

documentation that would demonstrate that dietary ingredients and dietary supplements are manufactured, packaged, and held under the conditions that would be required under the proposed CGMP regulations. Further, FDA is using its authority under sections 801 and 701(a) of the act in proposing recordkeeping requirements for dietary ingredients and dietary supplements that may not be marketed or sold in the United States and that are exported under section 801(e) of the act.

In addition to having the authority under the act to require recordkeeping, we also have authority to require access to the records. Because the practices set forth in the proposed CGMP rule are necessary to providing consumers with dietary supplements that are not adulterated, access to records that demonstrate that firms follow CGMPs is essential to confirming systematic compliance with CGMPs. We also have the authority to copy the records when necessary. We may consider it necessary to copy records when, for example, our investigator may need assistance in reviewing a certain record from relevant experts in headquarters. If we were unable to copy the records, we would have to rely solely on our inspector's notes and reports when drawing conclusions. A failure to have a required record would mean that a food is adulterated under section 402(g) of the act.

Recordkeeping will not only help the agency to determine whether dietary ingredients or dietary supplements were manufactured, packaged, and held consistent with CGMP regulations, but also will provide a public health benefit to consumers. When manufacturers keep records, for example, of lot or batch numbers, the records facilitate a manufacturer's recall of suspect products in case a recall becomes necessary. This benefits consumers because the manufacturer can recall its products that may be adulterated or misbranded more quickly.

#### *B. Issues From the ANPRM*

As stated previously, in addition to inviting comment on the industry-drafted CGMP outline, we asked nine questions in the ANPRM on CGMP issues for dietary supplements that the industry outline did not address. In this section, we summarize each question and the principal comments we received, and we respond to the comments. We address other significant comments about the ANPRM, other than the nine questions we asked, elsewhere in this document.

The nine questions in the ANPRM, comments, and our responses are as follows:

*Question 1.* Is there a need to develop specific defect action levels (DALs) for dietary ingredients?

The ANPRM stated that the use of a botanical in a dietary supplement may result in a much greater exposure to the botanical ingredient for consumers because the dietary supplement will be consumed in greater amounts than if the ingredient was in a food as a spice or flavoring agent.

Several comments stated that establishing DALs for dietary ingredients that are different than DALs for food is not necessary. The comments disagreed with our statement that dietary ingredients in dietary supplements and conventional foods are consumed in different quantities. For example, the comments stated that generally botanical ingredients are present in dietary supplements in approximately the same amounts normally consumed in conventional foods.

Other comments generally opposed applying the current DALs for foods to dietary ingredients and instead supported the development of DALs for dietary ingredients, especially for botanicals and herbals. Many comments recommended that we cooperate with industry, outside the rulemaking process, to develop DALs for dietary ingredients.

We disagree with the comments that state that establishing DALs for dietary ingredients that are different than DALs for food is not necessary because an ingredient in food and in a dietary supplement would be consumed in the same amounts. The comment did not provide evidence or examples to support the comment. Some food ingredients for which DALs have been established also are dietary ingredients used in dietary supplements. For example, a DAL has been established for whole ginger used in a conventional food. Ginger is also a dietary ingredient used in dietary supplements. We have found dietary supplements that recommend a daily intake of ginger of 4,815 mg, 1,260 mg, and 2,200 mg (Ref. 38). One teaspoon of raw ginger root is equal to 2,000 mg (2 grams (g)) and one teaspoon of ground ginger is equal to 1,800 mg of ginger (1.8 g) (Ref. 39). A recipe for gingersnaps yielding 18 cookies specifies 1 teaspoon ginger (Ref. 40). Thus, ginger would be consumed in greater amounts as a dietary supplement than as an ingredient in a conventional food. However, we have tentatively concluded that we do not have sufficient information to determine

whether a DAL for a dietary ingredient should be established at a different level than what has been established for the same ingredient used in conventional food.

DALs are established for a food ingredient on a per weight basis. The DALs for whole ginger for "insect filth and/or mold" is an "average of 3 percent or more pieces by weight are insect-infected and/or moldy" and for "mammalian excreta" is an "average of 3 mg or more of mammalian excreta per pound" (Ref. 41). Because the DAL is established by weight of the whole ginger, the DAL for ginger would apply whether it is used as an ingredient in a conventional food or a dietary ingredient in a dietary supplement. Therefore, if we have established a DAL in the industry compliance document for a conventional food ingredient, that DAL also would apply to that ingredient when used as a dietary ingredient in a dietary supplement until such time that we would establish a different DAL for its use as a dietary ingredient (Ref. 41). However, we do not have many dietary ingredients that are included in the DAL compliance guide. We agree that DALs may be needed for some dietary ingredients, especially ingredients like botanicals that are subject to the same type of defects (such as mold and insect parts) as other food for which DALs have been established. We base DALs on scientific information such as literature surveys, scientific market surveys, and laboratory analyses and also on information gained through physical plant inspections. If and when we determine that we have sufficient information to develop DALs for dietary ingredients, we will consider whether to do so.

*Question 2.* We requested comments on appropriate testing requirements to provide positive identification of dietary ingredients, particularly plant materials, used in dietary supplements.

The ANPRM explained that the misidentification of dietary ingredients, particularly plant materials, used in dietary supplements may present a significant public health and economic concern. The ANPRM also noted that the analytical methodology available for identifying many dietary ingredients is limited. We invited comments on the technical and scientific feasibility of identifying different types of dietary ingredients. We also solicited information on what constitutes "adequate testing" for identity of different types of dietary ingredients, and, in the absence of testing, what types of practices would be effective alternatives to testing to ensure the