed, DEA believes that it comports with the CSA to continue to treat such activity as a legitimate industrial use—not subject to CSA control—provided the foregoing conditions are met.

How Is “Human Consumption” Defined Under This Rule?

Under this final rule, a material, compound, mixture, or preparation containing THC will be considered “used for human consumption” (and therefore not exempted from control) if it is: (i) Ingested orally or (ii) applied by any means such that THC enters the human body. A material, compound, mixture, or preparation containing THC will be considered “intended for use for human consumption” and, therefore, not exempted from control if it is: (i) Designed by the manufacturer for human consumption; (ii) marketed for human consumption; or (iii) distributed, exported, or imported with the intent that it be used for human consumption.

In any legal proceeding arising under the CSA, the burden of going forward with the evidence that a material, compound, mixture, or preparation containing THC is exempt from control pursuant to this rule shall be upon the person claiming such exemption. 21 U.S.C. 885(a)(1). In order to meet this burden with respect to a product or processed plant material that has not been expressly exempted from control by the Administrator pursuant to 21 CFR 1308.23 (as explained below under the heading “What Is the Control Status of Personal Care Products Made from ‘Hemp?’”), the person claiming the exemption must present rigorous scientific evidence, including well-documented scientific studies by experts trained and qualified to evaluate the effects of drugs on humans.

How Are “Processed Plant Material” and “Animal Feed Mixture” Defined Under This Rule?

Under this final rule, any portion of the cannabis plant excluded from the CSA definition of marijuana will be considered “processed plant material” if it has been subject to industrial processes, or mixed with other ingredients, such that it cannot readily be converted into any form that can be used for human consumption. For example, fiber that has been separated from the mature stalks by retting for use in textiles is considered processed plant material, which is exempted from control, provided it is not used, or intended for use, for human consumption. In comparison, mature stalks that have merely been cut down and collected do not fit within the definition of “processed plant material” and, therefore, are not exempted from control. As another example, if a shampoo contains oil derived from sterilized cannabis seeds, one would expect that, as part of the production of

the shampoo, the oil was subject to industrial processes and mixed with other ingredients such that, even if some THC remains in the finished product, the shampoo cannot readily be converted into a product that can be consumed by humans. Under such circumstances, the product is exempted from control under this final rule. In comparison, a personal care product that consists solely of oil derived from cannabis seeds does not meet the definition of “processed plant material” under this final rule and, therefore, is not exempted from control.

“Animal feed mixture” is defined under this final rule to mean sterilized cannabis seeds mixed with other ingredients in a formulation that is designed, marketed, and distributed for animal consumption (and not for human consumption). For example, sterilized cannabis seeds mixed with seeds from other plants and for sale in pet stores fit within the definition of “animal feed mixture” and are exempted from control under this final rule provided the feed mixture is not used, or intended for use, for human consumption. (In contrast, a container of pure sterilized cannabis seeds—mixed with no other ingredients—does not meet the definition of “animal feed mixture” under this final rule and, therefore, is not exempted from control.)

Which “Hemp” Products Are Exempted From Control Under This Rule?

It is impossible to list every potential product that might be made from portions of the cannabis plant excluded from the definition of marijuana. Therefore, DEA cannot provide an exhaustive list of “hemp” products that are exempted from control under this final rule. Nonetheless, in order to provide some guidance to the public, the following are some of the more common “hemp” products that are exempted (noncontrolled) under this final rule, provided they are not used, or intended for use, for human consumption: paper, rope, and clothing made from fiber derived from cannabis stalks, industrial solvents made with oil from cannabis seeds, and bird seed containing sterilized cannabis seed mixed with seeds from other plants (or other ingredients not derived from the cannabis plant). Personal care products (such as lotions and shampoos) made with oil from cannabis seeds are also generally exempted, as explained below.

Which “Hemp” Products Are Not Exempted From Control Under This Rule?

Other than those substances that fit within the exemption being issued in

this final rule, all other portions of the cannabis plant, and products made therefrom, that contain any amount of THC are schedule I controlled substances.

Again, because one cannot list every conceivable "hemp" product, it is impossible to examine here every "hemp" product for a determination of whether such product is used, or intended for use, for human consumption within the meaning of this final rule. Therefore, this document contains no exhaustive list of "hemp" products that are not exempted from control under this final rule. Nonetheless, to provide some guidance, the following are some of the "hemp" products that are not exempted from control under this final rule (and therefore remain controlled substances) if they contain THC: any food or beverage (such as pasta, tortilla chips, candy bars, nutritional bars, salad dressings, sauces, cheese, ice cream, and beer) or dietary supplement.

What Is the Control Status of Personal Care Products Made From "Hemp"?

DEA has not conducted chemical analyses of all of the many and varied personal care products that are marketed in the United States, such as lotions, moisturizers, soaps, or shampoos that contain oil from sterilized cannabis seeds. Indeed, it appears that there is no reliable source of information on these products. Accordingly, DEA does not know whether every personal care product that is labeled a "hemp" product necessarily was made using portions of the cannabis plant, and if so, whether such portions of the plant are those excluded from the definition of marijuana. Even if one assumes that a product that says "hemp" on the label was made using cannabis seeds or other portions of the plant, one cannot automatically infer, without conducting chemical analysis, that the product contains THC.⁹ Assuming, however, that a "hemp" product does contain THC, and assuming further that such product is marketed for personal care (e.g., body lotion or shampoo), the question remains whether the use of the product results in THC entering the human body. DEA is unaware of any scientific evidence that definitively answers this question. Therefore, DEA cannot state, as a general matter, whether "hemp" personal care products are exempted from control under this

final rule. Nonetheless, given the information currently available, DEA will assume, unless and until it receives evidence to the contrary, that most personal care products do not cause THC to enter the human body and, therefore, are exempted under this final rule. For example, DEA assumes at this time that lotions, moisturizers, soaps, and shampoos that contain oil from sterilized cannabis seeds meet the criteria for exemption under this final rule because they do not cause THC to enter the human body and cannot be readily converted for human consumption. However, if a personal care "hemp" product is formulated and/or designed to be used in a way that allows THC to enter the human body, such product is not exempted from control under this final rule.

Again, it must be emphasized that, although DEA believes that most personal care "hemp" products currently marketed in the United States meet the criteria for exemption under this final rule, it is not possible for DEA to provide an exhaustive list of every such product and to state whether such product is exempted. Should manufacturers, distributors, or importers of "hemp" personal care products wish to have their products expressly exempted from control, they should take steps to determine whether such products contain THC and, if they do contain THC, whether use of the products results in THC entering the human body. Any such manufacturer, distributor, or importer who believes that its product satisfies the criteria for exemption under this final rule may request that DEA expressly declare such product exempted from control by submitting to DEA an application for an exemption, together with appropriate scientific data, in accordance with the procedures set forth in 21 CFR 1308.23(b) and (c).

A manufacturer, distributor, or importer of a "hemp" product that meets the criteria for exemption under this final rule need not obtain an express exemption from DEA in order to continue to handle such product. Rather, this is a voluntary procedure. DEA leaves it to the individual manufacturer, distributor, or importer to decide whether there is sufficient uncertainty about its product to seek an express exemption from DEA. However, any person who continues to handle a "hemp" product that does not meet the criteria for an exemption under this final rule is subject to liability under the CSA.

What Is the Legal Status of "Hemp" Products That Contain No THC?

Any portion of the cannabis plant, or any product made therefrom, or any product that is marketed as a "hemp" product, that is both excluded from the definition of marijuana and contains no THC—natural or synthetic—(nor any other controlled substance) is not a controlled substance. Accordingly, such substances need not be exempted from control under this final rule, since they are, by definition, noncontrolled.

What Is the Justification for Issuing the Exemptions Under This Rule?

DEA believes it is both necessary for the most effective enforcement of the CSA and consistent with the public interest to allow the exemptions contained in this rule. Otherwise, as provided in the CSA and DEA regulations, all products containing any amount of THC are schedule I controlled substances. In other words, in the absence of this final rule, legitimate industrial "hemp" products such as paper, rope, clothing, and animal feed mixtures would be schedule I controlled substances if they contain THC. Thus, without the exemptions that are being finalized in this rule, anyone who sought to import such products for legitimate industrial uses would need to obtain a DEA registration and an import permit. 21 U.S.C. 952(a)(2), 957(a). Likewise, distributors of such products would need a DEA registration and would be required to utilize DEA order forms and maintain strict records of all transactions. 21 U.S.C. 822(a)(1), 827(a), 828(a). DEA believes that such regulatory requirements are unnecessary to protect the public welfare and achieve the goals of the CSA, provided such products are not used, or intended for use, for human consumption. Furthermore, DEA believes that it would not be an appropriate prioritization of limited agency resources to take on the responsibility of regulating these products as schedule I controlled substances when they are not being used for human consumption. Therefore, as long as there is no possibility that humans will consume THC by using something other than an FDA-approved drug product or a product that the FDA has authorized for clinical research, DEA believes that it is consistent with the purposes and structure of the CSA to exempt industrial "hemp" products, processed plant materials, and animal feed mixtures in the manner specified in this final rule.

⁹ Any product that (i) is made from portions of the cannabis plant excluded from the CSA definition of marijuana and (ii) contains no THC (nor any other controlled substance) is not a controlled substance.

What Are the Registration Requirements for Handlers of "Hemp" Products Under This Final Rule?

In light of the exemptions provided under this rule, the following registration requirements should be considered:

Who must obtain a registration—Persons who wish to manufacture or distribute any THC-containing product or plant material that is not exempted from control under this rule must apply for the corresponding registration to handle a schedule I controlled substance. Absent such registration, it is unlawful to manufacture, distribute, or dispense, import, or export any such product or plant material. 21 U.S.C. 822(b), 841(a)(1), 957(a), 960(a). The circumstances under which DEA may grant registrations to handle schedule I controlled substances are limited, as set forth in 21 U.S.C. 823.

In addition, no person may cultivate the cannabis plant for any purpose except when expressly registered with DEA to do so. This has always been the case since the enactment of the CSA. 21 U.S.C. 822(b), 823(a); 21 CFR Part 1301; *see New Hampshire Hemp Council, Inc. v. Marshall*, 203 F.3d 1 (1st Cir. 2000). Further, the CSA prohibits the importation of schedule I controlled substances except as authorized by 21 U.S.C. 952(a)(2). Similarly, the CSA prohibits the exportation of schedule I nonnarcotic controlled substances except as authorized by 21 U.S.C. 953(c).

Who need not obtain a registration—Persons who import and distribute "hemp" products and processed cannabis plant material that are exempted from control under this final rule are not subject to any of the CSA requirements, including the requirement of registration. For example, a person who imports "hemp" clothing is not considered to be importing a controlled substance and is, therefore, not subject to any of the CSA requirements. Similarly, a person who has imported into the United States processed cannabis plant material that is exempted under this rule (such as retted fiber) and converts such material into an exempted "hemp" product (such as clothing) is not considered to be manufacturing a controlled substance and, therefore, need not obtain a controlled substance manufacturing registration.

It is worth repeating here that, if a product marketed as a "hemp" product actually contains no THC (or any other controlled substance), it is noncontrolled and handlers of the product are not subject to any of the

CSA provisions, such as the registration requirement.

Comments That DEA Received in Response to the Interim Rule

Following publication of the interim rule, DEA received comments from thousands of individuals and groups. The comments were in the form of original letters, form letters, petitions, and a cookbook. Those who submitted comments included companies that manufacture and distribute various "hemp" products, associations that represent such manufacturers and distributors, domestic and Canadian government officials, and individuals. In accordance with the Administrative Procedure Act, DEA carefully considered all of the comments it received.

Most of the comments that DEA received relate to both of the rules that DEA published on October 9, 2001: (i) DEA 205 (66 FR 51535), a proposed rule, which proposed to clarify that the listing of THC includes both natural and synthetic THC and (ii) DEA 206 (66 FR 51539), an interim rule, which exempted certain THC-containing products and plant materials from control. Those comments that DEA received which pertain primarily to the interim rule are addressed here. Those comments which pertain primarily to the proposed rule are addressed in the final DEA 205 rule, which appears in a separate **Federal Register** document that immediately precedes this document. Both DEA 205 and DEA 206 contain a summary of the pertinent comments, along with an explanation of how DEA considered them in deciding to finalize the rules.

The number of individuals and groups that participated in the comment process far exceeded the number of different issues raised. The issues raised overlapped to a large extent as many persons submitted form letters or signed petitions written by groups which themselves submitted lengthy comments. In this document, together with the final proposed rule, DEA has addressed all the major issues raised by the commenters. Some of these issues are addressed above in the text that precedes this section. The remaining issues are addressed below.

Comments Regarding Which Products To Exempt From Control

None of the commenters objected to the basic purpose of this rule: To exempt from control certain THC-containing industrial products and animal feed mixtures made from "hemp" (portions of the cannabis plant excluded from the definition of

marijuana). To the contrary, all the commenters who expressed an opinion on this particular issue agreed with these exemptions.¹⁰ However, many commenters said that DEA should go further by also exempting "hemp" food and beverage products that contain THC. DEA declined to adopt this suggestion for the reasons provided herein.

Those commenters who requested that DEA exempt THC-containing "hemp" food and beverage products made two main claims in support of this request: (i) That "hemp" foods and beverages contain only minimal amounts of THC, which, they asserted, cannot cause any psychoactive effects; and (ii) that the oil from "hemp" seeds (sterilized cannabis seeds) provides nutritional value and is a safe food ingredient.¹¹

As to the issue of THC content, many of the comments appeared to be asking DEA simply to assume that the placement of the word "hemp" on the label of a food or beverage product automatically means that the product contains a certain low amount of THC. In fact, the existence of the word "hemp" on the label of a food container provides no definitive proof of its contents. The FDA cannot and does not evaluate the contents of every food product sold in the United States. Since there is no reliable information about the contents of all foods and beverages marketed as "hemp" products, it cannot automatically be assumed that all such products will never cause a psychoactive effect or a positive drug test for THC.

One scientific study published in 1997 examined "hemp" salad oil (containing oil from cannabis seeds) sold in "hemp shops" and health food stores in Switzerland. The authors of the study stated that all the human subjects who ate the cannabis seed oil reported THC-specific psychotropic symptoms and had urine samples positive for THC.¹² In citing this study, DEA is not

¹⁰ Some commenters were under the mistaken impression that DEA failed to exempt any products from control. These commenters asked DEA to exempt what DEA had already exempted under the interim rule. For example, several commenters objected to DEA's supposed failure to exempt "hemp" clothing and paper, even though the interim rule stated repeatedly that such products were being exempted.

¹¹ Some commenters also expressed concern about the economic impact of disallowing THC-containing "hemp" food and beverage products. This issue is addressed in the final 205 rule, in the regulatory certifications.

¹² T. Lehman, Institute of Pharmacy, University of Bern, *et al.*, Excretion of Cannabinoids in Urine after Ingestion of Cannabis Seed Oil, *Journal of Analytical Toxicology*, vol. 21 (September 1997).

suggesting that all “hemp” food and beverage products cause psychoactive effects. Rather, DEA mentions this study in response to the assertions made by some commenters that eating “hemp” foods cannot possibly cause psychoactive effects.¹³

Attached to one of the comments was another study, which was also financed by various “hemp” companies. This study, entitled “Assessment of Exposure to and Human Health Risk from THC and other cannabinoids in hemp foods,” reached similar conclusions about the reduced levels of THC in currently marketed “hemp” foods and the diminished likelihood of testing positive for THC when consuming such products.

As for the comments claiming that “hemp” foods provide essential nutrients and are safe to eat, it is not DEA’s role under the CSA to assess the nutritional value or safety of foods.¹⁴ Regardless of whether the oil from cannabis seeds contains certain nutrients,¹⁵ the CSA does not provide

¹³ In a later study, financed by various “hemp” companies, human subjects were given oil from cannabis seeds containing lower doses of THC than in the Lehman study. G. Leson, *et al.*, Evaluating the Impact of Hemp Food Consumption on Workplace Drug Tests, *Journal of Analytic Toxicology*, vol. 25 (November/December 2001). The authors of this study reported that ingestion of cannabis seed oil containing these lower doses of THC resulted in little or no positive screening for THC, depending on the amount of THC consumed and the sensitivity of the urine testing. Companies who financed this study assert that the lower THC content given to the subjects of this study is commensurate with the current methods employed by these companies for cleaning the cannabis seeds before removing the oil from them for use in food products.

¹⁴ In the context of the CSA, the public “safety” (and DEA’s role therein) is implicated by the use of controlled substances for other than a legitimate medical purpose or in any other manner not authorized by the CSA.

¹⁵ Although this rule is not a food safety measure, because DEA received so many comments regarding this issue, some members of the public may be interested in the following information. Under the Federal Food, Drug, and Cosmetic Act, a substance that is added to food is not subject to the requirement of premarket approval if its safety is generally recognized among qualified scientific experts under the conditions of its intended use. 21 U.S.C. 321(s). A substance added to a food may be considered “generally recognized as safe” (GRAS) through experience based on “common use in food,” which requires a substantial history of consumption for food use by a significant number of consumers. 21 CFR 170.3(f), (h); 21 CFR 170.30. The FDA evaluated an industry submission claiming GRAS status for certain food uses of “hempseed oil” and expressly stated that it did not believe the submission provided a sufficient basis to classify “hempseed oil” as GRAS through experience based on common use in food. See FDA Center for Food Safety & Applied Nutrition, Office of Premarket Approval, Agency Response Letter, GRAS Notice No. GRN 00035 (August 24, 2000), reproduced at www.cfsan.fda.gov/rdb/opa-g035.html. In making this determination, the FDA did not evaluate whether there would be a basis for

for DEA to exempt food products that contain THC. As explained above and in the text accompanying the interim rule, the CSA prohibits human consumption of “any quantity” of a schedule I hallucinogenic substance outside of an FDA-approved product or FDA-approved research. Other than drugs that have been approved by the FDA for prescription use, or drugs that may be lawfully sold over the counter without a prescription, DEA may not exempt controlled substances to allow them to be used for human consumption—even in the case of products that supposedly contain only “trace amounts” of a controlled substance. 21 U.S.C. 811(g). Thus, DEA may not, as some commenters proposed, pick an arbitrary cutoff line allowing a certain percentage of THC in foods and beverages. Moreover, notwithstanding the statutory prohibition, DEA believes it would be inappropriate to attempt to establish an acceptable level of schedule I hallucinogens in food products. For example, it would not be appropriate to allow food products to contain “trace amounts” of such other schedule I hallucinogens as LSD or MDMA (“ecstasy”). Finding that it is contrary to the public welfare to allow human consumption of “any quantity” of schedule I hallucinogens, Congress did not give DEA the authority to determine what constitutes a “safe amount” of such drugs in food.¹⁶

Accordingly, DEA has limited the exemptions provided in this final rule to those cannabis-derived “hemp” products that do not cause THC to enter the human body.

Comments Regarding Testing Methods To Evaluate THC Content of Foods and Beverages

Many commenters asked the agency to indicate how it will determine whether a food or beverage product contains THC. Under federal law, it is legally sufficient to demonstrate a violation of the CSA based on the presence of any measurable amount of a prohibited controlled substance.¹⁷ Thus, the questions raised by the commenters are: “What testing methods

GRAS status through scientific procedures or whether “hempseed oil” would meet the standard for premarket approval as a food additive. *Id.*

¹⁶ To establish a violation of the CSA, the government does not have to prove that the controlled substance in question was of sufficient quantity to produce a psychoactive effect. *United States v. Nelson*, 499 F.2d 965 (8th Cir. 1974).

¹⁷ See, e.g., *United States v. Holland*, 884 F.2d 354, 357 (8th Cir. 1989), cert. denied, 493 U.S. 997 (1989); see also 21 U.S.C. 812(c), schedule I(c) (listing “any material, compound, mixture, or preparation, which contains any quantity” of hallucinogenic substances in schedule I).

will DEA utilize to determine whether a food product contains a measurable amount of THC and how sensitive are such methods?”

DEA will utilize testing assays or protocols used in standard analytical laboratories that have demonstrated valid and reliable sensitivity for the measurements of THC.¹⁸ The methodology, level of sensitivity, and degree of testing accuracy in the fields of analytical and forensic chemistry have evolved since the first discovery of THC in the 1960s. A variety of analytical equipment, testing methodologies, and protocols are described in the published scientific literature.¹⁹ Such methods may include (but are not limited to) gas chromatography, liquid chromatography, and mass spectrometry analyses. DEA has not, and will not, utilize any one method to the exclusion of others.²⁰

The lower limit of detectability of these assays can vary according to equipment, methodologies, and the form of the sample. Nonetheless, using currently available analytical methodologies and extraction procedures, it is reasonable to reproducibly and accurately detect THC at or below 1 part per million in cannabis bulk materials or products. Should more sensitive assays and analytical techniques be developed in the future, DEA will refine its testing methods accordingly.

Some companies that handle “hemp” food products have asked DEA whether the agency would test the companies’ products for THC content. It is not

¹⁸ In this context, “valid” means that the technique measures what it is designed to measure, and “reliable” means that the technique can be replicated by other laboratories.

¹⁹ See, e.g., M.V. Doig & R. Andela, *Analysis of pharmacologically active cannabinoids by GC-MS*, *Chromatographia* 52 (Supp.): S101-S102 (2000); P.D. Felgate & A.C. Dinan, *The determination of delta-9-tetrahydrocannabinol and 11-Nor-9-carboxy-delta-9-tetrahydrocannabinol in whole blood using solvent extraction combined with polar solid-phase extraction*, *Journal of Analytical Toxicology* 24:127-132 (2000); K. Ndjoko, *et al.*, *Analysis of cannabinoids by liquid chromatography-thermospray mass spectrometry and liquid chromatography-tandem mass spectrometry*, *Chromatographia* 47:72-76 (1998); B.J. Gudzinowicz & M.J. Gudzinowicz, *Analysis of drugs and metabolites by gas chromatography-mass spectrometry*, Volume 7: Natural, pyrolytic, and metabolic products of tobacco and marijuana, NY: Marcel Dekker, Inc. (1980).

²⁰ What constitutes the appropriate method of testing may vary depending on the circumstances. In any criminal prosecution, civil or administrative action, or other legal proceeding arising under the CSA, where the government must prove the presence of a controlled substance, the government may do so by the introduction of any evidence sufficient under law to prove such fact. See, e.g., *United States v. Bryce*, 208 F.3d 346, 352-354 (2d Cir. 2000).

within DEA's authority to serve as such a testing laboratory for private entities. Nor would it be appropriate for DEA to certify laboratories for these analyses. Manufacturers and distributors of "hemp" food and beverage products may, of course, conduct their own testing to determine to their own satisfaction that their products contain no THC. However, they are under no obligation to do so. Whether or not they conduct such testing, the law remains the same: if a food or beverage product contains any measurable amount of THC, it is an illegal schedule I controlled substance; if it contains no THC, it is a legal, noncontrolled substance.

Comments Regarding Drug Screening

Several commenters asserted that, in deciding whether or not to exempt THC-containing food and beverage products, DEA should not concern itself with the possibility that persons who eat such products then undergo drug screening might test positive for THC. Some of these commenters suggested that "hemp" food and beverage manufacturers have taken steps to ensure that the amount of THC in their products is low enough to avoid causing a positive drug screen. Given these comments, it must be emphasized that, while effective drug screening in appropriate circumstances is of concern to DEA and was part of the agency's overall consideration, the ultimate decision about which products to exempt from control did not turn on drug testing considerations. Rather, as explained above, DEA exempted certain products to the extent permissible by the CSA and consistent with the public welfare within the meaning of the Act.

Although drug testing was not the basis for the exemptions, in view of the comments about drug testing, it is worth reiterating that there are no uniform standards of what constitutes a "hemp" product. It cannot be said that, merely because a product has the word "hemp" on the label, it will necessarily contain a certain low amount of THC. Therefore, it cannot automatically be said that a food or beverage product marketed as containing "hemp" will never cause a positive drug test for THC. In fact, as noted above, one published scientific study found that eating "hempseed" salad oil (of a variety sold in "hemp shops" in Switzerland) did cause human research subjects to test positive for THC.

Comments Regarding the Cultivation of Cannabis for Industrial Purposes

Some commenters asserted that the United States should promote the

cultivation of cannabis for industrial purposes based on economic and environmental considerations. These commenters seemed to misunderstand the nature of the rules being finalized today. The rules do not impose restrictions on, or even address, the cultivation of cannabis. Rather, as the text accompanying the rules makes clear, the rules clarify which cannabis-derived products are controlled and which are exempted from control.

As stated above, it has always been the case since the enactment of the CSA in 1970 that any person who seeks to lawfully grow cannabis for any purpose (including the production of "hemp" for industrial purposes) must obtain a DEA registration. This requirement remains in effect and is not modified by the rules DEA is finalizing today.

Regulatory Certifications

Economic Impact of This Rule

This rule allows economic activity that would otherwise be prohibited. As has now been made clear under the DEA regulations being finalized today, all products that contain any amount of THC are schedule I controlled substances unless they are specifically listed in another schedule or exempted from control. Thus, without the exemptions provided in this final rule, industrial "hemp" products such as paper, rope, clothing, and animal feed would be subject to the provisions of the CSA and DEA regulations that govern schedule I controlled substances if they contained THC. The CSA permits the use of schedule I controlled substances for industrial purposes, but only under strictly regulated conditions. By virtue of this rule, however, most industrial "hemp" products are exempt from all provisions of the CSA and DEA regulations. Thus, this rule imposes no regulatory restrictions on any economic activities; rather, it removes regulatory restrictions on certain economic activities.

Regulatory Flexibility Act

For the reasons provided in the foregoing paragraph, the Acting Administrator hereby certifies that this rule will not have a significant impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act (5 U.S.C. 605(b)). Therefore, a final regulatory flexibility analysis is not required for this final rule.

Executive Order 12866

This rule has been drafted and reviewed in accordance with Executive Order 12866, Regulatory Planning and

Review, section 1(b), Principles of Regulation. This rule has been determined to be a "significant regulatory action" under Executive Order 12866, section 3(f). Accordingly, this rule has been reviewed by the Office of Management and Budget for purposes of Executive Order 12866.

Executive Order 13132

This rule does not preempt or modify any provision of state law; nor does it impose enforcement responsibilities on any state; nor does it diminish the power of any state to enforce its own laws. Accordingly, this rule does not have federalism implications warranting the application of Executive Order 13132.

Executive Order 12988—Civil Justice Reform

This rule meets the applicable standards set forth in sections 3(a) and 3(b)(2) of Executive Order 12988.

Unfunded Mandates Reform Act of 1995

This rule will not result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100,000,000 or more in any one year. Therefore, no actions are necessary under the Unfunded Mandates Reform Act of 1995.

Small Business Regulatory Enforcement Fairness Act of 1996

This rule is not likely to result in any of the following: An annual effect on the economy of \$100,000,000 or more; a major increase in costs or prices for consumers, individual industries, Federal, state, or local government agencies, or geographic regions; or significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets. Accordingly, under the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), this is not a major rule as defined in 5 U.S.C. 804. Therefore, the provisions of SBREFA relating to major rules are inapplicable to this rule. However, a copy of this rule has been sent to the Office of Advocacy, Small Business Administration. Further, a copy of this rule will be submitted to each House of the Congress and to the Comptroller General in accordance with SBREFA (5 U.S.C. 801).

Paperwork Reduction Act of 1995

This rule does not involve collection of information within the meaning of the Paperwork Reduction Act of 1995.

List of Subjects in 21 CFR Part 1308

Administrative practice and procedure, Drug traffic control, Narcotics, Prescription drugs.

Final Rule

Pursuant to the authority vested in the Attorney General under sections 201, 202, and 501(b) of the CSA (21 U.S.C.

811, 812, and 871(b)), delegated to the Administrator and Deputy Administrator pursuant to section 501(a) (21 U.S.C. 871(a)) and as specified in 28 CFR 0.100, the Acting Administrator hereby orders that the interim rule amending title 21 of the Code of Federal Regulations, part 1308, to include new § 1308.35, which was

published at 66 FR 51539, on October 9, 2001, is adopted as a final rule without change.

Dated: March 18, 2003.

John B. Brown III,

Acting Administrator.

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