**METRIC**

**A-A-20184C**
**May 16, 2013**
**SUPERSEDING**
**A-A-20184B**
**July 31, 2006**

# COMMERCIAL ITEM DESCRIPTION

# COFFEE, SOLUBLE

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

**1. SCOPE.** This CID covers soluble coffee, 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 style(s) of soluble coffee required (Sec. 3).
- When analytical requirements are different than specified (Sec. 7.1).
- When analytical requirements need to be verified (Sec. 7.2).
- Manufacturer's/distributor's certification (Sec. 10.3) or USDA certification (Sec. 10.4).

### 2.2 Purchasers *may specify* the following:

- Food Defense Section 10.1: Food Defense System Survey (FDSS) (Sec 10.1.1), or Food Defense Addendum to Plant Systems Audit (PSA) (Sec 10.1.2), or (Sec. 10.1.2 with 10.2.1).
- Manufacturer's quality assurance (Sec. 10.2 with 10.2.1) or (Sec. 10.2 with 10.2.2).
- Packaging requirements other than commercial (Sec. 11).

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

**Types and styles.**[1]

**Type I** - Spray dried, powdered
**Type II** - Spray dried, agglomerated

[1] Not all options are available from every manufacturer. Check with the manufacturer/distributor for availability.

**Type III** - Freeze dried
**Type IV** - Liquid coffee extracts (also known as liquid concentrate)
**Type V** - Other (*as specified by the purchaser*)

**Style A** - Regular
**Style B** - Decaffeinated

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

- Processing guidelines (Sec. 5).
- Salient characteristics (Sec. 6).
- Analytical requirements: *as specified by the purchaser* (Sec. 7).
- Manufacturer's/distributor's product assurance (Sec. 8).
- Regulatory requirements (Sec. 9).
- Quality assurance provisions: *as specified by the purchaser* (Sec. 10).
- Packaging requirements other than commercial: *as specified by the purchaser* (Sec. 11).

**5. PROCESSING GUIDELINES.**

**5.1 Processing.** The soluble coffee shall be prepared and/or decaffeinated in accordance with Current Good Manufacturing Practices (21 Code of Federal Regulations (CFR) Part 110). The coffee beans shall be processed using roasting, brew extraction and concentrating. Types I and II soluble coffees shall also be spray dried. Type III, soluble coffee shall also be freeze dried. **NOTE: When specified in the solicitation, contract, or purchase order, all processing shall be performed domestically.**

**5.2 Food security.** The soluble coffee shall be processed and transported in accordance with the Food and Drug Administration's (FDA's) *Guidance for Industry: Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance.*[2] This guidance identifies the kinds of preventive measures food manufacturers, processors, or handlers may take to minimize the risk that food under their control will be subject to tampering or other malicious, criminal, or terrorist actions. The implementation of enhanced food security preventive measures provides for the security of a plant's production processes and includes the storage and transportation of pre-production raw materials, other ingredients, and postproduction finished product.

**6. SALIENT CHARACTERISTICS.**

**6.1 Raw coffee bean requirements.** The roasted and ground coffee from which the soluble coffees are derived shall be made from coffee received in the raw or green bean state. The

[2] http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/FoodDefense/ucm083075.htm

ground coffee shall be made from Arabica and/or Robusta coffee beans. The ground coffee may include but is not limited to beans grown in Brazil, Colombia, Hawaii, Puerto Rico, Central America, Mexico, or Kenya. Type IV, liquid coffee extracts shall be produced from only roasted green coffee beans and water with the exception of GRAS (generally recognized as safe) preservatives to ensure the quality of the finished product. All coffee beans used shall be prepared from the current or previous year's crop. Green coffee beans are defined as the dried coffee seed (no less than Grade 8 as measured by the procedure of the FDA Technical Bulletin Number 5 - Macroanalytical Procedures Manual, Chapter V, 1984; electronic version 1998) commercially free from external layers such as: skin, hull, pulp, mucilage, parchment, and silver skin. Single types or blends of coffee beans shall be of such growths and grade as to produce an end product cup quality specified in Sec. 6.5.3. The green coffee beans shall be processed without fermentation.

**6.2 Dehydrated product.**

**6.2.1 Appearance.**

**6.2.1.1 Type I.** Soluble spray dried coffee shall be a spray-dried powder.

**6.2.1.2 Type II.** Soluble spray dried agglomerated coffee shall be spray-dried particles agglomerated to form a granular appearing product.

**6.2.1.3 Type III.** Soluble freeze dried coffee shall be a freeze dried coffee with a granular appearance.

**6.2.1.4 Type IV.** Liquid coffee extract shall be a concentrated coffee in liquid or frozen form.

**6.2.2 Texture.** Types I, II, and III soluble coffee shall be free flowing, and free from lumps which do not compress with light pressure. Type IV soluble coffee shall have a smooth texture.

**6.3 Hydrated product.**

**6.3.1 Dispersability.** Types I, II, and III soluble coffee shall be smooth, free from discernible lumps and sediment free. The soluble coffee shall fully dissolve in hot or cold water with constant stirring and show no evidence of undissolved floating particles.

**6.3.2 Color.** The prepared coffee beverage shall have a typical brownish-black coffee color.

**6.3.3 Flavor and aroma.** When prepared as directed on the package, the soluble coffee shall have a characteristic coffee flavor and aroma, and be free from objectionable flavor and/or odor.

**6.4 Bid sample.** Unless otherwise specified in the solicitation, contract, or purchase order, a bid sample shall be submitted and evaluated for conformance to Sections 6.3.1, 6.3.2, and 6.3.3.

**6.5 Foreign materials.** The finished product shall be clean, sound, wholesome, and free from evidence of rodent or insect infestation.

## 7. ANALYTICAL REQUIREMENTS.

**7.1 Chemical, physical, and microbiological requirements.** Unless otherwise specified in the solicitation, contract, or purchase order, the chemical, physical, and microbiological requirements for the soluble coffee shall be as follows:

**7.1.1 Sediment (Types I, II, and III).** The soluble coffee shall have not more than 2.5 mg of coffee sediment on disk, when compared to sediment disk 3.

**7.1.2 Particle size.** When specified for Department of Defense procurements, Type III soluble coffee shall meet the following requirements:

| U.S. Standard sieve size | Percent retained (by weight) |
|---|---|
| 6 | 5 maximum |
| 12 | 20 maximum |
| 40 | 80 ± 15 |
| Pan | 15 maximum |

**7.1.3 Caffeine and moisture tolerances.**

**TABLE I. Caffeine and moisture (percent by weight)**

| Type | Caffeine[3] | Moisture (maximum) |
|---|---|---|
| Type I, Style A | 2.0 | 3.0 |
| Type II, Style A | 2.0 | 5.0 |
| Type III, Style A | 2.0 | 2.6 |
| Type IV, Style A | 2.0[4] | - |
| Type I, Style B | 0.3 | 3.0 |
| Type II, Style B | 0.3 | 5.0 |
| Type III, Style B | 0.3 | 2.6 |
| Type IV, Style B | 0.3[4] | - |

[3] Caffeine levels for Style A are minimums. Caffeine levels for Style B are maximums.
[4] Caffeine level for the liquid coffee extract after reconstitution in accordance with manufacturer's directions.

**7.1.4 Chemical and microbiological tolerances.**

| Test | Tolerances |
|---|---|
| Standard plate count | Less than 1000 Colony Forming Units (CFU) per g |
| Ochratoxin A | Less than 10 parts per billion (ppb) |
| Total glucose | Less than 2.46 percent |
| Total xylose | Less than 0.45 percent |

**7.2 Product verification.** When verification of analytical requirements is specified in the solicitation, contract, or purchase order, testing for total glucose, total xylose, sediment, particle size, moisture, ochratoxin A and caffeine shall be performed on a composite sample. The subsamples shall be a minimum of one packet/container and shall contain the appropriate number of packets/containers (minimum 10) to yield a 227 g (8 oz) sample when composited. Due to the shelf life and stability of Type IV liquid coffee extracts, these samples will be composited at the laboratory. Standard plate count shall be performed on the contents of 5 randomly collected individual packets/containers.

**7.3 Analytical testing.** When specified in the solicitation, contract, or purchase order, the analyses shall be made in accordance with the following methods from the AOAC International Official Methods of Analysis (OMA) or as listed below:

| Test | Method |
|---|---|
| Standard plate count | 966.23, 990.12 |
| Ochratoxin A | 2000.09 |
| Total glucose | 995.13 |
| Total xylose | 995.13 |
| Caffeine | 960.25, 979.11 |
| Moisture[5] | 979.12 |

[5] Temperature during drying shall be 60 to 70°C (140 to 158°F) under a pressure of 9.906 to 14.986 cm (3.9 to 5.9 in) Hg.

| Test | Method |
|---|---|
| Sediment[6] | United States Sediment Standards for Milk and Milk Products |
| Particle size | [7] |

**7.4 Test results.** The test results for caffeine and moisture shall be reported to the nearest 0.1 percent. The test results for glucose and xylose shall be reported to the nearest 0.01 percent. The test results for sediment shall be reported to the nearest 0.1 mg. The test results for particle size shall be reported to the nearest 1.0 percent. The test results for standard plate count shall be reported to the nearest 10 grams. The test results for ochratoxin A shall be reported to the nearest ppb. Any results not conforming to the chemical, physical, and microbiological requirements shall be cause for rejection of the lot.

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

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

**10. QUALITY ASSURANCE PROVISIONS.** *Purchaser shall specify 10.3, or 10.4; purchaser may specify 10.1 with 10.1.1, 10.1 with 10.1.2, 10.1.2 with 10.2.1, 10.2 with 10.2.1, or 10.2 with 10.2.2.*

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[6] Weigh 5.0 grams of instant coffee into a clean 250 mL beaker. Add 200 mL of 85° - 100°C (185° - 212°F) distilled water. Stir until coffee is completely dissolved. Filter the hot coffee through a sediment filtering apparatus (see note below). The coffee solution shall not be less than 60°C (140°F) at the time of filtration. The filtering apparatus shall hold 3.175 cm (1-1/4 in) sediment disk and have an effective filtering area with a 2.8575 cm (1-1/8 in) diameter. The 2.8575 cm (1-1/8 in) diameter filtering area must be unobstructed except for a wire screen or wire screen and perforated plate support for filter disk, and constructed so that no sample being filtered can bypass the filtering material. Rinse the beaker and the sediment tester with 85°C (185°F) distilled water (not to exceed 200 mL) so as to transfer all sediment to the surface of the filter material and to rinse out all of the soluble coffee from the filter. Carefully remove the filter containing the sediment from apparatus and air dry the filter. Compare the dried filter with the photographs of the United States Sediment Standards for Milk and Milk Products.
**NOTE:** The sediment testing apparatus used in performing the sediment test is a Model KL Sediment tester, available from Sediment Testing Supply, 7366 North Greenview Avenue, Chicago, Illinois 60626, or its equivalent. The filter material used can also be obtained from the same company or from Filter Fabrics, 814 E. Jefferson Street, Goshen, Indiana 46528, or their equivalent.

[7] When required, the procedure for determining the particle size of the Type III product shall be as follows:
Assemble sieves and collecting pan in the following order from top to bottom; U.S. Standard Sieve No. 6, No. 12, No. 40, and pan. Place the weighed contents (to nearest gram) of a sample package on the top sieve and attach lid. Place assembly in a Ro-Tap® or equivalent mechanical shaking device and shake for 1 minute, in a room in which the relative humidity does not exceed 40 percent. Weigh product remaining on each sieve and in the collecting pan respectively. Calculate results in percentage and report results to the nearest 1.0 percent.

**10.1 Food defense.** When required in the solicitation, contract, or purchase order, a FDSS shall be conducted by USDA, Agricultural Marketing Service (AMS), Fruit and Vegetable Program (FV), Specialty Crops Inspection Division (SCI). Food defense requirements include a documented and operational food defense plan that provides for the security of a plant's production processes and includes the storage and transportation of pre-production raw materials and other ingredients and postproduction finished product. The plan shall address the following areas: (1) food security plan management; (2) outside and inside security of the production and storage facilities; (3) slaughter, when applicable, and processing, including all raw material sources; (4) shipping and receiving; (5) storage; (6) water and ice supply; (7) mail handling; (8) personnel security; and (9) transportation, shipping, and receiving.

**10.1.1 FDSS.** When required in the solicitation, contract, or purchase order, a FDSS shall be conducted by USDA, AMS, FV, SCI. The FDSS verifies that operators of food establishments have implemented measures to minimize the risk of tampering or other criminal actions against the food under their control. *(An AMS, FDSS verifies the participating company's adherence to the FDA's "Guidance for Industry - Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance.") For further information, see Sec. 13.1 and 13.3.2.*

**10.1.2 Food defense addendum to PSA.** When required in the solicitation, contract, or purchase order, a food defense addendum shall be conducted by USDA, AMS, FV, SCI auditors. This verifies that operators of food establishments have implemented measures to minimize the risk of tampering or other criminal actions against the food under their control. *(An AMS, FDSS, PSA verifies the participating company's adherence to the FDA's "Guidance for Industry - Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance.") For further information, see Sec. 13.1 and 13.3.2.*

**10.2 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 the awarding of the contract. Failure to provide this documentation within the proper time frame may result in the contract being terminated for cause.

**10.2.1 PSA.** A PSA conducted by USDA, AMS, or other 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 21 CFR 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.)*

**10.2.2 Plant survey.** A plant survey conducted by USDA, AMS, or other 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*

*produces products in a clean sanitary environment in accordance with 21 CFR Part 110 - Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Human Food.)*

**10.3 Manufacturer's/distributor's certification.** When required in the solicitation, contract, or purchase order, the manufacturer/distributor shall certify that the soluble coffee distributed meets or exceeds the requirements of this CID.

**10.4 USDA certification.** When required in the solicitation, contract, or purchase order that product quality and acceptability or both be determined, the SCI, FV, AMS, USDA, shall be the certifying program. SCI inspectors shall certify the quality and acceptability of the soluble coffee in accordance with SCI procedures, which include selecting random samples of the soluble coffee, evaluating the samples for conformance with the salient characteristics of this CID and other contractual requirements, and documenting the findings on official SCI score sheets and/or certificates. In addition, when required in the solicitation, contract, or purchase order, SCI inspectors will examine the soluble coffee for conformance to the U.S. Standards for Condition of Food Containers (7 CFR Part 42) in effect on the date of the solicitation.

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

**12. USDA INSPECTION NOTES. When Section 10.4 is specified in the solicitation, contract, or purchase order, USDA certification shall include evaluation of the quality and condition of samples of soluble coffee and compliance with requirements in the following areas:**

- Processing guidelines (Sec. 5).
- Salient characteristics (Sec. 6).
- Analytical requirements *when specified in the solicitation, contract, or purchase order* (Sec. 7). When USDA analytical testing is specified, SCI inspection personnel shall select samples and submit them to the USDA, Science and Technology Programs (S&TP) laboratory for analysis.
- Packaging requirements (Sec. 11 or *as specified in the solicitation, contract, or purchase order*).

**13. REFERENCE NOTES.**

**13.1 USDA certification, FDSS, Plant Survey, and PSA contact.** For a USDA certification, FDSS, Plant Survey, and PSA, contact the **Chief, Inspection Branch, SCI, FV, AMS, USDA, STOP 0240, 1400 Independence Avenue, SW, Washington, DC 20250-0240, telephone (202) 720-2482, fax (202) 720-0393, or via E-mail: Nathaniel.Taylor@ams.usda.gov.**

**13.2 Analytical testing and technical information contact.** For USDA technical information on analytical testing, contact **a member of the Technical Service Staff, S&TP, AMS, USDA,**

**STOP 0272, 1400 Independence Avenue, SW, Washington, DC 20250-0272, telephone (202) 690-0621 or via E-mail: Alan.Post@ams.usda.gov or Ruihong.Guo@ams.usda.gov.**

**13.3 Sources of documents.**

**13.3.1 Sources of information for nongovernmental document are as follows:**

Copies of the AOAC International OMA may be obtained from: **AOAC International, 481 North Frederick Avenue, Suite 500, Gaithersburg, MD 20877-2417, telephone (301) 924-7077. Internet address: http://www.aoac.org for nonmembers and http://www.eoma.aoac.org for members and AOAC OMA subscribers.**

**13.3.2 Sources of information for governmental documents are as follows:**

Applicable provisions of the U.S. Standards for Condition of Food Containers are contained in 7 CFR Part 42, the 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, New Orders, P.O. Box 979050, St. Louis, MO 63197-9000. Credit card (Visa, MasterCard, Discover/ NOVUS, and American Express) purchases may be made by calling the Superintendent of Documents on (866) 512-1800, (202) 512-1800. These documents may also be obtained free of charge on the Internet at: http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR.**

Copies of Guidance for Industry - Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance is available online from: **FDA, Center for Food Safety and Applied Nutrition (CFSAN) on the Internet at: http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/FoodDefense/ucm083075.htm.**

Copies of United States Sediment Standards for Milk and Milk products and copies of photographs of the sediment standards may be obtained from: **Standardization Branch, Dairy Programs, AMS, USDA, Room 2746-South Building, STOP 0230, 1400 Independence Ave., SW, Washington, DC 20250-0230. Telephone: (202) 720-7473, Fax (202) 720-2643, or on the Internet at: http://www.ams.usda.gov/dairy/grade.htm.**

Copies of the FDA Technical Bulletin Number.5 - Macroanalytical Procedures Manual, Chapter V, 1984; Electronic Version 1998 may be obtained from: **Internet address: http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm2006953.htm.**

Copies of this CID, and the U.S. Standards for Condition of Food Containers (7 CFR Part 42) are available from: **Chief, Standardization Branch, SCI, FV, AMS, USDA, STOP 240, 1400 Independence Avenue, SW, Washington, DC 20250-0240, telephone (202) 720-5021, Fax**

**(202) 690-1527, via E-mail: CIDS@ams.usda.gov or on the Internet at: www.ams.usda.gov/CommercialItemDescription.**

Copies of this CID are also available online at: **ASSIST Online (https://assist.dla.mil) or ASSIST Quick Search (https://assist.dla.mil/quicksearch) or from the Standardization Documents Order Desk, Defense Logistics Agency (DLA) Document Services, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.**

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: **DLA Troop Support, ATTN: DLA-FTSA, 700 Robbins Avenue, Philadelphia, PA 19111-5092 or Fax (215) 737-2963, or via E-mail: dscpsubsweb@dla.mil.**

**MILITARY INTERESTS:**

**Custodians**

Army - GL
Navy - SA
Air Force - 35
DLA - SS

**Review Activities**

Army - MD, QM
Navy - MC

**CIVIL AGENCY COORDINATING ACTIVITIES:**

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

**PREPARING ACTIVITY:**

DLA - SS
(Project No. 8955-2012-001)

**NOTE**: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.