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## **USDA COMMODITY REQUIREMENTS DOCUMENT**

# **DDI2 DRIED DAIRY INGREDIENTS FOR USE IN INTERNATIONAL FOOD ASSISTANCE PROGRAMS**

**Effective Date: November 27, 2013**

# USDA COMMODITY REQUIREMENTS DOCUMENT

## DDI2

### DRIED DAIRY INGREDIENTS

### FOR USE IN INTERNATIONAL FOOD ASSISTANCE PROGRAMS

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# Part 1 COMMODITY SPECIFICATIONS

## Section 1.1 COMMODITIES

### Section 1.1.1 Nonfat Dry Milk (NDM) Specifications

#### A. Quality of Product

- (1) The NDM purchased shall be Type I, Class A-low heat, Salmonella negative, and *Listeria monocytogenes* negative, in accordance with Commercial Item Description [CID A-A 20085D \(January 13, 2011\)](#), available at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3006747>
- (2) The NDM shall be tested for whey protein nitrogen (WPN) in accordance with the 17<sup>th</sup> Edition, “Standard Methods for the Examination of Dairy Products”, to determine the heat treatment classification listed in the table below:

WPN	Description
Low-Heat	The finished product shall show not less than 6.0 mg undenatured WPN per gram.
Medium-Heat	The finished product shall show not less than 1.55 mg and not more than 5.99 mg undenatured WPN per gram.
High-Heat	The finished product shall show not more than 1.5 mg undenatured WPN per gram.

#### B. Production Requirements for NDM

- (1) The NDM delivered to the United States Government (U.S., U.S. Government, or Government), shall have been manufactured in the U.S. from cow’s milk produced in the U.S., as defined in the [Master Solicitation for Commodity Procurements](#) at Part 3, Section A.1. The NDM shall not have been previously owned by the Government.
- (2) The plants in which the NDM is to be processed shall be inspected and approved by USDA’s Agricultural Marketing Service (AMS), Dairy Grading Branch (DGB), Dairy Programs (DP). The AMS plant approval code must match the appropriate product or operation code for the food ingredient being used.
- (3) The NDM shall be nonfortified or fortified spray process as specified in the solicitation and shall be U.S. Extra Grade. The NDM shall be subject to penicillin and coliform tests, to be performed by AMS at the time of grading. The penicillin test shall be negative; coliform counts shall not exceed 10 per gram; and the moisture content shall not exceed 3.5 percent.
- (4) Each dairy ingredient used in the manufacture of NDM shall originate from a dairy plant listed at the time of ingredient and packaging manufacture, as surveyed and approved by AMS. The AMS plant approval code must match the appropriate product or operation code for the applicable dairy ingredient.

**Section 1.1.2 Whey Protein Concentrate (WPC) Specifications**

- A. Definition of WPC - WPC is the substance obtained by removal of sufficient non-protein constituents from whey so that the finished dry product contains not less than 25 percent of protein. WPC is produced by physical separation techniques such as precipitation, filtration or dialysis. Acidity may be adjusted by the addition of safe and suitable ingredients.
- B. Quality of Product - The WPC shall comply with the appropriate definition and standard of identity, and all regulations issued pursuant to the Federal Food, Drug, and Cosmetic Act, relevant to milk (21 Code of Federal Regulations (CFR) Section 184.1979c, for the type of WPC specified in the solicitation.
- C. Production Requirements for WPC
  - (1) The WPC delivered to the Government shall have been pasteurized and manufactured in the U.S. from cow’s milk that was produced in the U.S. as defined in the Master Solicitation for Commodity Procurements at Part 3, Section A.1. In addition, the dairy ingredients shall not have been previously owned by the Government.
  - (2) The plants in which the product is to be processed shall be inspected and approved by AMS. The AMS plant approval code must match the appropriate product or operation code for the applicable dairy ingredient.
  - (3) Dairy ingredients used in the manufacture of WPC shall originate from a plant that has been approved by AMS. The AMS plant approval code must match the appropriate product or operation code for the applicable dairy ingredient.
- D. Composition Requirements - WPC shall comply with the following composition requirements:

<b>Whey Protein Concentrate</b>		
<b>Composition</b>	<b>WPC 34% Protein</b>	<b>WPC 80% Protein</b>
Protein% (dry basis)	34.0%-38.0%	80.0% Min.
Milkfat % (dry basis)	2.0%-5.0%	3.0%-8.0%
Ash % (dry basis)	3.0%-8.0%	2.0%-5.5%
Lactose % (dry basis)	60% max.	4.0%-12.0%
Moisture	maximum 5.0%	maximum 5.0%

**E. Microbiological Analysis**

<b>Item</b>	<b>Requirement</b>
Standard Plate Count	30,000/g max.
Coliform	10/g max.
E. Coli	Negative/g
Salmonella	Negative/375g
Coagulase-positive Staphylococci	Negative

F. Other Characteristics

Item	Requirement
Scorched Particle Content	15.0mg max.
pH Value	5.6-6.7
Color	White to light cream
Flavor	Bland, clean
Penicillin	Negative**
Heavy Metals (as lead)	10 ppm max.

\*\*Penicillin should be tested on incoming milk; if negative then no need to test on WPC

**Section 1.2 Warranty**

The DDI shall have a shelf life of at least one year from date of delivery to the Government, and shall not have been manufactured more than 60 days prior to delivery to the Government. The words or phrases “DDI” shall apply whenever WPC or NDM are used in this document and any other document which becomes a part of a contract in which any of the provisions of this CRD are incorporated, unless otherwise specified.

**Section 1.3 Quality Assurance**

- A. The quality, weight, and packaging will be based on grading certificates issued by AMS only when required by the solicitation. When grading certificates are not required by the solicitation, this does not relieve the contractor of its responsibility to deliver product which complies with all contractual requirements. Procedures and a schedule of fees for these services may be obtained by contacting [AMS](#).
- B. DDI produced in a plant determined by AMS to be using unsatisfactory manufacturing practices, equipment, facilities, or operating under unsanitary conditions shall not be offered for sale to the Government or sold for human consumption.
- C. The contractor shall not ship the commodity unless the contractor is informed by AMS that the containers, labels, and markings meet the Acceptable Quality Level of the United States Standard for Condition of Food Containers. Notice by AMS that a lot scheduled for shipment does not meet the U.S. standards shall constitute rejection.
- D. If the DDI fails to meet contract specifications on one or more factors on the first inspection, the contractor may arrange with AMS for subsequent inspections of the product. The inspections may be conducted at origin or, if agreed to by the Government, a subsequent point of delivery if the provisions of [7 CFR 58.22](#) through 58.32 issued under the Agricultural Marketing Act of 1946, as amended, with respect to retest, appeal, and new inspections can be met. When subsequent authorized inspections of the DDI are made, the results of the last inspection will be used as the basis of payment under the contract.

- E. USDA INSPECTION NOTES: USDA certification shall include evaluation of the quality and condition of samples of the DDI and compliance with requirements in the following areas:
- NDM Specifications (Sec 1.1.1).
  - WPC Specifications (Sec 1.1.2).
  - When USDA testing of DDI is specified, AMS inspection personnel shall select samples and submit them to the Science and Technology Programs laboratory for analysis.
  - Container and Packaging Requirements (Part 2).
- F. Contractors shall notify the Government immediately of lots that fail to meet contract requirements.
- G. USDA certification. AMS performs quality assurance, and the inspectors shall certify the quality and acceptability of the DDI in accordance with AMS procedures which include selecting random samples, evaluating samples for conformance with salient characteristics of this CRD and other contractual requirements, and documenting the findings on official certificates. In addition, when required in the solicitation, contract, or purchase order, AMS inspectors will examine the DDI for conformance to the United States Standards for Condition for Food Containers in effect on the date of the solicitation. To qualify for this option, the plant must be listed in Dairy Plants Surveyed and Approved for USDA Grading Service. The AMS plant approval code must match the applicable product or operation code for the DDI being manufactured.
- H. Contractor Quality Control. The contractor shall perform product testing and quality analysis to ensure that product delivered under the contract meets the requirements of this CRD, is suitable and safe for human consumption, and is equal to or better than the same or similar product offered for sale in the commercial human food market.

#### **Section 1.4 Failure of Commodity to Meet Requirements and Specifications**

- A. If discovered on or after delivery that all or any part of the commodity (including packages and containers) failed to meet contract requirements at time of delivery, the Government shall have the right to:
- (1) Accept or retain the entire quantity and hold Contractor liable for the damages sustained, as determined by the Government; or
  - (2) Reject the entire quantity or a portion thereof and accept or retain the remainder. The Government may, at its discretion, terminate the contract with respect to the quantity rejected or permit Contractor to replace all or part of the quantity rejected with a quantity of the commodity that conforms to all contract requirements and, in either circumstance, hold Contractor liable for damages sustained, as determined by the Government. To "reject" means to refuse to accept upon delivery or, after delivery and acceptance, to notify Contractor of the revocation of acceptance, in whole or in part. In either event, Contractor shall be held liable for all damages sustained, as determined by the Government.

- B. Any quantity rejected may be returned to Contractor, and shall be destroyed (if unfit for human consumption), or disposed of for the account of Contractor in accordance with applicable health and sanitation laws and regulations. Any rejection of a quantity of the commodity delivered by common carrier shall be made by the Government's office which issued the shipping instructions. Consignee may inform the carrier or Contractor of rejection of a quantity of the commodity delivered by contract carrier or by Contractor's own trucks. Contractor will be advised of Government's election under (A) 2. of this Section, either at the time of rejection or within a reasonable time thereafter.
- C. Inspection, checkloading, issuance of inspection or checkloading certificates, shipping instructions, or bills of lading, any payment by the Government, or the receipt of a commodity shall not constitute a waiver of the Government's rights under this Section.
- D. The rights and remedies provided in this Section are not exclusive or in derogation of any other rights and remedies provided by law or this CRD.

**Section 1.5 Regulatory Requirements**

- A. The delivered product shall comply with:
  - (1) All applicable Federal and State mandatory requirements and regulations relating to the preparation, packaging, labeling, storage, distribution, and sale of product within the commercial marketplace; and
  - (2) All applicable provisions of the Federal Food, Drug, and Cosmetic Act, the Fair Packaging and Labeling Act, and regulations promulgated hereunder (e.g. 21 CFR Parts 1-199).

Federal regulations include but are not limited to the following:

*CFR Title	Part/Section	Description
21	<a href="#">110</a>	Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Human Food
21	<a href="#">131.125</a>	Nonfat Dry Milk (NDM)
21	<a href="#">131.127</a>	NDM Fortified with Vitamins A & D
21	<a href="#">184.1979c</a>	Whey Protein Concentrate

\*Code of Federal Regulations

## **Part 2 CONTAINER AND PACKAGING REQUIREMENTS**

### **Section 2.1 GENERAL**

This part provides the container specifications and packaging materials requirements used under this contract.

### **Section 2.2 CONTAINERS AND MATERIALS**

- A. All containers and packaging shall be constructed to meet the requirements of the Food and Drug Administration for safe contact with the packaged product. The contractor shall obtain and maintain documentation from the container or packaging material manufacturer to verify that the containers and packaging materials used in this contract were in compliance with the Government's regulatory requirements for safe contact with food products as required in the [Master Solicitation](#), Part 3, Section A, Number 3.
- B. Questions concerning the containers and materials should be directed to:
  - USDA/FSA/DACO
  - Room 5755 – South Bldg, STOP 0551
  - 1400 Independence Avenue SW
  - Washington, DC 20250-0551
  - ATTN: Packaging
- C. If the contractor purchases packaging and container ingredients from a foreign country and/or the package and container is manufactured in a foreign country, the package and container SHALL NOT display country of origin labeling. Phrases similar, but not limited to, “Made in [Name of Foreign Country.]” or “Product of [Name of Foreign Country.]” are strictly prohibited.

### **Section 2.3 BASIC PACKAGING REQUIREMENTS**

- A. Container and packaging requirements for commercial products are those used in current commercial shipping practices for international distribution. For WPC, commercial packaging requirements shall be applicable unless otherwise specified in the solicitation.
- B. Bags shall be closed by expelling as much excess air as practical.
- C. Inner film facing the product shall be loose inserted food grade liner.
- D. Bottom and top of the bag shall be closed to provide a tight seal.
- E. Maximum average water-vapor transmission of the film at 90% to 95% relative humidity at 100°F (37.8°C) plus or minus 5°F (-15°C) shall be 0.45 gram per 100 square inches in 24 hours.



- F. The bag shall be capable of being printed with the information required.
- G. Any product packaged in shipping containers shall be marked to show the safe stacking height.
- H. Bags shall be manufactured to provide a tight seal designed to remain closed throughout the distribution system. Adhesives used in manufacture of bags must meet all Food and Drug Administration requirements for safe use in food packaging. Starch-based adhesives are **not** to be used.
- I. Bag designs that may be utilized include, but are not limited to, Pinch top, block bottom bags; Pinch top, pinch bottom, flat tube bags.
- J. The packaging and containers must sufficiently protect the commodity from exposure to the elements throughout the distribution system, including in-country storage, which routinely involves numerous and rugged handlings and extremes in temperature and humidity levels. It is important to note that commodity vendors are held responsible for commodity losses due to packaging or container failures, at the contracted price plus the costs associated with resolving problem situations (including commodity disposal and freight costs).

#### **Section 2.4 PERFORMANCE TEST PROCEDURES**

- A. All bags shall be capable of withstanding the following performance test for impact resistance:
  - (1) Ten filled and sealed bags shall each survive a single drop test on the butt and side on a shock machine that produces for each test a velocity change of 195 inches per second using a shock duration of .002 seconds without loss of product.
  - (2) Testing shall be conducted under standard temperature (73.4°F plus or minus 1.8°F) and relative humidity (50% plus or minus 2%) conditions.
  - (3) Filled bags shall be placed in the conditioned atmosphere for sufficient time before the tests are conducted for the bag materials to reach equilibrium.
  - (4) Bags submitted under this performance specification shall conform to all other applicable material, construction, and performance specifications.

B. Test Laboratories

The contractor may use any independent or private laboratory that is capable of conducting the performance test for impact resistance described in Section 2.5.A. However, the Government is aware of only the following domestically located independent or private laboratories that have such capability:

Michigan State University School of Packaging 130 Packaging Building East Lansing, MI 48824-1223 (517) 355-9580 <a href="http://www.packaging.msu.edu/research/testing_services/">http://www.packaging.msu.edu/research/testing_services/</a>	Lansmont Corporation 17 Mandeville Court Monterey, CA 93940 (831) 655-6600 <a href="http://www.lansmont.com">www.lansmont.com</a>
Rutgers University Center for Packaging Science and Engineering Busch Campus 137 Winchester Road, Piscataway, NJ 08854-8029 (732) 445-3224 <a href="http://catalogs.rutgers.edu/generated/nb-grad_0810/pg24361.html">http://catalogs.rutgers.edu/generated/nb-grad_0810/pg24361.html</a>	Ten-E Packaging Services, Inc. 1666 County Road 74 Newport, MN 55055 (651) 459-0671 <a href="http://www.ten-e.com/index.php/package-testing/">http://www.ten-e.com/index.php/package-testing/</a>

**Part 3 MARKING REQUIREMENTS**

**Section 3.1 MARKING SPECIFICATIONS**

- A. The following information shall be clearly marked on each container by print, lithograph, stamp, or stencil with permanent waterproof blue ink before sampling:
- (1) Product name;
  - (2) For NDM: heat treatment classification (however, heat treatment classification markings may be applied at the time of shipment to be in accordance with Whey Protein Nitrogen test result by AMS);
  - (3) For WPC: Unless otherwise specified in the solicitation, commercial markings shall be applicable for WPC provided they include as a minimum: product name, percent protein, name and location of manufacturer, month and year of manufacture, and manufacture's lot number, net weight in pounds and kilograms;
  - (4) Name and location of manufacturing plant or assigned State and plant number as reported for the plant by AMS in "Dairy Plants Surveyed and Approved for USDA Grading Service";
  - (5) Month and year of manufacture;
  - (6) Manufacturer's lot and subplot number;
  - (7) Bag serial number in order of production;
  - (8) Marked metric net weight in kilograms and marked net weight in pounds;

- (9) The AMS grading certificate number or AMS takeoff grading certificate number, when applicable, (both referred to as “certificate number”) shall be applied to each commodity container at the expense of Offeror. The lot’s final certificate number issued by AMS, i.e., takeoff certificate number, shall be the only certificate number marked on the commodity containers of the lot offered and delivered to CCC. At Offeror’s option and risk, the certificate number may be applied to each commodity container at time of packaging. To obtain a series of certificate numbers for application at time of packaging, contact AMS.

### **Section 3.2 CONTAINERS WITH INCORRECT MARKINGS**

- A. Any labels, bags, cans, can lids, cases, or any other type of packaging (hereinafter referred to as "containers") displaying incorrect markings may be used under a Government contract provided the incorrect markings are obliterated and correct markings are applied in a permanent manner with approval of the contracting officer.
- B. The appearance of containers in commercial or other channels either filled or unfilled bearing markings identifying the containers as part of a Government contract may cause expense to the Government in determining whether commodities have been diverted from authorized use and in answering inquiries. The contractor shall take all necessary actions to prevent the appearance in commercial or other channels of containers and container materials bearing any markings required under a Government contract, including those held by the contractor or others; e.g., overruns, misprints, etc. The contractor shall ensure that any container from a Government contract that appears in commercial or other channels shall have all markings required under this contract permanently obliterated.