



Council for Responsible Nutrition

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Ref. 2

November 21, 1995

TO: Elisa Bernstein, FDA
FROM: Annette Dickinson 
SUBJECT: Discussion Draft of GMP's

Attached please find several copies of the Discussion Draft of the GMP's we would like to present to FDA officials at our meeting scheduled for November 30 at 2:00 p.m. at 200 C Street, S.W. Per your instructions, I am also sending 6 or 8 copies to Fred Shank's office.

The package includes a table of contents, a statement of purpose, and a two-column text. The first column is our proposed GMP, and the second column provides side-by-side comparison with the existing food GMP. Thus, it is clear where we are fully incorporating the food GMP and where we are incorporating additional requirements which our members consider essential to the manufacture of safe and properly labeled dietary supplements.

This discussion draft is being submitted on behalf of the Council for Responsible Nutrition, the Nonprescription Drug Manufacturers Association, the National Nutritional Foods Association, the American Herbal Products Association, and the Utah Natural Products Alliance.

Our intent is to further evaluate the document following our discussion meeting, make any further amendments we believe may be warranted, and then submit it to the agency formally as a Citizen Petition.

DISCUSSION DRAFT, NOVEMBER 1995

GMP'S FOR DIETARY SUPPLEMENTS:

STATEMENT OF PURPOSE

This document describes Good Manufacturing Practices to be followed in the manufacturing and control operations for dietary supplements and dietary ingredients. The objective of these Good Manufacturing Practices is to assure that consumers are provided with safe dietary supplement products which are not adulterated or misbranded, which have the identity and provide the quantity of dietary ingredients declared in labeling, and which meet the quality specifications that the supplement is represented to meet.

The Food, Drug and Cosmetic Act defines dietary supplements in Section 201(ff). Dietary supplements include a broad spectrum of product forms and a broad spectrum of dietary ingredients. Dietary ingredients may include vitamins; minerals; herbs or other botanicals; amino acids; other dietary substances used to supplement the diet; and concentrates, metabolites, constituents, extracts, or combinations of these. Product forms include tablets, capsules, softgels, gelcaps, liquids, and other forms including--under some conditions--conventional food forms. These Good Manufacturing Practices are intended to encompass all of these types of products. In some cases, judgment may be required in determining the

applicability of a specific provision to a particular product or class of products.

Dietary supplements in the physical form of conventional food shall comply with these Good Manufacturing Practices and with applicable food GMP's. For example, if they are thermally processed low-acid products packaged in hermetically sealed containers, they shall also comply with the applicable GMP's covering that product category.

These Good Manufacturing Practices are modeled after good manufacturing practices for foods. Provisions have been adopted, modified, or expanded as appropriate, considering the special requirements applicable to the manufacture of dietary supplements and dietary ingredients. There is no desire or intent to impose on dietary supplements the type of documentation and validation currently required in the manufacture of pharmaceutical products, where it would be inappropriate or unnecessary to ensure safe and unadulterated products. Dietary supplements are classified as foods, and the Good Manufacturing Practices applicable to them are similar to those generally applicable to other foods.

GMP'S FOR DIETARY SUPPLEMENTS

DISCUSSION DRAFT

November 1995

TABLE OF CONTENTS

| <u>PAGE</u> | <u>TOPIC</u> |
|-------------|---|
| 1 | Definitions |
| 4 | Personnel |
| 4 | Disease Control |
| 4 | Cleanliness |
| 5 | Education and Training |
| 5 | Supervision |
| 5 | Exclusions: Raw Agricultural Commodities |
| 5 | Plant and Grounds |
| 5 | Grounds |
| 6 | Plant Construction and Design |
| 8 | Sanitation of Buildings and Facilities |
| 8 | General Maintenance |
| 8 | Cleaning and Sanitizing Materials |
| 8 | Pest Control |
| 9 | Water Supply |
| 9 | Plumbing |
| 9 | Sewage Disposal |
| 9 | Toilet Facilities |
| 10 | Hand-Washing Facilities |
| 10 | Rubbish Disposal |
| 10 | Supervision |

| | |
|----|---|
| 11 | Equipment and Utensils |
| 11 | Design and Construction |
| 12 | Sanitation of Equipment and Utensils |
| 14 | Quality Control and Laboratory Operations |
| 14 | Quality Control Unit |
| 14 | Laboratory Records |
| 14 | Expiration Dating |
| 15 | Production and Process Controls |
| 15 | Master Production and Control Records |
| 16 | Batch Production and Control Records |
| 17 | Handling and Storage of Raw Materials, In-Process Materials and Rework |
| 20 | Manufacturing Operations |
| 24 | Packaging and Labeling Operations |
| 25 | Warehousing, Distribution and Post-Distribution Procedures |
| 25 | Storage and Distribution |
| 25 | Reserve Samples |
| 25 | Records Retention |
| 26 | Complaint Files |
| 26 | Returned Products |
| 26 | Product Salvaging |
| 27 | Defect Action Levels |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>Definitions</p> <p>The definitions and interpretations of terms in section 201 of the Federal Food, Drug, and Cosmetic Act (the act) are applicable to such terms when used in this part. The following definitions shall also apply:</p> | <p>§110.3 Definitions</p> <p>The definitions and interpretations of terms in section 201 of the Federal Food, Drug, and Cosmetic Act (the act) are applicable to such terms when used in this part. The following definitions shall also apply:</p> |
| | <p>(a) <i>Acid foods or acidified foods</i> means foods that have an equilibrium pH of 4.6 or below.</p> |
| <p>(a) "<i>Adequate</i>" means that which is needed to accomplish the intended purpose in keeping with good public health practice.</p> | <p>(b) <i>Adequate</i> means that which is needed to accomplish the intended purpose in keeping with good public health practice.</p> |
| <p>(b) "<i>Batch or Lot</i>" means a specific quantity of a finished product or other material that is intended to have uniform character and quality, within specified limits, and is produced according to a single manufacturing order during the same cycle of manufacture.</p> | |
| | <p>(c) <i>Batter</i> means a semifluid substance, usually composed of flour and other ingredients, into which principal components of food are dipped or with which they are coated, or which may be used directly to form bakery foods.</p> |
| <p>(c) "<i>Blanching</i>" means a prepackaging heat treatment of a dietary product for a sufficient time and at a sufficient temperature to partially or completely inactivate the naturally occurring enzymes and to effect other physical or biochemical changes in the product.</p> | <p>(d) <i>Blanching</i>, except for tree nuts and peanuts, means a prepackaging heat treatment of foodstuffs for a sufficient time and at a sufficient temperature to partially or completely inactivate the naturally occurring enzymes and to effect other physical or biochemical changes in the food.</p> |
| <p>(d) "<i>Composition</i>" means, as appropriate:</p> <p>(1) the identity of a dietary ingredient or dietary supplement, and</p> <p>(2) the concentration of a dietary ingredient (e.g., weight or other unit of use/weight or volume), or the potency or activity of one or more dietary ingredients, as indicated by appropriate procedures.</p> | |
| | <p>(e) <i>Critical control point</i> means a point in a food process where there is a high probability that improper control may cause, allow, or contribute to a hazard or to filth in the final food or decomposition of the final food.</p> |
| <p>(e) "<i>Dietary ingredient</i>" means an ingredient intended for use or used in a dietary supplement that is:</p> <p>(1) a vitamin</p> <p>(2) a mineral,</p> <p>(3) an herb or other botanical,</p> <p>(4) an amino acid,</p> <p>(5) a dietary substance for use by man to supplement the diet by increasing the total dietary intake, or</p> <p>(6) a concentrate, metabolite, constituent, extract, or combination of any of the foregoing ingredients.</p> | |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| (f) "Dietary product" means either a dietary ingredient or dietary supplement as defined in this part. | |
| (g) "Dietary supplement" means dietary supplement as defined in section 201 (ff) of the act. | |
| | (f) Food means food as defined in section 201(f) of the act and includes raw materials and ingredients. |
| | (g) Food-contact surfaces are those surfaces that contact human food and those surfaces from which drainage onto the food or onto surfaces that contact the food ordinarily occurs during the normal course of operations. "Food-contact surfaces" includes utensils and food-contact surfaces of equipment. |
| (h) "In-process material" means any material fabricated, compounded, blended, ground, extracted, sifted, sterilized, derived by chemical reaction or processed in any other way that is produced for, and used in, the preparation of a dietary product. | |
| (i) "Lot" means "batch" as defined in this part. | (h) Lot means the food produced during a period of time indicated by a specific code. |
| (j) "Lot number" means any distinctive combination of letters, numbers, or symbols, or any combination of them from which the complete history of the manufacture, processing, packing, holding, and distribution of a batch or lot of a finished dietary ingredient, dietary supplement or other material can be determined. | |
| (k) "Manufacture" or "manufacturing" includes all operations associated with the production of dietary products, including packaging and labeling operations, testing, and quality control of a dietary ingredient or dietary supplement. | |
| (l) "Microorganisms" means yeasts, molds, bacteria, and viruses and includes, but is not limited to, species having public health significance. The term "undesirable microorganisms" includes those microorganisms that are of public health significance, that subject a dietary product to decomposition, that indicate that a dietary ingredient or dietary supplement is contaminated with filth, or that otherwise may cause a dietary product to be adulterated within the meaning of the act. Occasionally in these regulations, the adjective "microbial" is used instead of an adjectival phrase containing the word microorganism. | (i) Microorganisms means yeasts, molds, bacteria, and viruses and includes, but is not limited to, species having public health significance. The term "undesirable microorganisms" includes those microorganisms that are of public health significance, that subject food to decomposition, that indicate that food is contaminated with filth, or that otherwise may cause food to be adulterated within the meaning of the act. Occasionally in these regulations, FDA used the adjective "microbial" instead of using an adjectival phrase containing the word microorganism. |
| (m) "Pest" refers to any objectionable animals or insects including, but not limited to, bird, rodents, flies, and larvae. | (j) Pest refers to any objectionable animals or insects including, but not limited to, bird, rodents, flies, and larvae. |
| (n) "Plant" means the building or facility or parts thereof, used for or in connection with the manufacturing, packaging, labeling, or holding of a dietary product. | (k) Plant means the building or facility or parts thereof, used for or in connection with the manufacturing, packaging, labeling, or holding of human food. |
| (o) "Quality control operation" means a planned and systematic procedure for taking all actions necessary to prevent a dietary product from being adulterated within the meaning of the act. | (l) Quality control operation means a planned and systematic procedure for taking all actions necessary to prevent food from being adulterated within the meaning of the act. |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| (p) "Quality control unit" means any person or organizational element designated by the firm to be responsible for the duties relating to quality control operations. | |
| (q) "Raw material" means any ingredient intended for use in the manufacture of a dietary ingredient or dietary supplement, including those that may not appear in such finished product. | |
| (r) "Representative sample" means a sample that consists of a number of units that are drawn based on rational criteria, such as random sampling, and is intended to assure that the sample accurately portrays the material being sampled. | |
| (s) "Rework" means clean, unadulterated material that has been removed from processing for reasons other than insanitary conditions or that has been successfully reconditioned by reprocessing and that is suitable for use in the manufacture of a dietary product. | (m) Rework means clean, unadulterated food that has been removed from processing for reasons other than insanitary conditions or that has been successfully reconditioned by reprocessing and that is suitable for use as food. |
| | (n) Safe-moisture level is a level of moisture low enough to prevent the growth of undesirable microorganisms in the finished product under the intended conditions of manufacturing, storage, and distribution. The maximum safe moisture level for a food is based on its water activity (a _w). An a _w will be considered safe for food if adequate data are available that demonstrate that the food at or below the given a _w will not support growth of undesirable microorganisms. |
| (t) "Sanitize" means to adequately treat equipment, containers or utensils by a process that is effective in destroying vegetative cells of microorganisms of public health significance, and in substantially reducing numbers of other undesirable microorganisms, but without adversely affecting the product or its safety for the consumer. | (o) Sanitize means to adequately treat food-contact surfaces by a process that is effective in destroying vegetative cells of microorganisms of public health significance, and in substantially reducing numbers of other undesirable microorganisms, but without adversely affecting the product or its safety for the consumer. |
| (u) "Shall" is used to state mandatory requirements. | (p) Shall is used to state mandatory requirements. |
| (v) "Should" is used to state recommended or advisory procedures or identify recommended equipment. | (q) Should is used to state recommended or advisory procedures or identify recommended equipment. |
| (w) "Water activity (a _w)" is a measure of the free moisture in a dietary ingredient or dietary supplement and is the quotient of the water vapor pressure of the substance divided by the vapor pressure of pure water at the same temperature. | (r) Water activity (a _w) is a measure of the free moisture in a food and is the quotient of the water vapor pressure of the substance divided by the vapor pressure of pure water at the same temperature. |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>Personnel</p> <p>The plant management shall take all reasonable measures and precautions to assure the following:</p> <p>(a) <i>Disease control.</i> Any person who, by medical examination or supervisory observation, is shown to have, or appears to have, an illness, open lesion, including boils, sores, or infected wounds, or any other abnormal source of microbial contamination by which there is a reasonable possibility of an in-process or finished dietary product becoming adulterated, or processing equipment, utensils or packaging materials becoming contaminated, shall be excluded from any operations which may be expected to result in such adulteration or contamination until the condition is corrected. Personnel shall be instructed to report such health conditions to their supervisors.</p> | <p>110.10 Personnel</p> <p>The plant management shall take all reasonable measures and precautions to ensure the following:</p> <p>(a) <i>Disease control.</i> Any person who, by medical examination or supervisory observation, is shown to have, or appears to have, an illness, open lesion, including boils, sores, or infected wounds, or any other abnormal source of microbial contamination by which there is a reasonable possibility of food, food-contact surfaces, or food-packaging materials becoming contaminated, shall be excluded from any operations which may be expected to result in such contamination until the condition is corrected. Personnel shall be instructed to report such health conditions to their supervisors.</p> |
| <p>(b) <i>Cleanliness.</i> All persons working in direct contact with raw materials, in-process or finished dietary products, processing equipment, utensils or packaging materials shall conform to hygienic practices while on duty to the extent necessary to protect against adulteration or contamination of such materials. The methods for maintaining cleanliness include, but are not limited to:</p> | <p>(b) <i>Cleanliness.</i> All persons working in direct contact with food, food-contact surfaces, and food-packaging materials shall conform to hygienic practices while on duty to the extent necessary to protect against contamination of food. The methods for maintaining cleanliness include, but are not limited to:</p> |
| <p>(1) Wearing outer garments suitable to the operation in a manner that protects against the adulteration of in-process or finished dietary products, or contamination of processing equipment, utensils or packaging materials.</p> | <p>(1) Wearing outer garments suitable to the operation in a manner that protects against the contamination of food, food-contact surfaces or food-packaging materials.</p> |
| <p>(2) Maintaining adequate personal cleanliness.</p> | <p>(2) Maintaining adequate personal cleanliness</p> |
| <p>(3) Washing hands thoroughly (and sanitizing if necessary to protect against contamination with undesirable microorganisms) in an adequate hand-washing facility before starting work, after each absence from the work station, and at any other time when the hands may have become soiled or contaminated.</p> | <p>(3) Washing hands thoroughly (and sanitizing if necessary to protect against contamination with undesirable microorganisms) in an adequate hand-washing facility before starting work, after each absence from the work station, and at any other time when the hands may have become soiled or contaminated.</p> |
| <p>(4) Removing all unsecured jewelry and other objects that might fall into raw materials, in-process or finished dietary product, equipment, or containers, and removing hand jewelry that cannot be adequately sanitized during periods in which in-process or finished product is manipulated by hand. If such hand jewelry cannot be removed, it may be covered by material which can be maintained in an intact, clean, and sanitary condition and which effectively protects against the adulteration of dietary products or contamination of processing equipment, utensils or packaging materials.</p> | <p>(4) Removing all unsecured jewelry and other objects that might fall into food, equipment, or containers, and removing hand jewelry that cannot be adequately sanitized during periods in which food is manipulated by hand. If such hand jewelry cannot be removed, it may be covered by material which can be maintained in an intact, clean, and sanitary condition and which effectively protects against the contamination by these objects of the food, food-contact surfaces, or food-packaging materials.</p> |
| <p>(5) Maintaining gloves, if they are used in in-process or finished product handling, in an intact, clean, and sanitary condition. The gloves should be of a material that adequately protects the product from contamination</p> | <p>(5) Maintaining gloves, if they are used in food handling, in an intact, clean, and sanitary condition. The gloves should be of an impermeable material.</p> |
| <p>(6) Wearing, where appropriate, in an effective manner, hair nets, caps, beard covers, or other effective hair restraints.</p> | <p>(6) Wearing, where appropriate, in an effective manner, hair nets, headbands, caps, beard covers, or other effective hair restraints.</p> |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| (7) Storing clothing or other personal belongings in areas other than where in-process or finished product is exposed or where processing equipment or utensils are washed. | (7) Storing clothing or other personal belongings in areas other than where food is exposed or where equipment or utensils are washed. |
| (8) Confining the following to areas other than where in-process or finished product may be stored or exposed, or where processing equipment or utensils are washed: eating food, chewing gum, drinking beverages, or using tobacco. | (8) Confining the following to areas other than where food may be exposed or where equipment or utensils are washed: eating food, chewing gum, drinking beverages, or using tobacco. |
| (9) Taking any other necessary precautions to protect against adulteration of raw materials, in-process or finished product, or contamination of processing equipment, utensils or packaging materials with micro-organisms or foreign substances including, but not limited to, perspiration, hair, cosmetics, tobacco, chemicals, and medicines applied to the skin. | (9) Taking any other necessary precautions to protect against contamination of food, food-contact surfaces, or food-packaging materials with micro-organisms or foreign substances including, but not limited to, perspiration, hair, cosmetics, tobacco, chemicals, and medicines applied to the skin. |
| (c) <i>Education and training.</i> Each person engaged in the manufacture of a dietary product should have the proper education, training, and experience (or any combination thereof) needed to perform the assigned functions. Training should be in the particular operation(s) that the employee performs as they relate to the employee's functions. Appropriate documentation of training shall be retained by the manufacturer. | (c) <i>Education and training.</i> Personnel responsible for identifying sanitation failures or food contamination should have a background of education or experience, or a combination thereof, to provide a level of competency necessary for production of clean and safe food. Food handlers and supervisors should receive appropriate training in proper food handling techniques and food-protection principles and should be informed of the danger of poor personal hygiene and insanitary practices. |
| d) <i>Supervision.</i> Responsibility for assuring compliance by all personnel with all requirements of this part shall be clearly assigned to qualified personnel with proper education, training and experience (or any combination thereof). | (d) <i>Supervision.</i> Responsibility for assuring compliance by all personnel with all requirements of this part shall be clearly assigned to competent supervisory personnel. |
| <p>Exclusions</p> <p>The following operations are not subject to this part: Establishments engaged solely in the harvesting, storage, or distribution of one or more "raw agricultural commodities," as defined in section 201(r) of the act, which are ordinarily cleaned, prepared, treated, or otherwise processed before being marketed to the consuming public.</p> | <p>§110.19 Exclusions</p> <p>(a) The following operations are not subject to this part: Establishments engaged solely in the harvesting, storage, or distribution of one or more "raw agricultural commodities," as defined in section 201(r) of the act, which are ordinarily cleaned, prepared, treated, or otherwise processed before being marketed to the consuming public.</p> |
| | (b) FDA, however, will issue special regulations if it is necessary to cover these excluded operations. |
| <p>Plant and Grounds</p> <p>(a) <i>Grounds.</i> The grounds about a dietary product manufacturing plant under the control of the operator shall be kept in a condition that will protect against the adulteration of dietary products. The methods for adequate maintenance of grounds include, but are not limited to:</p> | <p>Subpart B—Buildings and Facilities</p> <p>§110.20 Plant and grounds.</p> <p>(a) <i>Grounds.</i> The grounds about a food plant under the control of the operator shall be kept in a condition that will protect against the contamination of food. The methods for adequate maintenance of grounds include, but are not limited to:</p> |
| (1) Properly storing equipment, removing litter and waste, and cutting weeds or grass within the immediate vicinity of the plant buildings or structures that may constitute an attractant, breeding place, or harborage for pests. | (1) Properly storing equipment, removing litter and waste, and cutting weeds or grass within the immediate vicinity of the plant buildings or structures that may constitute an attractant, breeding place, or harborage for pests. |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>(2) Maintaining roads, yards, and parking lots so that they do not constitute a source of adulteration in areas where product is exposed.</p> | <p>(2) Maintaining roads, yards, and parking lots so that they do not constitute a source of contamination in areas where food is exposed.</p> |
| <p>(3) Adequately draining areas that may contribute to product adulteration by seepage, foot-borne filth, or providing a breeding place for pests.</p> | <p>(3) Adequately draining areas that may contribute to contamination to food by seepage, foot-borne filth, or providing a breeding place for pests.</p> |
| <p>(4) Operating systems for waste treatment and disposal in an adequate manner so that they do not constitute a source of adulteration in areas where product is exposed. If the plant grounds are bordered by grounds not under the operator's control and not maintained in the manner described in paragraph (a)(1) through (3) of this section, care shall be exercised in the plant by inspection, extermination, or other means to exclude pests, dirt, and filth that may be a source of product adulteration.</p> | <p>(4) Operating systems for waste treatment and disposal in an adequate manner so that they do not constitute a source of contamination in areas where food is exposed. If the plant grounds are bordered by grounds not under the operator's control and not maintained in the manner described in paragraph (a)(1) through (3) of this section, care shall be exercised in the plant by inspection, extermination, or other means to exclude pests, dirt, and filth that may be a source of food contamination.</p> |
| <p>(b) <i>Plant construction and design.</i> Plant buildings and structures shall be suitable in size, construction, and design to facilitate maintenance, cleaning and sanitary operations for dietary product manufacturing purposes and to prevent mixups between different raw materials and products. The plant and facilities shall:</p> | <p>(b) <i>Plant construction and design.</i> Plant buildings and structures shall be suitable in size, construction, and design to facilitate maintenance and sanitary operations for food-manufacturing purposes. The plant and facilities shall:</p> |
| <p>(1) Provide sufficient space for such placement of equipment and storage of materials as is necessary for the prevention of mixups, maintenance of sanitary operations and the production of safe dietary products.</p> | <p>(1) Provide sufficient space for such placement of equipment and storage of materials as is necessary for the maintenance of sanitary operations and the production of safe food.</p> |
| <p>(2) Permit the taking of proper precautions to reduce the potential for mixups or adulteration of in-process or finished dietary product, or contamination of processing equipment, utensils or packaging materials with microorganisms, chemicals, filth, or other extraneous material. The potential for mixups and product adulteration may be reduced by adequate product safety controls and operating practices or effective design, including the separation of operations in which contamination is likely to occur, by one or more of the following means: location, time, partition, air flow, enclosed systems, or other effective means.</p> | <p>(2) Permit the taking of proper precautions to reduce the potential for contamination of food, food-contact surfaces, or food-packaging materials with microorganisms, chemicals, filth, or other extraneous material.</p> <p>(2)...The potential for contamination may be reduced by adequate food safety controls and operating practices or effective design, including the separation of operations in which contamination is likely to occur, by one or more of the following means: location, time, partition, air flow, enclosed systems, or other effective means.</p> |
| <p>(3) Permit the taking of proper precautions to protect dietary ingredients or dietary supplements in outdoor bulk fermentation vessels by any effective means, including:</p> <ul style="list-style-type: none"> (i) Using protective coverings. (ii) Controlling areas over and around the vessels to eliminate harborages for pests. (iii) Checking on a regular basis for pests and pest infestation. (iv) Skimming the fermentation vessels, as necessary | <p>(3) Permit the taking of proper precautions to protect food in outdoor bulk fermentation vessels by any effective means, including:</p> <ul style="list-style-type: none"> (i) Using protective coverings. (ii) Controlling areas over and around the vessels to eliminate harborages for pests. (iii) Checking on a regular basis for pests and pest infestation. (iv) Skimming the fermentation vessels, as necessary. |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>(4) Be constructed in such a manner that floors, walls, and ceilings may be adequately cleaned and kept clean and kept in good repair; that drip or condensate from fixtures, ducts and pipes does not adulterate raw materials, in-process or finished dietary products, or contaminate product containers, utensils or packaging materials; and that aisles or working spaces are provided between equipment and walls and are adequately unobstructed and of adequate width to permit employees to perform their duties and to protect against adulterating in-process or finished product, or contaminating processing equipment with clothing or personal contact.</p> | <p>(4) Be constructed in such a manner that floors, walls, and ceilings may be adequately cleaned and kept clean and kept in good repair; that drip or condensate from fixtures, ducts and pipes does not contaminate food, food-contact surfaces, or food-packaging materials; and that aisles or working spaces are provided between equipment and walls and are adequately unobstructed and of adequate width to permit employees to perform their duties and to protect against contaminating food or food-contact surfaces with clothing or personal contact.</p> |
| <p>(5) Provide adequate lighting in hand-washing areas, dressing and locker rooms, and toilet rooms and in all areas where product is examined, processed, or stored and where equipment or utensils are cleaned; and provide safety-type light bulbs, fixtures, sky-lights, or other glass suspended over exposed product in any step of preparation or otherwise protect against product adulteration in case of glass breakage.</p> | <p>(5) Provide adequate lighting in hand-washing areas, dressing and locker rooms, and toilet rooms and in all areas where food is examined, processed, or stored and where equipment or utensils are cleaned; and provide safety-type light bulbs, fixtures, sky-lights, or other glass suspended over exposed food in any step of preparation or otherwise protect against food contamination in case of glass breakage.</p> |
| <p>(6) Provide adequate ventilation or control equipment to maintain adequate control over microorganisms, dust, humidity, and temperature, when appropriate, for the manufacture of dietary products; to minimize odors and vapors (including steam and noxious fumes) in areas where they may adulterate dietary products; and locate and operate fans and other air-blowing equipment in a manner that minimizes the potential for adulterating raw materials, in-process or finished dietary products, or contaminating processing equipment, utensils or packaging materials.</p> | <p>(6) Provide adequate ventilation or control equipment to minimize odors and vapors (including steam and noxious fumes) in areas where they may contaminate food; and locate and operate fans and other air-blowing equipment in a manner that minimizes the potential for contaminating food, food-packaging materials, and food-contact surfaces.</p> |
| <p>(7) Provide, where necessary, adequate screening or other protection against pests.</p> | <p>(7) Provide, where necessary, adequate screening or other protection against pests.</p> |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>Sanitation of Buildings and Facilities</p> <p>(a) <i>General maintenance.</i> Buildings, fixtures, and other physical facilities of the plant shall be maintained in a sanitary condition and shall be kept in repair sufficient to prevent raw materials, in-process or finished dietary products from becoming adulterated within the meaning of the act.</p> | <p>§110.35 Sanitary operations.</p> <p>(a) <i>General maintenance.</i> Buildings, fixtures, and other physical facilities of the plant shall be maintained in a sanitary condition and shall be kept in repair sufficient to prevent food from becoming adulterated within the meaning of the act....</p> |
| <p>(b) <i>Cleaning and sanitizing materials.</i></p> <p>(1) Cleaning compounds and sanitizing agents used in cleaning and sanitizing procedures shall be free from undesirable microorganisms and shall be safe and adequate under the conditions of use. Compliance with this requirement may be verified by any effective means including purchase of these substances under a supplier's guarantee or certification, or examination of these substances for contamination. Only the following toxic materials may be used or stored in a plant where product is processed or exposed:</p> <ul style="list-style-type: none"> (i) Those required to maintain clean and sanitary conditions; (ii) Those necessary for use in laboratory testing procedures; (iii) Those necessary for plant and equipment maintenance and operation; and (iv) Those necessary for use in the plant's operations. | <p>(b) <i>Substances used in cleaning and sanitizing; storage of toxic materials.</i></p> <p>(1) Cleaning compounds and sanitizing agents used in cleaning and sanitizing procedures shall be free from undesirable microorganisms and shall be safe and adequate under the conditions of use. Compliance with this requirement may be verified by any effective means including purchase of these substances under a supplier's guarantee or certification, or examination of these substances for contamination. Only the following toxic materials may be used or stored in a plant where food is processed or exposed:</p> <ul style="list-style-type: none"> (i) Those required to maintain clean and sanitary conditions; (ii) Those necessary for use in laboratory testing procedures; (iii) Those necessary for plant and equipment maintenance and operation; and (iv) Those necessary for use in the plant's operations. |
| <p>(2) Toxic cleaning compounds, sanitizing agents, and pesticide chemicals shall be identified, used, held, and stored in a manner that protects against adulteration of raw materials, in-process or finished product, or contamination of processing equipment or packaging materials. All relevant regulations promulgated by other Federal, State, and local government agencies for the application, use or holding of these products should be followed. Rodenticides, insecticides, and fungicides should be registered and used in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act.</p> | <p>(2) Toxic cleaning compounds, sanitizing agents, and pesticide chemicals shall be identified, held, and stored in a manner that protects against contamination of food, food-contact surfaces, or food-packaging materials. All relevant regulations promulgated by other Federal, State, and local government agencies for the application, use or holding of these products should be followed.</p> |
| <p>(c) <i>Pest control.</i> No pests shall be allowed in any area of a dietary product manufacturing plant. Effective measures shall be taken to exclude pests from the processing areas and to protect against the adulteration of product on the premises by pests. The use of insecticides or rodenticides is permitted only under precautions and restrictions that will protect against the adulteration of raw materials, in-process or finished product, or contamination of processing equipment, utensils or packaging materials.</p> | <p>(c) <i>Pest control.</i> No pests shall be allowed in any area of a food plant. Guard or guide dogs may be allowed in some areas of a plant if the presence of the dogs is unlikely to result in contamination of food, food-contact surfaces, or food-packaging materials. Effective measures shall be taken to exclude pests from the processing areas and to protect against the contamination of food on the premises by pests. The use of insecticides or rodenticides is permitted only under precautions and restrictions that will protect against the contamination of food, food-contact surfaces, and food-packaging materials.</p> |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| | <p>§110.37 Sanitary facilities and controls.</p> <p>Each plant shall be equipped with adequate sanitary facilities and accommodations including, but not limited to:</p> |
| <p>(d) <i>Water supply.</i> Potable water at a suitable temperature, and under pressure as needed, shall be provided in all areas where required for the processing of dietary products, for the cleaning of processing equipment, utensils, and packaging materials, or for employee sanitary facilities. Any water that contacts in-process or finished dietary products, utensils or processing equipment shall meet the standards prescribed in the Environmental Protection Agency's Primary Drinking Water Regulations (40 CFR Part 141).</p> | <p>(a) <i>Water supply.</i> The water supply shall be sufficient for the operations intended and shall be derived from an adequate source. Any water that contacts food or food-contact surfaces shall be safe and of adequate sanitary quality. Running water at a suitable temperature, and under pressure as needed, shall be provided in all areas where required for the processing of food, for the cleaning of equipment, utensils, and food-packaging materials, or for employee sanitary facilities.</p> |
| <p>(e) <i>Plumbing.</i> Plumbing shall be of adequate size and design and adequately installed and maintained to:</p> | <p>(b) <i>Plumbing.</i> Plumbing shall be of adequate size and design and adequately installed and maintained to:</p> |
| <p>(1) Carry sufficient quantities of water to required locations throughout the plant.</p> | <p>(1) Carry sufficient quantities of water to required locations throughout the plant.</p> |
| <p>(2) Properly convey sewage and liquid disposable waste from the plant.</p> | <p>(2) Properly convey sewage and liquid disposable waste from the plant.</p> |
| <p>(3) Avoid constituting a source of adulteration to product, or contamination of water supplies, processing equipment, or utensils or creating an unsanitary condition.</p> | <p>(3) Avoid constituting a source of contamination to food, water supplies, equipment, or utensils or creating an unsanitary condition.</p> |
| <p>(4) Provide adequate floor drainage or other appropriate means of water removal in all areas where floors are subject to flooding-type cleaning or where normal operations release or discharge water or other liquid waste on the floor.</p> | <p>(4) Provide adequate floor drainage in all areas where floors are subject to flooding-type cleaning or where normal operations release or discharge water or other liquid waste on the floor.</p> |
| <p>(5) Provide that there is not backflow from, or cross-connection between, piping systems that discharge waste water or sewage and piping systems that carry water used for the manufacture of dietary products.</p> | <p>(5) Provide that there is not backflow from, or cross-connection between, piping systems that discharge waste water or sewage and piping systems that carry water for food or food manufacturing.</p> |
| <p>(f) <i>Sewage disposal.</i> Sewage disposal shall be made into an adequate sewerage system or disposed of through other adequate means.</p> | <p>(c) <i>Sewage disposal.</i> Sewage disposal shall be made into an adequate sewerage system or disposed of through other adequate means.</p> |
| <p>(g) <i>Toilet facilities.</i> Each plant shall provide its employees with adequate, readily accessible toilet facilities. Compliance with this requirement may be accomplished by:</p> | <p>(d) <i>Toilet facilities.</i> Each plant shall provide its employees with adequate, readily accessible toilet facilities. Compliance with this requirement may be accomplished by:</p> |
| <p>(1) Maintaining the facilities in a sanitary condition.</p> | <p>(1) Maintaining the facilities in a sanitary condition.</p> |
| <p>(2) Keeping the facilities in good repair at all times.</p> | <p>(2) Keeping the facilities in good repair at all times.</p> |
| <p>(3) Providing self-closing doors</p> | <p>(3) Providing self-closing doors.</p> |
| <p>(4) Providing doors that do not open into areas where dietary product is exposed to airborne contamination, except where alternate means have been taken to protect against such contamination (such as double doors or positive air-flow systems)</p> | <p>(4) Providing doors that do not open into areas where food is exposed to airborne contamination, except where alternate means have been taken to protect against such contamination (such as double doors or positive air-flow systems)</p> |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>(h) <i>Hand-washing facilities.</i> Hand-washing facilities shall be adequate and convenient and be furnished with running water at a suitable temperature. Compliance with this requirement may be accomplished by providing:</p> | <p>(e) <i>Hand-washing facilities.</i> Hand-washing facilities shall be adequate and convenient and be furnished with running water at a suitable temperature. Compliance with this requirement may be accomplished by providing:</p> |
| <p>(1) Hand-washing and, where appropriate, hand-sanitizing facilities at each location in the plant where good sanitary practices require employees to wash and/or sanitize their hands.</p> | <p>(1) Hand-washing and, where appropriate, hand-sanitizing facilities at each location in the plant where good sanitary practices require employees to wash and/or sanitize their hands.</p> |
| <p>(2) Effective hand-cleaning and sanitizing preparations.</p> | <p>(2) Effective hand-cleaning and sanitizing preparations.</p> |
| <p>(3) Air driers, sanitary towel service or suitable drying devices.</p> | <p>(3) Sanitary towel service or suitable drying devices.</p> |
| <p>(4) Devices or fixtures, such as water control valves, so designed and constructed to protect against recontamination of clean, sanitized hands.</p> | <p>(4) Devices or fixtures, such as water control valves, so designed and constructed to protect against recontamination of clean, sanitized hands.</p> |
| <p>(5) Readily understandable signs directing employees handling unprotected product, packaging materials, utensils or processing equipment to wash and, where appropriate, sanitize their hands before they start work, after each absence from post of duty, and when their hands may have become soiled or contaminated. These signs may be posted in the processing room(s) and in all other areas where employees may handle such products, materials, utensils or equipment.</p> | <p>(5) Readily understandable signs directing employees handling unprotected food, unprotected food-packaging materials, food-contact surfaces to wash and, where appropriate, sanitize their hands before they start work, after each absence from post of duty, and when their hands may have become soiled or contaminated. These signs may be posted in the processing room(s) and in all other areas where employees may handle such food, materials, or surfaces.</p> |
| <p>(6) Refuse receptacles that are constructed and maintained in a manner that protects against adulteration of dietary products.</p> | <p>(6) Refuse receptacles that are constructed and maintained in a manner that protects against contamination of food.</p> |
| <p>(i) <i>Rubbish disposal.</i> Rubbish shall be so conveyed, stored, and disposed of as to minimize the development of odor, minimize the potential for the waste becoming an attractant and harborage or breeding place for pests, and protect against adulteration of raw materials, in-process or finished dietary products, or contamination of utensils, processing equipment, water supplies, and ground surfaces.</p> | <p>(f) <i>Rubbish and offal disposal.</i> Rubbish and any offal shall be so conveyed, stored, and disposed of as to minimize the development of odor, minimize the potential for the waste becoming an attractant and harborage or breeding place for pests, and protect against contamination of food, food-contact surfaces, water supplies, and ground surfaces.</p> |
| <p>(j) <i>Supervision.</i> Overall sanitation of the plant shall be under the supervision of one or more individuals qualified by education, experience and training (or any combination thereof) assigned responsibility for assuring that sanitation procedures are accomplished.</p> | <p>§110.80 Processes and controls. ...Overall sanitation of the plant shall be under the supervision of one or more competent individuals assigned responsibility for this function...</p> |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>Equipment and Utensils</p> | <p>Subpart C—Equipment</p> |
| <p>(a) <i>Design and construction</i></p> <p>(1) All plant equipment and utensils shall be so designed and of such material and workmanship as to be adequately cleanable, and shall be properly maintained.</p> | <p>§110.40 Equipment and utensils.</p> <p>(a) All plant equipment and utensils shall be so designed and of such material and workmanship as to be adequately cleanable, and shall be properly maintained.</p> |
| <p>(2) The design, construction and use of equipment and utensils shall preclude the adulteration of raw materials, packaging materials, in-process materials or finished product with lubricants, fuel, metal fragments, contaminated water, or any other contaminants.</p> | <p>The design, construction, and use of equipment and utensils shall preclude the adulteration of food with lubricants, fuel, metal fragments, contaminated water, or any other contaminants.</p> |
| <p>(3) All equipment should be so installed and maintained as to facilitate the cleaning of the equipment and of all adjacent spaces. Processing equipment and utensils shall be corrosion-resistant when in contact with raw materials, in-process or finished dietary product. They shall be made of nontoxic materials and designed to withstand the environment of their intended use and the action of dietary products, and, if applicable, cleaning compounds and sanitizing agents. Processing equipment and utensils shall be maintained to protect dietary products from being adulterated by any source.</p> | <p>All equipment should be so installed and maintained as to facilitate the cleaning of the equipment and of all adjacent spaces. Food-contact surfaces shall be corrosion-resistant when in contact with food. They shall be made of nontoxic materials and designed to withstand the environment of their intended use and the action of food, and, if applicable, cleaning compounds and sanitizing agents. Food-contact surfaces shall be maintained to protect food from being contaminated by any source, including unlawful indirect food additives.</p> |
| <p>(4) Seams on utensils and processing equipment shall be smoothly bonded or maintained so as to minimize accumulation of product, dirt, and organic matter and thus minimize the opportunity for growth of microorganisms.</p> | <p>(b) Seams on food-contact surfaces shall be smoothly bonded or maintained so as to minimize accumulation of food particles, dirt, and organic matter and thus minimize the opportunity for growth of microorganisms.</p> |
| <p>(5) Equipment that is in the manufacturing or product handling area and that does not come into contact with a dietary product shall be so constructed that it can be kept in a clean condition.</p> | <p>(c) Equipment that is in the manufacturing or food-handling area and that does not come into contact with food shall be so constructed that it can be kept in a clean condition.</p> |
| <p>(6) Holding, conveying, and manufacturing systems, including gravimetric, pneumatic, closed, and automated systems, shall be of a design and construction that enables them to be maintained in an appropriate clean condition.</p> | <p>(d) Holding, conveying, and manufacturing systems, including gravimetric, pneumatic, closed, and automated systems, shall be of a design and construction that enables them to be maintained in an appropriate sanitary condition.</p> |
| <p>(7) Each freezer and cold storage compartment used to store and hold a dietary product capable of supporting growth of microorganisms shall be fitted with an indicating thermometer, temperature-measuring device, or temperature-recording device so installed as to show the temperature accurately within the compartment, and should be fitted with an automatic control for regulating temperature or with an automatic alarm system to indicate a significant temperature change in a manual operation.</p> | <p>(e) Each freezer and cold storage compartment used to store and hold food capable of supporting growth of microorganisms shall be fitted with an indicating thermometer, temperature-measuring device, or temperature-recording device so installed as to show the temperature accurately within the compartment, and should be fitted with an automatic control for regulating temperature or with an automatic alarm system to indicate a significant temperature change in a manual operation.</p> |
| <p>(8) Instruments and controls used in the manufacture, processing, packing or holding dietary products, including instruments and controls used for measuring, regulating, or recording temperatures, pH, acidity, water activity, or other conditions that control or prevent the growth of undesirable microorganisms in such products shall be accurate and adequately maintained, and adequate in number for their designated uses.</p> | <p>(f) Instruments and controls used for measuring, regulating, or recording temperatures, pH, acidity, water activity, or other conditions that control or prevent the growth of undesirable microorganisms in food shall be accurate and adequately maintained, and adequate in number for their designated uses.</p> |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>(9) Compressed air or other gases mechanically introduced into a dietary product or used to clean equipment or utensils shall be treated in such a way that dietary ingredients or dietary supplements are not adulterated.</p> | <p>(g) Compressed air or other gases mechanically introduced into food or used to clean food-contact surfaces or equipment shall be treated in such a way that food is not contaminated with unlawful indirect food additives.</p> |
| <p>(b) <i>Sanitation of equipment and utensils.</i></p> <p>(1) Cleaning and sanitizing of utensils and equipment shall be conducted in a manner that protects against adulteration of raw materials, in-process or finished dietary product, processing equipment, utensils or packaging materials.</p> | <p>§110.35 Sanitary operations.</p> <p>(a) <i>General maintenance.</i></p> <p>...Cleaning and sanitizing of utensils and equipment shall be conducted in a manner that protects against contamination of food, food-contact surfaces, or food-packaging materials....</p> |
| <p>(2) All utensils and processing equipment shall be cleaned as frequently as necessary to protect against product adulteration.</p> | <p>(d) <i>Sanitation of food-contact surfaces.</i> All food-contact surfaces, including utensils and food-contact surfaces of equipment, shall be cleaned as frequently as necessary to protect against contamination of food.</p> |
| <p>(3) Utensils and processing equipment used for manufacturing or holding of dry dietary products shall be in a dry, sanitary condition at the time of use. When the surfaces are wet-cleaned, they shall, when necessary, be sanitized and thoroughly dried before subsequent use.</p> | <p>(1) Food-contact surfaces used for manufacturing or holding low-moisture food shall be in a dry, sanitary condition at the time of use. When the surfaces are wet-cleaned, they shall, when necessary, be sanitized and thoroughly dried before subsequent use.</p> |
| <p>(4) In wet processing, when cleaning is necessary to protect against the introduction of microorganisms into a dietary product, all utensils and processing equipment shall be cleaned and sanitized as appropriate before use and after any interruption during which the utensils or processing equipment may have become contaminated. Where equipment and utensils are used in a continuous production operation or in back-to-back operations involving different batches of the same products, the utensils and product-contact surfaces of the equipment shall be cleaned and sanitized as appropriate.</p> | <p>(2) In wet processing, when cleaning is necessary to protect against the introduction of microorganisms into food, all food-contact surfaces shall be cleaned and sanitized before use and after any interruption during which the food-contact surfaces may have become contaminated. Where equipment and utensils are used in a continuous production operation the utensils and food-contact surfaces of the equipment shall be cleaned and sanitized as necessary.</p> |
| <p>(5) Non-product-contact surfaces of equipment should be cleaned as frequently as necessary to protect against product adulteration</p> | <p>(3) Non-food-contact surfaces of equipment used in the operation of food plants should be cleaned as frequently as necessary to protect against contamination of food.</p> |
| <p>(6) Single-service articles (such as utensils intended for one-time use, paper cups, and paper towels) should be stored in appropriate containers and shall be handled, dispensed, used, and disposed of in a manner that protects against adulteration of dietary products, and contamination of utensils and processing equipment.</p> | <p>(4) Single-service articles (such as utensils intended for one-time use, paper cups, and paper towels) should be stored in appropriate containers and shall be handled, dispensed, used, and disposed of in a manner that protects against contamination of food or food-contact surfaces.</p> |
| <p>(7) Sanitizing agents shall be adequate and safe under conditions of use. Any facility, procedure, or machine is acceptable for cleaning and sanitizing equipment and utensils if it is established that the facility, procedure, or machine will routinely render equipment and utensils clean and provide adequate cleaning and sanitizing treatment.</p> | <p>(5) Sanitizing agents shall be adequate and safe under conditions of use. Any facility, procedure, or machine is acceptable for cleaning and sanitizing equipment and utensils if it is established that the facility, procedure, or machine will routinely render equipment and utensils clean and provide adequate cleaning and sanitizing treatment.</p> |
| <p>(8) Cleaned and sanitized portable equipment with product-contact surfaces and utensils should be stored in a location and manner that protects product-contact surfaces from contamination.</p> | <p>(e) <i>Storage and handling of cleaned portable equipment and utensils.</i> Cleaned and sanitized portable equipment with food-contact surfaces and utensils should be stored in a location and manner that protects food-contact surfaces from contamination.</p> |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>(9) Equipment and utensils and finished product containers shall be maintained in an acceptable condition through appropriate cleaning and sanitizing, as necessary. Insofar as necessary, equipment shall be taken apart for thorough cleaning.</p> | <p>§110.80(b) <i>Manufacturing operations.</i> (1) Equipment and utensils and finished food containers shall be maintained in an acceptable condition through appropriate cleaning and sanitizing, as necessary. Insofar as necessary, equipment shall be taken apart for thorough cleaning....</p> |
| <p>(10) Written procedures shall be established and followed for cleaning and maintaining equipment and utensils used in the manufacture of dietary products.</p> | |
| <p>(11) A written record of major equipment cleaning and use shall be maintained in individual equipment logs that show the date, product and lot number of each batch processed. The persons performing the cleaning shall record in the log that the work was performed. Entries in the log should be in chronological order.</p> | |
| <p>(12) Equipment, containers, and utensils used to convey, hold, or store raw materials, in-process material, rework, or finished product shall be constructed, handled, and maintained during manufacturing or storage in a manner that protects against contamination.</p> | <p>....(7) Equipment, containers, and utensils used to convey, hold, or store raw materials, work-in-process, rework, or food shall be constructed, handled, and maintained during manufacturing or storage in a manner that protects against contamination....</p> |

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| <p>Quality Control and Laboratory Operations</p> <p>Appropriate quality control operations shall be employed to assure that dietary products conform to appropriate standards of purity, quality and composition, and that packaging materials are safe and suitable for their intended purpose.</p> | <p>Subpart E--Production and Process Controls §110.80 Processes and controls.</p> <p>...Appropriate quality control operations shall be employed to ensure that food is suitable for human consumption and that food-packaging materials are safe and suitable...</p> |
| <p>(a) <i>Quality control unit.</i></p> <p>(1) There shall be a quality control unit that has the responsibility and authority to:</p> <p>(i) Approve or reject all procedures, specifications, controls, tests and examinations, or deviations from them, that impact the purity, quality and composition of a dietary ingredient or dietary supplement; and</p> <p>(ii) Approve or reject all raw materials, packaging materials, labeling, and finished dietary products, including products manufactured, processed, packed, or held under contract by another company, based on adequate determination of conformance to established specifications; and</p> <p>(iii) Assure that completed production records are reviewed as appropriate. Quality control shall be responsible for evaluation of errors committed in the manufacture of a product and shall have the final authority to determine if the error may be corrected in such manner that the product can be approved for distribution or must be destroyed. Such evaluations and their resolution must be documented and maintained with and/or cross referenced in the batch production record.</p> | |
| <p>(2) Adequate laboratory facilities should be available, as needed, to the quality control unit.</p> | |
| <p>(3) The responsibilities and procedures applicable to the quality control unit shall be established in writing and followed.</p> | |
| <p>(b) <i>Laboratory records.</i> Laboratory records shall be maintained and shall include complete data derived from all specified tests.</p> | |
| <p>(c) <i>Expiration dating.</i></p> <p>(1) Whenever a dietary ingredient or dietary supplement bears an expiration date, such date shall be supported by data and rationale to reasonably assure that the product meets established specifications at the expiration date.</p> | |

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| <p>(2) Appropriate accelerated stability studies or data from similar product formulations may be used for an initial determination of shelf life. Product shelf life shall be confirmed and may be extended on the basis of real time studies on product stored under labeled storage conditions.</p> | |
| <p>Production and Process Controls</p> <p>(a) <i>Master production and control records.</i></p> <p>(1) To assure uniformity from batch to batch, a master production and control record shall be prepared for the manufacture of each dietary ingredient and dietary supplement, and shall be reviewed and approved by the quality control unit.</p> | |
| <p>(2) Master production and control records shall include, as appropriate:</p> <ul style="list-style-type: none"> (i) A complete list of raw materials used in the manufacture of a dietary product, designated by names or codes sufficiently specific to indicate any special quality characteristic(s). (ii) An accurate statement of the weight or measure of each raw material used in the manufacture of a dietary product. Each batch shall be formulated with the intent to provide not less than 100 percent of each claimed dietary ingredient. (iii) For dietary supplements, the name and weight or measure of each dietary ingredient per unit or portion or per unit of weight or measure of the supplement. (iv) A statement concerning any calculated excess of dietary ingredient contained in a dietary supplement. (v) A statement of the total weight or measure of any dietary supplement unit. (vi) A statement of theoretical weight or measure of a dietary ingredient or dietary supplement expected at the conclusion of manufacture, including the maximum and minimum percentages of theoretical yield beyond which investigation is required. (vii) A description of the product container(s), closure(s), and other packaging materials, including positive identification of all labeling used. (viii) Manufacturing and control instructions, designed to assure that the dietary product has the purity, composition and quality it is represented to possess. | |

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| <p>(b) <i>Batch production and control records.</i></p> <p>(1) Individual batch production and control records shall be prepared and followed for each batch of dietary product produced and shall include complete information relating to the production and control of each batch.</p> | |
| <p>(2) These records shall be an accurate reproduction of the appropriate master production and control record and shall include documentation that each significant step in the manufacture, processing, packing, or holding of the batch was accomplished, including:</p> <ul style="list-style-type: none"> (i) Dates; (ii) Identity of individual major equipment and lines used; (iii) Specific identification, including lot number, of each raw material or in-process material used; (iv) Weight or measure of each raw material used in the course of processing; (v) Quality control results; (vi) Inspection of the packaging and labeling area; (vii) A statement of the actual yield at the conclusion of manufacture and a statement of the percentage of theoretical yield, as appropriate; (viii) Label control records, including specimens, copies or records of all labels used; (ix) Description of product containers and closures used; (x) Any special notes of investigations or deviations from the described process. | |
| <p>(3) Any deviation from written, approved specifications, standards, test procedures or other laboratory control mechanisms shall be recorded and justified.</p> | |

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| <p>(c) <i>Handling and storage of raw materials, in-process materials and rework.</i></p> <p>(1) Raw materials, in-process materials and rework shall be inspected and segregated or otherwise handled as necessary to ascertain that they are clean and suitable for processing into dietary products and shall be stored under conditions that will protect against adulteration and minimize deterioration</p> <p>Containers of raw materials should be inspected on receipt to assure that their condition has not contributed to the adulteration or deterioration of the contents.</p> <p>Liquid or dry raw materials and other ingredients received and stored in bulk form shall be held in a manner that protects against contamination.</p> | <p>§110.80 (a) <i>Raw materials and other ingredients.</i></p> <p>(1) Raw materials and other ingredients shall be inspected and segregated or otherwise handled as necessary to ascertain that they are clean and suitable for processing into food and shall be stored under conditions that will protect against contamination and minimize deterioration.</p> <p>...Containers and carriers of raw materials should be inspected on receipt to ensure that their condition has not contributed to the contamination or deterioration of food.</p> <p>(7) Liquid or dry raw materials and other ingredients received and stored in bulk form shall be held in a manner that protects against contamination.</p> |
| <p>(2) Raw agricultural materials that contain soil or other contaminants shall be washed or cleaned as necessary. Water used for washing, rinsing, or conveying raw agricultural materials shall be safe and of adequate sanitary quality. Notwithstanding the general requirement for potable water, water may be reused for washing, rinsing, or conveying raw agricultural materials if it does not increase the level of contamination of the such materials.</p> | <p>(1)...Raw materials shall be washed or cleaned as necessary to remove soil or other contamination. Water used for washing, rinsing, or conveying food shall be safe and of adequate sanitary quality. Water may be reused for washing, rinsing, or conveying food if it does not increase the level of contamination of the food.</p> |
| <p>(3) Raw materials, in-process materials, and rework shall be held in bulk, or in containers designed and constructed so as to protect against adulteration and shall be held at such temperature and relative humidity and in such a manner as to prevent a dietary ingredient or dietary supplement from becoming adulterated within the meaning of the act. Material scheduled for rework shall be identified as such.</p> | <p>(5) Raw materials, other ingredients, and rework shall be held in bulk, or in containers designed and constructed so as to protect against contamination and shall be held at such temperature and relative humidity and in such a manner as to prevent the food from becoming adulterated within the meaning of the act. Material scheduled for rework shall be identified as such.</p> |
| <p>(4) Frozen raw materials and other ingredients shall be kept frozen. If thawing is required prior to use, it shall be done in a manner that prevents the raw materials and other ingredients from becoming adulterated within the meaning of the act.</p> | <p>(6) Frozen raw materials and other ingredients shall be kept frozen. If thawing is required prior to use, it shall be done in a manner that prevents the raw materials and other ingredients from becoming adulterated within the meaning of the act.</p> |
| <p>(5) Written procedures shall be established and followed describing the receipt, identification, examination, handling, sampling, testing and approval or rejection of raw materials.</p> | |
| <p>(6) Each lot of raw material shall be identified with a distinctive lot number and shall be appropriately controlled according to its status (e.g. quarantined, approved, rejected).</p> | |

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| <p>(7) Raw material samples shall be examined and tested as follows.</p> <p>(i) Each lot of raw material, in-process material and rework that is liable to adulteration with filth, insect infestation or other visually evident extraneous material shall be examined against established specifications for such adulteration, and shall comply with any applicable Food and Drug Administration regulations, and guidelines. In lieu of such examination by the manufacturer, a guarantee or certification of examination may be accepted from the supplier of a component provided that the manufacturer establishes the reliability of the supplier's examination.</p> | <p>(4) Raw materials, other ingredients, and rework susceptible to contamination with pests, undesirable microorganisms, or extraneous material shall comply with applicable Food and Drug Administration regulations, guidelines, and defect action levels for natural or unavoidable defects if a manufacturer wishes to use the materials in manufacturing food. Compliance with this requirement may be verified by any effective means, including purchasing the materials under a supplier's guarantee or certification, or examination of these materials for contamination.</p> |
| <p>(ii) Each lot of a raw material that is liable to microbiological contamination that is objectionable in view of its intended use shall be subjected to microbiological tests before use. Raw materials shall either not contain levels of microorganisms that may produce food poisoning or other disease in humans, or they shall be otherwise treated during manufacturing operations so that they no longer contain levels that would cause the product to be adulterated within the meaning of the act. In lieu of such testing by the manufacturer, a guarantee or certification of analysis may be accepted from the supplier of a component provided that the manufacturer establishes the reliability of the supplier's analyses.</p> | <p>(2) Raw materials and other ingredients shall either not contain levels of microorganisms that may produce food poisoning or other disease in humans, or they shall be pasteurized or otherwise treated during manufacturing operations so that they no longer contain levels that would cause the product to be adulterated within the meaning of the act. Compliance with this requirement may be verified by any effective means, including purchasing raw materials and other ingredients under a supplier's guarantee or certification.</p> |
| <p>(iii) Raw materials and other ingredients susceptible to adulteration with aflatoxin or other natural toxins shall comply with current Food and Drug Administration regulations, guidelines, and action levels for poisonous or deleterious substances before these materials or ingredients are incorporated into a finished dietary ingredient or dietary supplement. Compliance with this requirement may be accomplished by analyzing these materials and ingredients for aflatoxins and other natural toxins or, in lieu of such testing by the manufacturer, a guarantee or certification of analysis may be accepted from the supplier of a component provided that the manufacturer establishes the reliability of the supplier's analyses.</p> | <p>(3) Raw materials and other ingredients susceptible to contamination with aflatoxin or other natural toxins shall comply with current Food and Drug Administration regulations, guidelines, and action levels for poisonous or deleterious substances before these materials or ingredients are incorporated into finished food. Compliance with this requirement may be accomplished by purchasing raw materials and other ingredients under a supplier's guarantee or certification, or may be verified by analyzing these materials and ingredients for aflatoxins and other natural toxins.</p> |
| <p>(iv) Each lot of raw material shall undergo at least one test by the manufacturer to verify its identity. Such tests may include any appropriate test with sufficient specificity to determine identity, including chemical and laboratory tests, gross organoleptic analysis, microscopic identification or analysis of constituent markers.</p> | |

| PROPOSED SUPPLEMENT GMP | FOOD GMP |
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| <p>(v) Each lot of raw material shall be tested for conformity with all other established specifications. In lieu of such testing by the manufacturer, a guarantee or certification of analysis may be accepted from the supplier of a component provided that the manufacturer establishes the reliability of the supplier's analyses.</p> | |
| <p>(8) Approved raw materials shall be rotated so that the oldest approved stock is used first. Deviation from this requirement is permitted if such deviation is temporary and appropriate.</p> | |
| <p>(9) Raw materials shall be retested or reexamined and approved or rejected by the quality control after a specified time in storage or after exposure to air, heat, or other conditions that are likely to adversely affect the purity, quality or composition of the raw material.</p> | |
| <p>(10) Rejected raw materials shall be identified and controlled under a system that prevents their use in manufacturing or processing operations for which they are unsuitable.</p> | |

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| <p>(d) <i>Manufacturing operations.</i></p> <p>(1) All operations in the receiving, inspecting, transporting, segregating, preparing, manufacturing, packaging, and storing of dietary products shall be conducted in accordance with adequate sanitation principles.</p> <p>(2) All reasonable precautions shall be taken to assure that production procedures do not contribute adulteration from any source. Chemical, microbial, or extraneous-material testing procedures shall be used where necessary to identify sanitation failures or possible product adulteration.</p> <p>(3) All product that has become contaminated to the extent that it is adulterated within the meaning of the act shall be rejected, or if permissible, treated or processed to eliminate the contamination.</p> | <p>§110.80 Processes and controls.</p> <p>All operations in the receiving, inspecting, transporting, segregating, preparing, manufacturing, packaging, and storing of food shall be conducted in accordance with adequate sanitation principles...</p> <p>...All reasonable precautions shall be taken to ensure that production procedures do not contribute contamination from any source. Chemical, microbial, or extraneous-material testing procedures shall be used where necessary to identify sanitation failures or possible food contamination.</p> <p>All food that has become contaminated to the extent that it is adulterated within the meaning of the act shall be rejected, or if permissible, treated or processed to eliminate the contamination.</p> |
| <p>(4) All product manufacturing, including packaging and storage, shall be conducted under such conditions and controls as are necessary to minimize the potential for the growth of microorganisms, or for the adulteration of raw materials, in-process materials and finished product.</p> | <p>§110.80(b) Manufacturing operations.</p> <p>...(2) All food manufacturing, including packaging and storage, shall be conducted under such conditions and controls as are necessary to minimize the potential for the growth of microorganisms, or for the contamination of food.</p> |
| | <p>One way to comply with this requirement is careful monitoring of physical factors such as time, temperature, humidity, a., pH, pressure, flow rate, and manufacturing operations such as freezing, dehydration, heat processing, acidification, and refrigeration to ensure that mechanical breakdowns, time delays, temperature fluctuations, and other factors do not contribute to the decomposition or contamination of food.</p> <p>(3) Food that can support the rapid growth of undesirable micro-organisms, particularly those of public health significance, shall be held in a manner that prevents the food from becoming adulterated within the meaning of the act. Compliance with this requirement may be accomplished by any effective means, including:</p> <p>(i) Maintaining refrigerated foods at 45°F (7.2°C) or below as appropriate for the particular food involved.</p> <p>(ii) Maintaining frozen foods in a frozen state.</p> <p>(iii) Maintaining hot foods at 140°F (60°C) or above.</p> <p>(iv) Heat treating acid or acidified foods to destroy mesophilic micro-organisms when those foods are to be held in hermetically sealed containers at ambient temperatures.</p> |

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| <p>(5) Measures such as sterilizing, irradiating, pasteurizing, freezing, refrigerating, controlling pH or controlling water activity (a_w) that are taken to destroy or prevent the growth of undesirable microorganisms, particularly those of public health significance, shall be adequate under the conditions of manufacture, handling, and distribution to prevent dietary products from being adulterated within the meaning of the act.</p> | <p>(4) Measures such as sterilizing, irradiating, pasteurizing, freezing, refrigerating, controlling pH or controlling a_w that are taken to destroy or prevent the growth of undesirable microorganisms, particularly those of public health significance, shall be adequate under the conditions of manufacture, handling, and distribution to prevent food from being adulterated within the meaning of the act.</p> |
| <p>(6) Work-in-process shall be handled in a manner that protects against adulteration.</p> | <p>(5) Work-in-process shall be handled in a manner that protects against contamination.</p> |
| <p>(7) Effective measures shall be taken to protect finished dietary ingredients and dietary supplements from adulteration by raw materials, in-process materials or refuse. When raw materials, in-process materials or refuse are unprotected, they shall not be handled simultaneously in a receiving, loading, or shipping area if that handling could result in adulterated dietary products. Dietary ingredients and dietary supplements transported by conveyor shall be protected against adulteration as necessary.</p> | <p>(6) Effective measures shall be taken to protect finished food from contamination by raw materials, other ingredients, or refuse. When raw materials, other ingredients, or refuse are unprotected, they shall not be handled simultaneously in a receiving, loading, or shipping area if that handling could result in contaminated food. Food transported by conveyor shall be protected against contamination as necessary.</p> |
| <p>(8) All raw material containers, compounding and storage containers, processing lines and major equipment used during the production of a batch shall be properly identified at all times to indicate their contents and when necessary, the phase of processing of the batch.</p> | |
| <p>(9) Effective measures shall be taken as necessary to protect against the inclusion of metal or other extraneous material in product. Compliance with this requirement may be accomplished by using sieves, traps, magnets, electronic metal detectors, or other suitable effective means.</p> | <p>... (8) Effective measures shall be taken to protect against the inclusion of metal or other extraneous material in food. Compliance with this requirement may be accomplished by using sieves, traps, magnets, electronic metal detectors, or other suitable effective means.</p> |
| <p>(10) Dietary products, raw materials, and in-process materials that are rejected or adulterated within the meaning of the act shall be identified, stored and disposed of in a manner that protects against the adulteration of other products.</p> | <p>(9) Food, raw materials, and other ingredients that are adulterated within the meaning of the act shall be disposed of in a manner that protects against the contamination of other food...</p> |
| <p>(11) Written procedures shall be established and followed that describe appropriate tests, and/or examinations to be conducted that may be necessary to assure the purity, composition and quality of the finished product.</p> | |
| <p>(12) Written procedures shall be established and followed prescribing the method for reprocessing batches or operational start-up materials that do not conform to finished goods standards or specifications. Finished goods manufactured using such materials shall meet all established purity, composition and quality standards.</p> | <p>(9)...If the adulterated food is capable of being reconditioned, it shall be reconditioned using a method that has been proven to be effective or it shall be reexamined and found not to be adulterated within the meaning of the act before being incorporated into other food.</p> |

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| <p>(13) Mechanical manufacturing steps such as cutting, sorting, inspecting, shredding, drying, grinding, blending and sifting shall be performed so as to protect dietary ingredients and dietary supplements against adulteration. Compliance with this requirement may be accomplished by providing adequate physical protection of dietary products from contact with adulterants. Protection may be provided by adequate cleaning and sanitizing of all processing equipment between each manufacturing step.</p> | <p>(10) Mechanical manufacturing steps such as washing, peeling, trimming, cutting, sorting and inspecting, mashing, dewatering, cooling, shredding, extruding, drying, whipping, defatting, and forming shall be performed so as to protect food against contamination. Compliance with this requirement may be accomplished by providing adequate physical protection of food from contaminants that may drip, drain, or be drawn into the food. Protection may be provided by adequate cleaning and sanitizing of all food-contact surfaces, and by using time and temperature controls at and between each manufacturing step.</p> |
| <p>(14) Heat blanching, when required in the preparation of a dietary product, should be effected by heating the product to the required temperature, holding it at this temperature for the required time, and then either rapidly cooling the material or passing it to subsequent manufacturing without delay. Thermophilic growth and contamination in blanchers should be minimized by the use of adequate operating temperatures and by periodic cleaning. Where the blanched product is washed prior to filling, potable water shall be used.</p> | <p>(11) Heat blanching, when required in the preparation of food, should be effected by heating the food to the required temperature, holding it at this temperature for the required time, and then either rapidly cooling the food or passing it to subsequent manufacturing without delay. Thermophilic growth and contamination in blanchers should be minimized by the use of adequate operating temperatures and by periodic cleaning. Where the blanched food is washed prior to filling, water used shall be safe and of adequate sanitary quality.</p> |
| | <p>(12) Batters, breadings, sauces, gravies, dressings, and other similar preparations shall be treated or maintained in such a manner that they are protected against contamination. Compliance with this requirement may be accomplished by any effective means, including one or more of the following:</p> <ul style="list-style-type: none"> (i) Using ingredients free of contamination. (ii) Employing adequate heat processes where applicable. (iii) Using adequate time and temperature controls. (iv) Providing adequate physical protection of components from contaminants that may drip, drain, or be drawn to them. (v) Cooling to an adequate temperature during manufacturing. (vi) Disposing of batters at appropriate intervals to protect against the growth of microorganisms. |

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| <p>(15) Intermediate or dehydrated dietary products that rely on the control of water activity (a_w) for preventing the growth of undesirable microorganisms shall be processed to and maintained at a safe moisture level. Compliance with this requirement may be accomplished by any effective means, including employment of one or more of the following practices:</p> <ul style="list-style-type: none"> (i) Monitoring the water activity (a_w) of the material. (ii) Controlling the soluble solids-water ratio in finished product. (iii) Protecting finished product from moisture pickup, by use of a moisture barrier or by other means, so that the water activity (a_w) of the product does not increase to an unsafe level. | <p>(14) Food such as, but not limited to, dry mixes, nuts, intermediate moisture food, and dehydrated food, that relies on the control of a_w for preventing the growth of undesirable microorganisms shall be processed to and maintained at a safe moisture level. Compliance with this requirement may be accomplished by any effective means, including employment of one or more of the following practices:</p> <ul style="list-style-type: none"> (i) Monitoring the a_w of food. (ii) Controlling the soluble solids-water ratio in finished food (iii) Protecting finished food from moisture pickup, by use of a moisture barrier or by other means, so that the a_w of the food does not increase to an unsafe level. |
| <p>(16) Dietary ingredients and dietary supplements that rely principally on the control of pH for preventing the growth of undesirable microorganisms shall be monitored and maintained at an appropriate pH. Compliance with this requirement may be accomplished by any effective means, including employment of one or more of the following practices:</p> <ul style="list-style-type: none"> (i) Monitoring the pH of raw materials, in process material, and finished product. (ii) Controlling the amount of acid added to the product. | <p>(15) Food such as, but not limited to, acid and acidified food, that relies principally on the control of pH for preventing the growth of undesirable microorganisms shall be monitored and maintained at a pH of 4.6 or below. Compliance with this requirement may be accomplished by any effective means, including employment of one or more of the following practices:</p> <ul style="list-style-type: none"> (i) Monitoring the pH of raw materials, food in process, and finished food. (ii) controlling the amount of acid or acidified food added to low-acid food. |
| <p>(17) When ice is used in contact with dietary products, it shall be made from potable water, and shall be used only if it has been manufactured in accordance with current good manufacturing practice as outlined in 21 CFR Part 110.</p> | <p>(16) When ice is used in contact with food, it shall be made from water that is safe and of adequate sanitary quality, and shall be used only if it has been manufactured in accordance with current good manufacturing practice as outlined in this part.</p> |
| | <p>(17) Food manufacturing areas and equipment used for manufacturing human food should not be used to manufacture nonhuman food grade animal food or inedible products, unless there is no reasonable possibility for the contamination of the human food.</p> |

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| <p>(e) <i>Packaging and labeling operations.</i></p> <p>(1) Filling, assembling, packaging, and other operations shall be performed in such a way that dietary products are protected against adulteration. Compliance with this requirement may be accomplished by any effective means, including:</p> <ul style="list-style-type: none"> (i) Adequate cleaning and sanitizing of all filling and packaging equipment, utensils and product containers, as appropriate. (ii) Using materials for product containers and packaging materials that are safe and suitable. (iii) Providing physical protection from adulteration, particularly airborne contamination (iv) Using sanitary handling procedures. | <p>(13) Filling, assembling, packaging, and other operations shall be performed in such a way that the food is protected against contamination. Compliance with this requirement may be accomplished by any effective means, including:</p> <ul style="list-style-type: none"> (i) Use of a quality control operation in which the critical control points are identified and controlled during manufacturing. (ii) Adequate cleaning and sanitizing of all food-contact surfaces and food containers. (iii) Using materials for food containers and food-packaging materials that are safe and suitable, as defined in §130.3(d) of this chapter. (iv) Providing physical protection from contamination, particularly airborne contamination. (v) Using sanitary handling procedures. |
| <p>(2) Written procedures shall be established and followed describing in sufficient detail the control procedures employed for the receipt, storage, handling, sampling, examination, and/or testing that may be necessary to assure the identity of labeling and the appropriate identity, cleanliness and quality characteristics of packaging materials for dietary products.</p> | |
| <p>(3) For dietary supplements, labels and other labeling materials for each different product type, strength, or quantity of contents shall be stored separately with suitable identification</p> | |
| <p>(4) Obsolete labels, labeling, and other packaging materials for dietary products shall be destroyed.</p> | |
| <p>(5) Written procedures shall be established and followed to assure that correct labels, labeling, and packaging materials are issued and used for dietary products.</p> | |
| <p>(6) Dietary ingredient and dietary supplement packages shall be identified with a lot number that permits determination of the history of the manufacture and control of the batch</p> | |
| <p>(7) Packaged and labeled dietary supplements shall be examined to provide assurance that containers and packages in the lot have the correct label and lot number. Products not meeting specifications shall be rejected by the quality control unit.</p> | |

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| <p>Warehousing, Distribution and Post-Distribution Procedures</p> <p>(a) <i>Storage and distribution.</i></p> <p>(1) Storage and transportation of finished product shall be under conditions that will protect product against physical, chemical, and microbial adulteration as well as against deterioration of the product and the container.</p> | <p>§110.93 Warehousing and distribution.</p> <p>Storage and transportation of finished food shall be under conditions that will protect food against physical, chemical, and microbial contamination as well as against deterioration of the food and the container.</p> |
| <p>(2) Adequate distribution records shall be maintained and retained by the manufacturer at least one year beyond expected product shelf life, whereby an effective product recall can be achieved should one become necessary.</p> | |
| <p>(b) <i>Reserve samples</i> An appropriately identified reserve sample that is representative of each batch of a dietary product should be retained and stored under conditions consistent with the product labeling until at least one year after the expiration date or if no expiration date is identified on the product, for at least three years after the date of manufacture. The reserve sample should be stored in the same immediate container-closure system in which the finished product is marketed or in one that provides similar protection. The reserve sample shall consist of at least twice the quantity necessary to perform all the required tests.</p> | |
| <p>(c) <i>Records retention</i></p> <p>(1) Any laboratory production, control or distribution record specifically associated with a batch of product shall be retained for at least one year after the expiration date of the batch, or if no expiration date is identified on the product, for at least three years after the date of manufacture.</p> | |
| <p>(2) Raw material records shall be maintained for at least one year after the expiration date of the last batch of product incorporating the raw material, or if no expiration date is identified on the product for at least three years after the date of manufacture of the finished product.</p> | |

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| <p>(d) <i>Complaint files.</i></p> <p>(1) Written procedures describing the handling of all written and oral complaints regarding a dietary product shall be established and followed. Such procedures shall include provisions for review by the quality control unit of any complaint involving the possible failure of a product to meet any of its specifications and, for such products, a determination as to the need for an investigation.</p> | |
| <p>(2) A written record of each complaint shall be maintained, until at least 1 year after the expiration date of the product, or 1 year after the date that the complaint was received, whichever is longer.</p> | |
| <p>(3) The written record shall include, where known: the name and description of the product, lot number, name of complainant, nature of complaint, and reply to complainant, if any.</p> | |
| <p>(4) Where an investigation is conducted, the written record shall include the findings of the investigation and follow-up action taken.</p> | |
| <p>(e) <i>Returned products.</i> Returned dietary products shall be identified as such and held. If the conditions under which returned dietary products have been held, stored, or shipped before or during their return, or if the condition of the product, its container, carton or labeling as a result of storage or shipping, casts doubt on the purity, composition or quality of the product, the returned product shall be destroyed unless examination, testing or other investigations prove the product meets appropriate standards of purity, composition and quality. A product may be reprocessed provided the subsequent product meets appropriate specifications. Records pertaining to returned products that are subsequently reprocessed and/or redistributed shall be maintained and shall include the name and description of the product, lot number, reason for the return, quantity returned, date of disposition, and ultimate disposition of the returned product.</p> | |
| <p>(f) <i>Product salvaging.</i> Dietary products that have been subjected to improper storage conditions including extremes in temperature, humidity, smoke, fumes, pressure, age, or radiation due to natural disasters, fires, accidents, or equipment failures shall not be salvaged and returned to the marketplace. Whenever there is a question whether products have been subjected to such conditions, salvaging operations may be conducted only if there is (a) evidence from laboratory tests that the products meet all applicable standards of purity, quality and composition, and (b) evidence from inspection of the premises that the products and their associated packaging were not subjected to improper storage conditions as a result of the disaster or accident. Records including name, lot number, and disposition shall be maintained for products subject to this section.</p> | |

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| <p>(g) <i>Defect Action Levels.</i></p> <p>(1) Some dietary ingredients and dietary supplements, even when produced under current good manufacturing practice, contain natural or unavoidable defects that at low levels are not hazardous to health. The Food and Drug Administration establishes maximum levels for these defects in dietary products produced under current good manufacturing practice and uses these levels in deciding whether to recommend regulatory action.</p> | <p style="text-align: center;">Subpart G—Defect Action Levels</p> <p>§110.110 Natural or unavoidable defects in food for human use that present no health hazard.</p> <p>(a) Some foods, even when produced under current good manufacturing practice, contain natural or unavoidable defects that at low levels are not hazardous to health. The Food and Drug Administration establishes maximum levels for these defects in foods produced under current good manufacturing practice and uses these levels in deciding whether to recommend regulatory action.</p> |
| <p>(2) Defect action levels are established for dietary products whenever it is necessary and feasible to do so. These levels are subject to change upon the development of new technology or the availability of new information.</p> | <p>(b) Defect action levels are established for foods whenever it is necessary and feasible to do so. These levels are subject to change upon the development of new technology or the availability of new information.</p> |
| <p>(3) Compliance with defect action levels does not excuse violation of the requirement in section 402(a)(4) of the act that dietary products not be prepared, packed, or held under unsanitary conditions or the requirements in this part that dietary product manufacturers, distributors, and holders shall observe current good manufacturing practice. Evidence indicating that such a violation exists causes a dietary product to be adulterated within the meaning of the act, even though the amounts of natural or unavoidable defects are lower than the currently established defect action levels. The manufacturer, distributor, and holder of a dietary product shall at all times utilize quality control operations that reduce natural or unavoidable defects to the lowest level currently feasible.</p> | <p>(c) Compliance with defect action levels does not excuse violation of the requirement in section 402(a)(4) of the act that food not be prepared, packed, or held under unsanitary conditions or the requirements in this part that food manufacturers, distributors, and holders shall observe current good manufacturing practice. Evidence indicating that such a violation exists causes the food to be adulterated within the meaning of the act, even though the amounts of natural or unavoidable defects are lower than the currently established defect action levels. The manufacturer, distributor, and holder of food shall at all times utilize quality control operations that reduce natural or unavoidable defects to the lowest level currently feasible.</p> |
| <p>(4) The mixing of a dietary ingredient or dietary supplement containing defects above the current defect action level with another lot of dietary ingredient or dietary supplement is not permitted and renders the final product adulterated within the meaning of the act, regardless of the defect level of the final product.</p> | <p>(d) The mixing of a food containing defects above the current defect action level with another lot of food is not permitted and renders the final food adulterated within the meaning of the act, regardless of the defect level of the final food.</p> |
| <p>(5) A compilation of the current defect action levels for natural or unavoidable defects in dietary products that present no health hazard may be obtained upon request from the Industry Programs Branch (HFF-326), Center for Food Safety and Applied Nutrition, Food and Drug Administration, 200 C St. SW, Washington, DC 20204.</p> | <p>(e) A compilation of the current defect action levels for natural or unavoidable defects in food for human use that present no health hazard may be obtained upon request from the Industry Programs Branch (HFF-326), Center for Food Safety and Applied Nutrition, Food and Drug Administration, 200 C St. SW, Washington, DC 20204.</p> |