

METRIC

A-A-20144C

August 15, 2016

SUPERSEDING

A-A-20144B

May 1, 1998

COMMERCIAL ITEM DESCRIPTION

JUICE, LEMON AND JUICE, LIME

The U.S. Department of Agriculture (USDA) has authorized the use of this Commercial Item Description (CID). This CID replaces the requirements of CID A-A-20102B and A-A-20122B.

1. SCOPE. This CID covers lemon juice and lime juice (juice) packed in commercially acceptable containers, suitable for use by Federal, State, local governments, and other interested parties. **Please note: This document does not guarantee purchase of this item by USDA.**¹

2. PURCHASER NOTES.

2.1 Purchasers *must specify* the following:

- Type(s), style(s), package type(s), and agricultural practice(s) of juice desired (Sec. 3).
- When analytical requirements are different than specified (Sec. 7.1).
- Manufacturer/distributor certification (Sec. 10.3) or USDA certification (Sec. 10.4).

2.2 Purchasers *may specify* the following:

- Food Defense (Sec. 10.1) and Manufacturer's Quality Assurance (Sec. 10.2). Purchaser may specify one of the following combinations: Sec. 10.1.1 with 10.2.1, or 10.1.2 with 10.2.2.
- Packaging requirements other than commercial (Sec. 11).

3. CLASSIFICATION. The juice must conform to the following list which must be specified in the solicitation, contract, or purchase order.

Types, styles, package types, and agricultural practices.²

Type I - Lemon (must comply with 21 Code of Federal Regulations (CFR) § 146.114)

Type II - Lime

¹ USDA purchase specifications are available at: <https://www.ams.usda.gov/selling-food/product-specs>.

² Not all options are available from every manufacturer. Check with the manufacturer/distributor for availability.

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Style A - Reconstituted (from concentrate)

Style B - Single strength, Not From Concentrate (NFC)

Style C - Concentrated (frozen)

Package type 1 - Plastic bottle

Package type 2 - Glass bottle

Package type 3 - Pouch or bag

Package type 4 - Drum

Package type 5 - Composite

Package type 6 - Other (as specified by the purchaser)

Agricultural practice a - Conventional

Agricultural practice b - Organic

4. MANUFACTURER'S/DISTRIBUTOR'S NOTES. Manufacturer/distributor products must 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 juice must be processed in accordance with 21 CFR Part 120, Hazard Analysis and Critical Control Point (HACCP) Systems, where applicable, or 21 CFR Part 110, Current Good Manufacturing Practices (CGMP).

5.2 Food defense. The juice must be processed and transported in accordance with the Food and Drug Administration (FDA's) *Guidance for Industry: Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance*.³ This guidance document 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 post-production finished product.

³ <http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/FoodDefense/ucm083075.htm>.

5.3 Directions for use. When Style C, Concentrated (frozen), is specified, the juice concentrate must be reconstituted in accordance with the manufacturer's directions.

5.4 Organic ingredients. When organic juice is specified in the solicitation, contract, or purchase order, the product must be produced, handled, and labeled in accordance with the USDA Organic regulations by an operation that is certified organic in accordance with the requirements of the National Organic Program, 7 CFR Part 205. A Certificate of Organic Production or Handling must be provided to verify that the product was processed and handled in accordance with the USDA organic regulations.

5.5 Temperature requirement. Style A juice is considered shelf-stable. When chilled, Style B juice must be maintained at a temperature of 4.5 - 10°C (40 - 50°F) and when canned, the juice must be maintained at a temperature of -1.0 - 4.5°C (30 - 40°F). Style C frozen juice must be maintained at a temperature of -18°C (0°F) or lower.

5.6 Shelf-life. From date of manufacture, the juice is expected to have the following shelf-life when stored under temperature requirements specified in Sec. 5.5: frozen concentrated or single strength one year, chilled single strength two months, canned single strength one year.

6. SALIENT CHARACTERISTICS.

6.1 Labeling. All ingredients must be declared by their common or usual name in descending order of predominance by weight, 21 CFR § 101.4(a) unless exempted by 21 CFR § 101.100.

6.2 Ingredients. Style A juice must be prepared using concentrated juice and water. Style B and Style C juice must contain concentrated juice.

6.2.1 Lemons or limes. Type I Lemon juice and Type II Lime juice must be prepared from the unfermented juice of clean, sound, mature lemons (*Citrus limon*) or limes (*Citrus aurantifolia* or *Citrus latifolia*). The lemons or limes must be cleaned and sorted prior to extraction of the juice.

6.2.3 Flavor Oil or Essence. The lemon juice may contain lemon oil or lemon essence derived from lemons and must be adjusted in accordance with Canned Fruit Juices, Lemon, 21 CFR § 146.114. The juice must not contain any other added flavor ingredients.

6.2.4 Preservatives. The juice may contain safe and suitable preservatives as permitted by the FDA.

6.2.5 Additional and optional processing ingredients. All ingredients used must meet standards specified in the Food Chemicals Codex (FCC) or the minimum quality specification in the U.S. Pharmacopeia (USP) National Formulary. The additional ingredients must be approved

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for their particular uses by FDA food additive regulations, 21 CFR Part 170 or Direct Food Substances Affirmed as Generally Recognized as Safe (GRAS) requirements, 21 CFR Part 184.

6.3 Finished product.

6.3.1 Flavor and aroma. The specified juice must possess flavor and aroma typical for the variety and must not possess any off-flavors including but not limited to terpenic, oxidized, scorched, rancid, or caramelized.

6.3.2 Color. Styles A and C (when reconstituted) lemon juice must possess a pale yellow color, brightness and uniformity typical for the variety Style A and Style C (when reconstituted) lime juice must possess a pale yellowish-green color, brightness and uniformity typical for the variety. The juice must be free from browning due to, but not limited to scorching, oxidation, or adverse storage conditions.

6.4 Defects. Styles A and B juices must comply with defect levels specified for Grade “A” classification of the U.S. Standards for Grades of Canned Lemon Juice.⁴ Style C juice must comply with the defect levels specified for Grade “A” classification of the U.S. Standards for Grades of Concentrated Lemon Juice for Manufacturing, must reconstitute properly and show no material gelation.

6.5 Foreign material. The juice must be free of peel, core, seeds, seed particles, coagulated pulp, or other defects that detract from the appearance or utility of the product. The finished juice must show no evidence of foreign material, such as, but not limited to, harmless extraneous material. The juice must meet the FDA Food Defect Action Level for Canned Citrus Fruit Juices, 21 CFR Part 110.⁵

7. ANALYTICAL REQUIREMENTS.

7.1 Analytical requirements. Unless otherwise specified in the solicitation, contract or purchase order, the analytical requirements for the juice must conform to those in the following table or as specified in 21 CFR § 146.114.

⁴ <https://www.ams.usda.gov/grades-standards/canned-lemon-juice-grades-and-standards>

⁵ <http://www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/sanitationtransportation/ucm056174.htm>.

TABLE I. Analytical Requirements

Test	Requirement
Titrateable Acidity (calculated as anhydrous citric acid)	
Lemon, Reconstituted and NFC (Type I, Styles A and B)	Not less than 4.50 percent w/w ⁶ to the nearest 0.01 g.
Lime, Reconstituted and NFC (Type II, Styles A and B)	Not less than 5.00 percent w/w to the nearest 0.01 g.
Lemon, Concentrated (Type I, Style C)	32.00-50.00 percent w/w to the nearest 0.01 g
Lime, Concentrated (Type II, Style C)	32.00-60.00 percent w/w to the nearest 0.01 g
Recoverable oil (by volume)⁷	
Type I, Style C	0.220 mL ± 0.100 mL per 100 mL of single strength juice to the nearest 0.001 mL
Soluble solids	
Lemon, Reconstituted and NFC (Type I, Styles A and B)	Not less than 6.0 percent w/w (21 CFR § 146.114) to the nearest 0.1 percent
Lime, Reconstituted and NFC (Type II, Styles A and B)	Not less than 6.0 percent w/w to the nearest 0.1percent
Lemon and Lime, Concentrated (Types I and II, Style C)	Not less than 6.0 percent w/w to the nearest 0.1 percent when properly reconstituted

7.2 Analytical verification. Purchaser must specify manufacturer/distributor certification (Sec. 10.3) or USDA certification (Sec. 10.4).

7.3 USDA verification procedures. When USDA certification (Sec. 10.4) is specified in the solicitation, contract, or purchase order, analytical testing must be performed as follows.

7.3.1 Product verification sampling. When USDA verification of analytical requirements is

⁶ w/w (weight per weight) is standard scientific notation indicating that the weight of the substance and product is used, not volume.

⁷ The test for recoverable oil must be conducted on a reconstituted basis, not on concentrate.

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specified in the solicitation, contract, or purchase order, analytical testing must be performed on subsamples of packages randomly selected from the lot. The number of subsamples must be based on USDA inspection service sampling procedures and plans per 7 CFR § 52.38. The contents of each will be used to create a composite sample that will be tested for applicable analytical tests as outlined in Table I.

7.3.2 Analytical testing and reporting. When specified in the solicitation, contract, or purchase order, the analytical methods used must be in accordance with AOAC International Official Methods of Analysis (OMA) as specified in Table II:

TABLE II. Analytical Testing and Reporting

Test	Method	Reported as
Preparation of sample	965.31	N/A
Titrateable acidity, as anhydrous citric acid	942.15	g per 100 g of product sample to the nearest 0.01 percent or nearest 0.01 g per 100 g
Recoverable oil, by volume	968.20	Nearest 0.001 mL per 100 mL
Soluble Solids	976.20, 983.17, or 52.012 ⁸	Nearest 0.1 percent

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

9. REGULATORY REQUIREMENTS. The delivered juice must comply with all applicable Federal and State mandatory requirements and regulations relating to the preparation, packaging, labeling, storage, distribution, and sale of the product in the commercial marketplace. Delivered juice must comply with all applicable provisions of the Federal Food, Drug, and Cosmetic (FD&C) Act, the Fair Packaging and Labeling Act, and regulations promulgated thereunder. When a known allergen is included in the product, the product must be in compliance with the allergen labeling requirements of the FD&C Act.

⁸ For Type I, Lemon juice, when prepared from concentrated lemon juice, the finished food contains not less than 6 percent by weight, of soluble solids taken as the refractometric sucrose value (of the filtrate), corrected to 20°C but uncorrected for acidity, in accordance with the “International Scale of Refractive Indices of Sucrose Solutions” in section 52.012 of the “Official Methods of Analysis of the Association of Official Analytical Chemists,” 13th Ed. (1980) (21 CFR Part 146.114). The refractive indices (n) of the solution must be determined using method 31.011 in the “Official Methods of Analysis of the Association of Official Analytical Chemists,” 13th Ed. (1980).

10. QUALITY ASSURANCE PROVISIONS. *Purchaser must specify 10.3 or 10.4. Purchaser may specify one of the following combinations: 10.1.1 with 10.2.1, or 10.1.2 with 10.2.2.*

10.1 Food defense. When required in the solicitation, contract, or purchase order, a Food Defense Systems Survey (FDSS) must be conducted by USDA, Agricultural Marketing Service (AMS), Specialty Crops Program (SCP), Specialty Crops Inspection (SCI) Division. 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 post-production finished product. The plan must 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; (9) transportation, shipping and receiving.

10.1.1 FDSS. When required in the solicitation, contract, or purchase order, a FDSS must be conducted by USDA, AMS, SCP, SCI Division. 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 *Guidance for Industry - Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance.*⁹

10.1.2 Food defense section of the Plant Systems Audit (PSA). When required in the solicitation, contract, or purchase order, a food defense audit will be conducted as part of the PSA. The audit will be conducted by USDA, AMS, SCP, SCI Division 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. The food defense section of the PSA verifies the participating company's adherence to the FDA *Guidance for Industry - Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance.*⁹

10.2 Manufacturer quality assurance. When required in the solicitation, contract, or purchase order, the product manufacturer will 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 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

⁹ See footnote 3 on page 2.

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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 the CGMP's (21 CFR Part 110).

10.2.2 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 CGMP's (21 CFR Part 110) and verifies that the manufacturer has an internal quality assurance program in place.

10.3 Manufacturer/distributor certification. When required in the solicitation, contract, or purchase order, the manufacturer/distributor must certify that the juice distributed meets or exceeds the requirements of this CID. The manufacturer/distributor must certify via a Certificate of Conformance or other adequate documentation (*as specified by the purchaser*) that the juice meets the analytical requirements specified in Sec. 7 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 USDA, AMS, SCP, SCI Division inspectors, must be the certifying program. SCI Division inspectors must certify the quality and acceptability of the juice in accordance with SCI Division procedures, which include selecting random samples of the juice, evaluating the samples for conformance with the salient characteristics and analytical requirements of this CID and other contractual requirements, and documenting the findings on official SCI Division score sheets and/or certificates. In addition, when required in the solicitation, contract, or purchase order, SCI Division inspectors will examine the juice 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 must be commercial unless otherwise specified in the solicitation, contract, or purchase order.

12. USDA INSPECTION NOTES. When Sec. 10.4 is specified in the solicitation, contract, or purchase order, USDA certification must include evaluation of the quality and condition of samples of juice 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 Division inspection personnel must select samples and submit them to the USDA, AMS, Science and Technology Program (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 services.

13.1.1 USDA certification. For USDA certification contact: **Associate Director, Inspection Operations, SCI Division, SCP, AMS, USDA, Room 1536 South Building, 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.**

13.1.2 USDA FDSS, plant survey, and PSA. For a USDA FDSS, plant survey, and PSA contact the **Chief, Audit Services Branch, SCI Division, SCP, AMS, USDA, Room 0711 South Building, STOP 0247, 1400 Independence Avenue, SW, Washington, DC 20250-0247, telephone (202) 720-5021, fax (202) 260-8927, or via E-mail: fvaudits@ams.usda.gov.**

13.1.3 Analytical testing and technical information. For USDA technical information on analytical testing, contact the **Laboratory Approval and Testing Division, S&TP, AMS, USDA, STOP 0272, 1400 Independence Avenue, SW, Washington, DC 20250-0272, telephone (202) 690-0621 or via E-mail: KerryR.Smith@ams.usda.gov.**

13.2 Sources of documents.

13.2.1 Sources of information for nongovernmental documents are as follows:

Copies of the AOAC International OMA may be obtained from: **AOAC International, 2275 Research Boulevard, Suite 300, Rockville, MD 20850-3250, telephone (301) 924-7077.** Internet address: <http://www.aoac.org> for nonmembers and <http://www.eoma.aoac.org> for members and AOAC OMA subscribers.

Copies of the Food Chemicals Codex and U.S. Pharmacopeia may be purchased from: **United States Pharmacopeia Convention, 12601 Twinbrook Parkway, Rockville, MD 20877, telephone (800) 227-8772 or (301) 881-0666, Fax (301) 816-8148 or on the Internet at: <http://www.usp.org>.**

13.2.2 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 National Organic Program are contained in 7 CFR Part 205, the Fair Packaging and Labeling Act are contained in 16 CFR Parts 500 to 503, and the FD&C 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**

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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 this CID, the U.S. Standards for Condition of Food Containers (7 CFR Part 42), the U.S. Standards for Grades of Canned Lemon Juice, the U.S. Standards for Grades of Concentrated Lemon Juice for Manufacturing, and beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this CID are available from or provided to: **Director, SCI Division, SCP, AMS, USDA, 1400 Independence Avenue, SW, STOP 0247, Washington, DC 20250-0247, via E-mail: CIDS@ams.usda.gov or on the Internet at: <http://www.ams.usda.gov/grades-standards/cids> and <https://www.gpo.gov/fdsys/pkg/CFR-2015-title7-vol2/pdf/CFR-2015-title7-vol2-part42.pdf>.**

CIVIL COORDINATING ACTIVITIES:

- DOJ - BOP
- HHS - FDA
- USDA - SCP
- VA - OSS

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