

METRIC

A-A-20032F
December 20, 2002
SUPERSEDING
A-A-20032E
August 6, 1997

COMMERCIAL ITEM DESCRIPTION

POTATOES, WHITE, DEHYDRATED

The U.S. Department of Agriculture (USDA) has authorized the use of this Commercial Item Description (CID).

1. SCOPE. This CID covers dehydrated white potatoes, packed in commercially acceptable containers, suitable for use by Federal, State, local governments, and other interested parties.

2. PURCHASER NOTES.

2.1 Purchasers *shall specify* the following:

- Type(s), style(s), size(s), and option(s) desired (Sec. 3).
- When the shelf life at the time of delivery is other than specified (Sec. 5.6).
- When analytical requirements are different than specified (Sec. 6.1).
- When analytical requirements need to be verified (Sec. 6.3).
- Manufacturer's/distributor's certification (Sec. 9.2) or USDA certification (Sec. 9.3).

2.2 Purchasers *may specify* the following:

- Define quality requirements of the sauce for Type V, Style A potato casseroles through a bid sample (Sec. 6.2)
- Manufacturer's quality assurance (Sec. 9.1 with 9.1.1) or (Sec. 9.1 with 9.1.2).
- Special labeling and packaging requirements (Sec. 10).

3. CLASSIFICATION. The dehydrated potatoes shall conform to the following list which shall be specified in the solicitation, contract, or purchase order.

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Types, styles, sizes, and options.

Type I - Diced, blanched

Style A - Without peel

Style B - With peel

Size 1 - 0.44 mm x 0.44 mm x 0.16 mm (7/16 inch x 7/16 inch x 5/32 inch)

Size 2 - 9.5 cm x 9.5 cm x 3.2 cm (3/8 inch x 3/8 inch x 1/8 inch)

Size 3 - Other

Type II - Mashed (precooked, rapid rehydrating)

Style A - Granules

Style B - Flakes without peel

Option a - With sulfiting agents 1/

Option b - Without sulfiting agents 1/

Style C - Flakes with peel

Option a - With sulfiting agents 1/

Option b - Without sulfiting agents 1/

Style D - Agglomerates

Option a - Without lumps

Option b - With lumps

Style E - Pellets

Style F - Other

1/ Sulfiting agents (Sodium Bisulfite) are a color and flavor preservative

Type III - Sliced, blanched

Style A - Without peel

Style B - With peel

Size 1 - 3.2 mm (1/8 inch) thick round random cut

Size 2 - Other

Type IV - Shredded

Style A - Blanched

Style B - Cooked

Style C - Blanched/cooked (mixture of Styles A and B)

Size 1 - 0.22 mm x 0.22 mm (7/32 inch x 7/32 inch) maximum cross section, with a predominate piece length greater than 1.25 cm (1/2 inch)

Size 2 - Other

Type V - Potato casserole

Style A - Scalloped

Style B - Au Gratin

Style C - Other

Type VI - Other

4. MANUFACTURER=S/DISTRIBUTOR=S NOTES. Manufacturer's/distributor's products shall meet the requirements of the:

- Salient characteristics (Sec. 5).
- Analytical requirements: *as specified by the purchaser* (Sec. 6).
- Manufacturer's/distributor's assurance (Sec. 7).
- Regulatory requirements (Sec. 8).
- Quality assurance provisions: *as specified by the purchaser* (Sec. 9).
- Packaging requirements other than commercial: *as specified by the purchaser* (Sec. 10).

5. SALIENT CHARACTERISTICS.

5.1 Raw ingredients. The dehydrated potatoes shall be prepared from clean, sound, white to pale yellow-fleshed potato pieces or whole potatoes.

5.1.1 Additives and optional ingredients. All additives and optional ingredients used in the preparation of the product shall be of Food Chemicals codex purity.

5.1.2 Processing. The dehydrated potatoes shall be prepared in accordance with good manufacturing practices (21 CFR Part 110).

5.2 DEHYDRATED PRODUCT.

5.2.1 Additives and other ingredients. The Types and Styles of dehydrated potatoes shall contain those additives appropriate for manufacturing.

5.2.2 Defects. There shall not be any specific defect or combination of defects which materially affects the appearance, edibility, storage, or shipping quality of the dehydrated white potato product.

5.2.2.1 Fused product (Types I, III, and IV). Fused product is defined as more than two pieces that do not separate with slight thumbnail pressure. Each individual sample unit of 100 grams shall contain not more than 3.0 grams of fused pieces.

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5.2.2.2 Type I Diced, Style A without peel. Each individual sample unit of 100 grams of product shall contain not more than 3.0 grams of dices containing black, dark brown, or orange (scorched) discoloration(s) greater than 1.6 mm (1/16 inch) in any dimension. Peel shall be classified as a defect. No sample shall contain more than 5 defects greater than 6.35 mm (1/4 inch) in any dimension.

5.2.2.3 Type I Diced, Style B with peel. Each individual sample unit of 100 grams of product shall contain not more than 3.0 grams of dices containing black or orange (scorched) discolorations(s) greater than 1.6 mm (1/16 inch) in any dimension. Peel shall not be classified as a defect. No sample shall contain more than 5 defects greater than 6.35 mm (1/4 inch) in any dimension.

5.2.2.4 Type II Mashed, Style A Granules. Each individual sample unit shall contain not more than 80 black or dark brown specks and the average of all sample units shall not exceed 65 black or dark brown specks. The sample unit for evaluation is the surface of the product in a circle 100 mm (3.94 inches) in diameter.

5.2.2.5 Type II Mashed, Style B Flakes without peel. Each individual sample unit of 100 grams of product shall contain not more than 20 total pieces of peel, black, dark brown, or orange (scorched) specks and the average of all sample units shall not exceed 15 peel, black, dark brown, or orange (scorched) specks measuring over 1.6 mm (1/16 inch) in any dimension. Peel shall be classified as a defect.

5.2.2.6 Type II Mashed, Style C Flakes with peel. Each individual sample unit of 100 grams of product shall contain not more than 20 total pieces of black or orange (scorched) specks and the average of all sample units shall not exceed 15 black or orange (scorched) specks measuring over 1.6 mm (1/16 inch) in any dimension. Numerous brown peel specks will be visible and shall not be classified as a defect. The sample shall contain no extraneous material.

5.2.2.7 Type II Mashed, Style D Agglomerates and Style E Pellets. Each individual sample unit shall contain not more than 40 black, dark brown, or orange (scorched) specks, larger than a sharp pencil point dot, and the average of all sample units shall not exceed 30 black, dark brown, or orange (scorched) specks. The sample unit for evaluation is the surface of the product in a circle 100 mm (3.94 inches) in diameter.

5.2.2.8 Type III Sliced, Style A without peel. Each individual sample unit of 100 grams of product shall contain not more than 20 black, dark brown, or orange (scorched) discoloration(s) greater than 6.35 mm (1/4 inch) in any dimension and the average of all sample units shall not exceed 15 black, dark brown, or orange (scorched) defects(s). Peel shall be classified as a defect.

5.2.2.9 Type III Sliced, Style B with peel. Each individual sample unit of 100 grams of product shall contain not more than 20 black or orange (scorched) discoloration(s) greater than 6.35 mm (1/4 inch) in any dimension and the average of all sample units shall not exceed 15 black, or orange (scorched) defects(s). Peel shall not be classified as a defect.

5.2.2.10 Type IV Shredded. Each individual sample unit of 100 grams shall contain not more than 3.0 grams of shreds containing black, dark brown, or orange (scorched) discoloration(s) greater than 3.2 mm (1/8 inch) in any dimension.

5.2.3 Product shape.

5.2.3.1 Type II Mashed, Style D Agglomerates. The dehydrated potatoes shall be in a porous random shape agglomerated potato pieces, where by the final drying has been accomplished by air-drying. The agglomerated potato pieces shall be free from clumps that will not break under slight finger pressure. Rehydration will be such that the product performs as an instant mashed potato mix after whipping by hand to form the appearance and functionally of instant mashed potatoes. In a 100 gram sample, the finished product granulation shall be of such size that none of the dehydrated potato pieces shall be retained on a U.S. Standard No. 6 sieve, that a minimum of 70 percent, by weight, shall be retained on a U.S. Standard No. 40 sieve, and a maximum of 30 percent, by weight, shall pass through a U.S. Standard No. 40 sieve. Place the sieves in a Rotap, W.S. Tyler or equivalent and shake for 30 seconds with the tapper raised.

5.2.3.2 Type II Mashed, Style E Pellets. The dehydrated potato pieces shall be in porous pelletized form, free flowing, and free from clumps that will not break under slight finger pressure. The dehydrated potato pieces final drying shall be accomplished by air-drying. In a 100 gram sample, the finished product granulation shall be of such size that a minimum of 80 percent, by weight, shall be retained on a U.S. Standard No. 6 sieve and a maximum of 10 percent, by weight, shall be retained on a U.S. Standard No. 8 sieve.

5.4 REHYDRATED PRODUCT. After rehydration in accordance with label directions.

5.4.1 Flavor and odor. The rehydrated or prepared potatoes shall have a good flavor and odor typical for the type and style of potatoes. The product shall be free from objectionable or foreign flavor or odor (e.g., sour, musty, rancid, scorched, etc.).

5.4.2 Type I Diced, Type III Sliced, Type IV Shredded. The rehydrated or prepared diced, sliced, and shredded potato units must approximate the size specified and must have a mealy texture typical of prepared potatoes.

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5.4.3 Type II Mashed. Following the manufacturer’s label directions the rehydrated or prepared product shall have a consistency typical of mashed potatoes.

5.4.4 Type V Potato casserole. The potato casserole shall have a taste and appearance typical of the style specified in the solicitation, contract, or purchase order.

5.4.5 All types except for styles with peel. For all types except those styles with peel, the rehydrated or prepared product shall have a good, typical, cooked potato color ranging from white to pale yellow. The color shall be bright and free from gray or brown colors.

5.4.6 Styles with peel. For all styles with peel, the rehydrated or prepared product shall have a good, typical, cooked potato color ranging from white to pale yellow with peel added.

5.5 Foreign material. The dehydrated white potatoes shall be free from extraneous matter. The dehydrated white potatoes shall be free from foreign material such as, but not limited to, dirt, glass, wood, paint, filth, insects, metal, etc.

5.6 Shelf life. Unless otherwise specified in the solicitation, contract, or purchase order, the dehydrated, white potatoes shall have a shelf life of at least 12 months from date of production/packaging.

6. ANALYTICAL REQUIREMENTS.

6.1 Analytical requirements. Unless otherwise specified in the solicitation, contract, or purchase order, analytical requirements for the dehydrated white potatoes shall be as follows:

<u>Test</u>	<u>Tolerance</u>
Moisture	Shall not exceed 9.0 percent
Reducing sugars <u>2/</u>	Shall not exceed 4.0 percent

NON-SULFITED POTATOES

Sulfite content <u>3/</u>	Non-sulfited potatoes shall not exceed 10 parts per million (ppm)
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2/ Calculated as percent invert sugar, dry weight basis.

3/ Calculated as sulfur dioxide.

6.2 Quality requirements for Type V potato casseroles. When required in the solicitation, contract, or purchase order, the quality requirements for the sauce used in the potato casseroles shall be defined at the discretion of the purchaser or be based on a reference or bid sample product and a mutual agreement between the parties involved.

6.3 Product verification. When USDA verification of analytical requirements is specified in the solicitation, contract, or purchase order, the following procedures will be followed.

6.3.1 Sampling procedures. USDA inspection service will select the number of product containers based on USDA inspection service sampling procedures and plans.

6.3.2 Preparation of sample. The sample to be analyzed shall be a one-pound composite sample derived from a composite of the three containers. Prepare a clean, dry Waring Blender or similar mill by grinding a sample and then discarding it. Grind approximately 100 grams of the well-mixed sample in the prepared Waring Blender or similar mill for one minute. (Type II Mashed, Style A Granule potatoes need not be ground or screened.) Place the ground material in a small, dry, tightly-closed container for at least ½ hour. Pass the ground material over a U.S. Standard No. 20 sieve nested on a U.S. Standard No. 40 sieve. That portion which passes through the 20 mesh screen but not the 40 mesh screen is to be analyzed and shall be weighed immediately or placed in a small, dry container with a tightly closed lid until ready for analysis (a one-half pint Mason jar is satisfactory).

6.3.3 Further preparation of sample for reducing sugars test. Weigh 25 grams of potato granules or ground, sieved material into a 250 mL centrifuge bottle, add 75 mL of water, mix, and allow to stand for ½ hour. Add 100 mL of 95 percent ethyl alcohol plus 1 gram of calcium carbonate. Heat in a hot water (90 degrees Centigrade) bath for 1 hour while stirring frequently. Centrifuge sample at 1,500 rpm for 10 minutes and decant the liquid portion into a 600 mL beaker.

Repeat extraction three more times, each time using 75 mL of 80 percent ethyl alcohol, heating in the hot water (90 degrees Centigrade) bath for 15 minutes while stirring frequently. Centrifuge at 1,500 rpm for 10 minutes and decant the liquid into the 600 mL beaker. Evaporate combined extracts on a steam bath to a volume of 50 to 75 mL. Quantitatively transfer extract into 250 mL volumetric flask with hot distilled water, cool, add 10 mL of saturated, neutralized lead acetate 4, and bring to volume. Filter liquid through No. 2V Whatman or equivalent filter paper into a 250 mL Erlenmeyer flask containing about 4 grams of potassium oxalate. Mix filtrate thoroughly and allow precipitate to settle. To remove excess lead, add a few potassium oxalate crystals. Decant liquid through No. 2V Whatman or equivalent filter paper into a 250 mL glass-stoppered Erlenmeyer flask. Reagents used shall be American Chemical Society Reagent Grade.

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4/ A saturated solution of neutralized lead acetate is prepared by adjusting the solution to pH 6.8 with 1N sodium hydroxide.

6.3.4 Examination for moisture. Weigh to the nearest 0.1 mg, two, approximately 2-gram, samples of the ground, screened material (that portion which has passed through the 20 mesh screen and has been collected on the 40 mesh screen) into tared, dry, aluminum weighing dishes approximately 50.8 or 63.5 mm (2 or 2-1/2 inches) in diameter and 19.1 mm (3/4 inch) in depth with tight-fitting covers. Place the dishes with cocked lids in a vacuum-oven and dry for 6 hours at 70 degrees Centigrade under a pressure of not more than 100 mm of mercury. During drying, admit to the oven a slow current of air (approximately 2 bubbles per second), dried by passing through concentrated sulfuric acid. Remove the dishes, place the lids on tightly, and allow them to cool in a desiccator before weighing. Calculate the percent of moisture in the original samples and report the average of the two samples.

6.4 Analytical testing. The sample shall be analyzed using the following Official Methods of Analysis of the AOAC International methods or other methods as follows:

<u>Test</u>	<u>Method</u>
Moisture	934.06 (first paragraph) and paragraph 6.3.4 of this CID.
Reducing Sugars	906.03 or 923.09 and paragraph 6.3.3 of this CID.
Sulfite Content	990.28, 990.29

6.5 Test results. The test results for moisture and reducing sugars shall be reported to the nearest 0.1 percent. Test results for sulfite content shall be reported to the nearest ppm. Any result not conforming to the finished product requirements shall be cause for rejection of the lot.

7. MANUFACTURER’S/DISTRIBUTOR’S PRODUCT ASSURANCE. The manufacturer/distributor shall certify that the dehydrated potatoes provided shall meet the salient characteristics of this CID, conform to the their own specifications, standards, and quality assurance practices, and be the same dehydrated potatoes offered for sale in the commercial market. The purchaser reserves the right to require proof of conformance.

8. REGULATORY REQUIREMENTS. The delivered dehydrated potatoes shall comply with all applicable Federal and State mandatory requirements and regulations relating to the preparation, packaging, labeling, storage, distribution, and sale of the dehydrated potatoes within the commercial marketplace. Delivered dehydrated potatoes shall comply with all applicable provisions of the Federal Food, Drug, and Cosmetic Act, the Fair Packaging and Labeling Act, and regulations promulgated thereunder.

9. QUALITY ASSURANCE PROVISIONS. *Purchaser shall specify 9.2 or 9.3; purchaser may specify 9.1 with 9.1.1 or 9.1 with 9.1.2.*

9.1 Manufacturer's quality assurance. When required in the solicitation, contract, or purchase order, the product manufacturer shall be required to provide evidence, by certificate, that the manufacturing plant has undertaken one of the following quality assurance measures within 12 months prior to providing a bid, or no later than 10 business days from the date of awarding of the contract. Failure to provide this documentation within the proper time frame may result in the contract being terminated for cause.

9.1.1 Plant systems audit. A plant systems audit (PSA) shall be conducted by USDA, Agricultural Marketing Service (AMS), or other third party auditing service and is required within 12 months prior to the date of the awarding of the contract. *(An AMS PSA verifies the manufacturer's capability to produce products in a clean, sanitary environment in accordance with Title 21 Code of Federal Regulations Part 110 - Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Human Food; and have in place an internal quality assurance program. The AMS PSA determines the manufacturer's ability to produce under this CID, if the products of interest are identified at the time of the PSA.)*

9.1.2 Plant survey. A plant survey shall be conducted by USDA, AMS, or other third party auditing service and is required within 12 months prior to the date of the awarding of the contract. *(An AMS plant survey audit verifies that, at the time of the survey, the manufacturer produces products in a clean, sanitary environment in accordance with Title 21 Code of Federal Regulations Part 110 - Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Human Food.)*

9.2 Manufacturer's/distributor's certification. When required in the solicitation, contract, or purchase order, the manufacturer/distributor will certify that the dehydrated potatoes distributed meets or exceeds the requirements of this CID.

9.3 USDA certification. When required in the solicitation, contract, or purchase order that product quality and acceptability or both be determined, the Processed Products Branch (PPB), Fruit and Vegetable Programs (FVP), AMS, USDA, shall be the certifying program. PPB inspectors shall certify the quality and acceptability of the dehydrated potatoes in accordance with PPB procedures which include selecting random samples of the dehydrated potatoes, evaluating the samples for conformance with the salient characteristics of this CID and other contractual requirements, and documenting the findings on official PPB score sheets and/or certificates. In addition, when required in the solicitation, contract, or purchase order, PPB inspectors will examine the dehydrated potatoes for conformance to the United States Standards for Condition of Food Containers in effect on the date of the solicitation.

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10. PACKAGING. Preservation, packaging, packing, labeling, and case marking shall be commercial unless otherwise specified in the solicitation, contract, or purchase order.

11. USDA INSPECTION NOTES. When Section 9.3 is specified in the solicitation, contract, or purchase order, USDA certification shall include evaluation of the quality and condition of samples of dehydrated potatoes, and compliance with requirements in the following areas:

- Salient characteristics (Sec. 5).
- Analytical requirements *when specified in the solicitation, contract, or purchase order* (Sec. 6.1). When USDA testing of dehydrated potatoes consistency is specified, PPB inspection personnel shall select samples and conduct the tests.
- Packaging requirements (Sec. 10 or as specified in the solicitation, contract, or purchase order).

12. REFERENCE NOTES.

12.1 USDA certification contact. For USDA certification, contact the **Branch Chief, PPB, FVP, AMS, USDA, STOP 0247, 1400 Independence Avenue, SW, Washington, DC 20250-0247, telephone (202) 720-4693, Fax (202) 690-1527, or via E-mail: terry.bane@usda.gov.**

12.2 Analytical testing and technical information. For USDA technical information on analytical testing, contact the **Branch Chief, Technical Service Branch, Science and Technology Programs (S&TP), AMS, USDA, STOP 0272, 1400 Independence Avenue, SW, Washington, DC 20250-0272, telephone (202) 690-0621, or via E-mail: anita.okrend@usda.gov.**

12.3 Sources of documents.

12.3.1 Source of information for nongovernmental document is as follows :

Copies of the Official Methods of Analysis of the AOAC International may be obtained from: **AOAC International, 481 North Frederick Avenue, Suite 500, Gaithersburg, MD 20877, telephone (301) 924-7077. Internet address: <http://www.aoac.org>.**

Copies of the Food Chemicals codex may be purchased from: **National Academy Press, 2101 Constitution Avenue, NW, Lockbox 285, Washington, DC 20055, telephone (800) 624-8373 or (202) 334-3313, Fax (202) 334-2451. Internet address: <http://www.nap.edu>.**

12.3.2 Sources of information for governmental documents are as follows :

Applicable provisions of the Fair Packaging and Labeling Act are contained in 16 CFR Parts 500 to 503. The Federal Food, Drug, and Cosmetic Act is contained in 21 CFR Parts 1 to 199. These documents may be purchased from: **Superintendent of Documents, New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954. Credit card (MasterCard or Visa) purchases may be made by calling the Superintendent of Documents on (202) 512-1803 or on the Internet at: <http://www.access.gpo.gov/nara>.**

Copies of this CID, the United States Standards for Condition of Food Containers, and beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this CID are available from and/or provided to: **Head, Food Quality Assurance Staff, Fruit and Vegetable Programs, AMS, USDA, STOP 0243, 1400 Independence Avenue, SW, Washington, DC 20250-0243, telephone (202) 720-9939, Fax (202) 690-0102, via E-mail: FQAStaff@usda.gov or on the Internet at: <http://www.ams.usda.gov/fv/fvqual.hmt>.**

Military activities should submit requests for copies of this CID to: **Standardization Documents Order Desk, Document Automation And Production Service, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.**

MILITARY INTERESTS:

CIVIL AGENCY COORDINATING ACTIVITIES:

Military Coordinating Activity

Army - GL

DOJ - BOP
HHS - NIH
USDA - FV

Custodians

Army - GL
Navy - SA
Air Force - 35

VA -OSS

PREPARING ACTIVITY:

USDA - FV

Review Activities

Army - MD, QM
Navy - MC
DLA - SS

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