

METRIC

A-A-20161B

June 13, 2005

SUPERSEDING

A-A-20161A

March 21, 1997

COMMERCIAL ITEM DESCRIPTION

PIE FILLINGS, FRUIT, PREPARED

The U.S. Department of Agriculture (USDA) has authorized the use of this Commercial Item Description (CID) and replaces CID A-A-20244, Pie Filling, Lemon, Ready-To-Use.

1. SCOPE. This CID covers prepared fruit pie fillings, packed in commercially acceptable containers, suitable for use by Federal, State, local governments, and other interested parties; and as a component of operational rations.

2. PURCHASER NOTES.

2.1 Purchasers *shall specify* the following:

- Type(s) and flavor(s) of prepared fruit pie fillings required (Sec. 3).
- When analytical requirements are different than specified (Sec. 6.1).
- When analytical requirements need to be verified (Sec. 6.2).
- Manufacturer's/distributor's certification (Sec. 9.2) or USDA certification (Sec. 9.3).

2.2 Purchasers *may specify* the following:

- Manufacturer's quality assurance (Sec. 9.1 with 9.1.1) or (Sec. 9.1 with 9.1.2).
- Packaging requirements other than commercial (Sec. 10).

3. CLASSIFICATION. The prepared fruit pie fillings shall conform to the following list which shall be specified in the solicitation, contract or purchase order.

Types and flavors.

Type I - Regular

Flavor A - Apple

Flavor B - Apricot

Flavor C - Blueberry

Flavor D - Cherry

AMSC N/A

FSC 8940

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Flavor E - Lemon

Flavor F - Peach

Flavor G - Pineapple

Flavor H - Strawberry

Flavor I - Other

Type II - No Sugar Added (21 CFR 101.60(c)(2))

Flavor A - Apple

Flavor B - Blueberry

Flavor C - Cherry

Flavor D - 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 product 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 Processing. The prepared fruit pie fillings shall be prepared in accordance with good manufacturing practices (21 CFR Part 110).

5.1.2 Food Chemicals Codex purity. The ingredients listed in the Food Chemicals Codex shall comply with the purity standards of the Food Chemicals Codex.

5.2 Raw ingredients. The prepared fruit pie fillings shall be prepared from fresh, frozen, or canned fruit, or a combination thereof. Dried fruit may be used for apricot and apple pie filling. Lemon pie filling ingredients may be from concentrated or canned lemon juice. The products shall contain thickening ingredients (i.e. starch, pectin, carrageenan, and cellulose gums). The Type I pie fillings shall contain nutritive sweeteners. The Type II pie fillings may contain non-nutritive sweeteners (i.e. saccharin, sorbitol, maltitol, sucralose). Apple pie filling shall contain a 2 to 1 ratio of ground cinnamon to ground nutmeg or 0.1 percent cinnamon and 0.05 percent nutmeg by weight of finished canned product or commercial spice blend that yields an acceptable product. Lemon pie filling may contain egg yolks. The pie fillings may contain lemon juice, citrates, fruit essence, seasonings, artificial colors, preservatives, natural or artificial flavorings, and other ingredients. No sulfur dioxide yielding compounds may be used, except

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that sulfur dioxide may be used as a preservative for dried apricots and dried apples in accordance with 21 CFR 182.3862.

5.2.1 Water. Water used in the formulation shall conform to the National Primary Drinking Water Regulations.

5.2.2 Egg yolks. Egg yolks shall be prepared under the continuous inspection of the USDA and shall be identified by appropriate labeling or marking with a USDA Inspection Shield. The egg yolks shall have been tested and certified as *Salmonella*, not detected, or as *Salmonella*, not isolated, by the USDA. Egg ingredients shall have been processed according to the Regulations Governing the Inspection of Eggs and Egg Products (9 CFR Part 590) as amended.

5.2.3 Fruit. Fruit ingredients shall be of the following U.S. Standards for Grades, as applicable.

TABLE I. Raw Materials

Flavor	Fresh <u>1/</u>	Frozen	Canned	Dried
Apple	U.S. No. 1 <u>2/</u>	U.S. Grade A	U.S. Grade A	U.S. Grade B <u>3/</u> or better
Apricot	U.S. No. 2 or better	U.S. Grade B <u>3/</u> or better	U.S. Grade B <u>3/</u> or better	U.S. Grade B <u>3/</u> or better
Blueberry	U.S. No. 1 or better	U.S. Grade B <u>3/</u> or better	U.S. Grade B <u>3/</u> or better	---
Cherry	U.S. No. 1 or better	U.S. Grade B <u>3/</u> or better	U.S. Grade B <u>3/</u> or better	---
Lemon	U.S. No. 2 or better	---	U.S. Grade A <u>4/</u>	---
Peach	U.S. No. 1 or better	U.S. Grade B <u>3/</u> or better	U.S. Grade B <u>3/</u> or better	---
Pineapple	---	U.S. Grade A	U.S. Grade B <u>3/</u> or better	---
Strawberry	---	U.S. Grade A	---	---

1/ Processing grades to be used, as available.

2/ Applicable only to product solicited during apple season. For out-of-season procurements, apples for pie filling must meet U.S. Grade C or better of U.S. Standards for Grades of Canned Sliced Apples.

3/ Harmless extraneous material, such as pit fragments, stems, and the like, shall meet U.S. Grade A.

4/ U.S. Standards for Grades of Canned Lemon Juice or U.S. Standards for Grades of Concentrated Lemon Juice for Manufacturing.

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5.3 Finished product. The prepared fruit pie fillings shall have the following characteristics.

5.3.1 Color, odor, and flavor. The prepared fruit pie fillings shall impart a color, odor, and flavor characteristic of the particular kind of fruit used.

5.3.2 Fruit ingredients. The fruit ingredients shall be reasonably uniform in size and color. There shall be no objectionable extraneous material. The fruit ingredients shall be practically free from defects to such a degree that the appearance or eating quality is not affected.

5.3.3 Texture. Fruit texture of the prepared fruit pie filling shall be firm, not hard or mushy. The product shall have no ungelatinized pockets and shall not be tough or rubbery. Fruit glaze shall not exhibit syneresis. The pie filling shall be thick, firm, and uniform with a gel-like body and shall be easily spreadable. When prepared in accordance with the manufacturer's directions, the prepared lemon pie filling shall be smooth and free from cracks or crevices, shall be easily sliced into portions, and shall maintain its shape without breaking when transferred to serving dishes.

5.4 Thermoprocessing. When specified in the solicitation, contract, or purchase order, the fruit pie fillings shall be thermally processed until commercially sterile.

6. ANALYTICAL REQUIREMENTS.

6.1 Analytical requirements. Unless otherwise specified in the solicitation, contract, or purchase order, the analytical requirements for the finished product shall be in accordance with Table II.

TABLE II. Analytical requirements

<u>Flavor</u>	<u>Style</u>	<u>Minimum soluble solids for Type I (degree Brix)</u>	<u>Minimum soluble solids for Type II (degree Brix)</u>	<u>pH</u>
Apple	Slices	25.0	8.0	3.2 to 3.6
Apricot	Halves	30.0	---	3.6 to 4.0
Blueberry	Whole	27.0	11.0	3.4 to 3.8
Cherry	Whole	25.0	8.0	3.4 to 3.8
Lemon	---	29.0	---	3.5 to 4.0
Peach	Slices/strips	27.0	---	3.3 to 3.8
Pineapple	Crushed	27.0	---	3.3 to 3.9
Strawberry	Whole	25.0	---	3.4 to 3.9

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6.1.1 Consistency. Unless otherwise specified, the consistency of the pie fillings after 1 minute at 22°C (72°F), shall be as follows: Apple shall range from 7.5 to 10.5 cm (2.95 to 4.13 inches); apricot, blueberry, cherry, peach, pineapple, and strawberry shall range from 7.0 to 9.5 cm (2.76 to 3.74 inches); lemon shall range from 6.5 to 8.0 cm (2.56 to 3.15 inches).

6.1.2 Washed drained weight. Unless otherwise specified, the percent washed drained weight of fruit pie fillings shall be as follows: Apple shall not be less than 50.0 percent 5/; apricot and cherry shall be not less than 36.0 percent; blueberry, pineapple, and strawberry shall not be less than 30.0 percent; and peach not less than 40.0 percent.

5/ For Jonathan, Rome, Ida Red, Winesap, Golden Delicious, or Fuji apple varieties the minimum percent washed drained weight shall be 44.0 percent.

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

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

6.2.2 Composite sample. Analytical testing shall be performed on a composite sample. The composite sample shall be 227 g (8 oz) and prepared from subsamples drawn from randomly selected containers. The number of subsamples used to create the composite shall be based on USDA procedures or the composite sample shall be prepared from a minimum of five randomly selected containers to yield a 227 g (8 oz) sample when composited.

6.3 Analytical testing. When specified in the solicitation, contract, or purchase order, analyses shall be in accordance with the following methods from the Official Methods of Analysis of the AOAC International.

<u>Test</u>	<u>Method</u>
Soluble solids	932.12
pH	981.12

6.4 Test results. The test results for pH shall be reported to the nearest 0.1 value and soluble solids results to the nearest 1.0° Brix. The consistency test shall be reported to the nearest 0.1 centimeters in 1 minute. Washed drained weight shall be reported to the nearest 0.1 percent. Any result not conforming to the analytical requirements shall be cause for rejection of the lot.

6.5 Consistency test and washed drained weight procedures. Consistency shall be determined first, retaining the product sample for use in the washed drained weight procedure.

A-A-20161B**6.5.1 Consistency test.****6.5.1.1 Equipment.**

- (a) A 24-inch square platform scribed with 30 concentric circles 1 centimeter apart, equipped with leveling screws and a glass plate cover.
- (b) Spreadometer lifting device or its equivalent.
- (c) No. 2 can (307 x 409) with both ends removed.
- (d) A clear plastic over-cap.
- (e) Spatula or suitable tool.

6.5.1.2 Procedures.

- (a) Condition samples until a product temperature of $22^{\circ} \pm 3^{\circ}\text{C}$ ($72^{\circ} \pm 5^{\circ}\text{F}$) has been reached.
- (b) Level the platform.
- (c) Thoroughly mix the sample contents, taking care not to crush the individual fruit particles. Place a plastic over-cap over one open end. Carefully place 623.7 g (22 oz) net weight in the No. 2 can.
- (d) Place a clear plastic plate on the open end of the cylinder, center, invert, remove the plastic over-cap. Transfer pie filling adhering to the over-cap to the cylinder, level the pie filling. Raise the cylinder gently to a height of 3.18 cm (1.25 inches). (In the case of heavy viscosity apple pie filling, it may be necessary to raise the can to a height of 3.81 cm (1.5 inches) to allow the product to flow freely from the can. This latter adjustment may be made during the spread time). Wipe the inside of the cylinder with a spatula in a circular manner.
- (e) Hold can in this position and record the extent of spread at four equally-spaced radial points after 1 minute.
- (f) Calculate the average of the four readings to determine compliance with requirements in section 6.1.1 of this CID.

6.5.2 Washed drained weight procedures.

- (a) Select five sample units of one type of pie filling at random from the lot. Determine and record the net weight of each sample. Transfer the contents of the first sample unit to a flat bottom container.
- (b) Add a minimum of three times the sample's volume of $20\text{-}22^{\circ}\text{C}$ ($68\text{-}72^{\circ}\text{F}$) water to the container so as to cover the contents. Gently agitate to separate the fruit from the slurry without breaking up the fruit pieces.
- (c) Pour the contents into a U.S. Standard No. 8 sieve in a manner that will distribute the product evenly over the sieve without breaking the fruit. Distribute such that product does not completely cover all the openings in the sieve. Tilt sieve at about a 45° angle and allow to drain for two minutes before determining the washed drained weight by subtracting the sieve tare weight from the gross weight. Catch the additional fruit particles that fall through the U.S.

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Standard No. 8 sieve with a U.S. Standard No. 20 sieve. Add the fruit weight from the U.S. Standard No. 20 sieve to the fruit weight from U.S. Standard No. 8 sieve to determine final drained weight. Divide the resulting drained weight by the net weight of the sample and multiply by 100 to obtain the percent washed drained weight. Repeat this procedure for each of the remaining sample units. Any individual sample more than two percent under the requirement or a sample average less than the requirement shall be cause for rejection of the lot.

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

8. REGULATORY REQUIREMENTS. The delivered fruit pie fillings shall comply with all applicable Federal, State, and local mandatory requirements and regulations relating to the preparation, packaging, labeling, storage, distribution, and sale of fruit pie fillings within the commercial marketplace. Delivered product 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) conducted by USDA, Agricultural Marketing Service (AMS), or another audit performed by a third party auditing service 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 verifies that the manufacturer has 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 conducted by USDA, AMS, or another survey performed by a third party auditing service 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*

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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 fruit pie filling 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 fruit pie fillings in accordance with PPB procedures which include selecting random samples of the packaged fruit pie fillings, 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 fruit pie fillings for conformance to the United States Standards for Condition of Food Containers in effect on the date of the solicitation.

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 packaged fruit pie fillings, 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 analytical testing is specified, PPB inspection personnel shall select samples and submit them to the USDA, Science and Technology Program (S&TP) laboratory for analysis.
- 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.

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12.2 Analytical testing and technical information. For USDA technical information on analytical testing, contact the **Branch Chief, Technical Service Branch, 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 Fredrick Avenue, Suite 500, Gaithersburg, MD 20877, telephone (301) 924-7077. Internet address: <http://www.aoac.org>.**

Copies of the Food Chemicals Codex may be obtained from: **National Academy Press, 500 Fifth Street, NW, Lockbox 285, Washington, DC 20055; telephone (888) 624-8373 or (202) 334-3313 Fax (202) 334-1891. Internet address: <http://www.nap.edu>.**

12.3.2 Sources of information for governmental documents are as follows:

Applicable provisions of: Fair Packaging and Labeling Act are contained in 16 CFR Parts 500 to 503, and the Federal Food, Drug, and Cosmetic Act are contained in 21 CFR Parts 1 to 199. These documents may be purchased from: **Superintendent of Documents, ATTN: 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) 512-1800 or on the Internet at: <http://www.gpoaccess.gov/nara/index.html>.**

Copies of National Primary Drinking Water Regulations are available from the **Office of Drinking Water, Environmental Protection Agency, WH550D, 401 M Street SW, Washington, DC 20460 or on the Internet at: <http://www.epa.gov/safewater/standards.html>.**

Copies of the United States Standards for Grades for fresh fruits and vegetables are available from: **Chief, Fresh Products Branch, STOP 0240, 1400 Independence Avenue, SW, Washington, DC 20250-0240, or on the Internet at: <http://www.ams.usda.gov/fv/>.**

Copies of the United States Standards for Grades for processed fruit and vegetable products are available from: **Chief, Processed Products Branch, STOP 0247, 1400 Independence Avenue, SW, Washington, DC 20250-0247, or on the Internet at: <http://www.ams.usda.gov/fv/>.**

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Copies of this CID and the United States Standards for Condition of Food Containers are available from: **Head, Food Quality Assurance Program, FVP, 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: www.ams.usda.gov/fv/fvqual/htm.**

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: **Commander, Defense Supply Center Philadelphia, ATTN: DSCP-FTSL, 700 Robbins Avenue, Philadelphia, PA 19111-5092, FAX (215) 737-2963, or via E-mail: sally.a.gallagher@dla.mil.**

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 or on the Internet at: <http://assist.daps.dla.mil/quicksearch/>.**

MILITARY INTERESTS:**Custodians**

Army - GL
Navy - SA
Air Force - 35

Review Activities

Army - MD, QM
Navy - MC

CIVIL AGENCY COORDINATING ACTIVITIES:

DOJ - BOP
HHS - NIH, IHS, FDA
USDA - FV
VA - OSS

PREPARING ACTIVITY:

DLA - SS
(Project No. 8940-P123)

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