COMMERCIAl ITEM DESCRIPTION

TRAIL MIX

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

1. SCOPE. This CID covers trail mix, a high energy food consisting of dried fruits, nuts, and/or seeds, candy, and chocolate, 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.**

2. PURCHASER NOTES.

2.1 Purchasers **must specify** the following:

- Nuts and fruits attributes desired (Sec. 3.1 and 3.2).
- Roasting, flavorings, and agricultural practices desired (Sec. 3.4).
- Percent quantity of ingredients by weight (Sec 6.3).
- When analytical requirements are different than specified (Sec. 7.2).
- When compliance with analytical requirements must 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:

- Pan-coated candies, chocolates, seeds and legumes, and savory snacks desired (Sec. 3.3).
- 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 trail mix must conform to the following list which must be specified in the solicitation, contract, or purchase order.

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3.1 **Nut types, almond skins, walnut colors, and walnut coatings, sizes, and peanut types.**

**Nut type I** - Shelled almonds
- **Almond skin A** - Unblanched (natural) - skin intact
- **Almond skin B** - Blanched - skin removed

**Nut type II** - Shelled walnuts (*Juglans regia*)
- **Walnut color 1** - Light
- **Walnut color 2** - Light amber
- **Walnut color 3** - Combination of light and light amber

- **Walnut coating a** - Antioxidant coating
- **Walnut coating b** - Uncoated

**Nut type III** - Shelled peanuts, blanched and skins removed
- **Peanut type (1)** - Virginia
- **Peanut type (2)** - Runner
- **Peanut type (3)** - Spanish

**Nut type IV** - Shelled cashews
**Nut type V** - Shelled filberts (hazelnuts)
**Nut type VI** - Shelled pecans
**Nut type VII** - Shelled pistachios
**Nut type VIII** - Coconut
**Nut type IX** - Other (*as specified by the purchaser*)

**Size (a)** - Whole
**Size (b)** - Diced (almonds, walnuts, and filberts)
**Size (c)** - Pieces (almonds, walnuts, and cashews)
**Size (d)** - Halves (walnuts and pecans)
**Size (e)** - Halves and pieces (walnuts and pecans)
**Size (f)** - Small pieces (walnuts)
**Size (g)** - Splits (separated half of the kernel) (peanuts, cashews, and pistachios)
**Size (h)** - Butts (kernels broken crosswise either evenly or unevenly) (cashews)
**Size (i)** - Whole and broken (filberts)
**Size (j)** - Diced (filberts)
**Size (k)** - Chips (wide thin strips) (coconut)
**Size (l)** - Flakes (flat strips) (coconut)
**Size (m)** - Other (*as specified by the purchaser*)

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

3 May be used to prevent oxidative rancidity and increase the walnuts shelf life.
3.2 Dried fruit types, styles, raisin sizes, piece sizes, coatings, and preparation methods.\(^4\)

<table>
<thead>
<tr>
<th>Dried fruit type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I</strong></td>
<td>Pitted plums, whole and/or pieces</td>
</tr>
<tr>
<td><strong>II</strong></td>
<td>Date pieces</td>
</tr>
<tr>
<td><strong>III</strong></td>
<td>Raisins</td>
</tr>
<tr>
<td><strong>Style A</strong></td>
<td>Natural seedless (dark brown color and dried under the sun)</td>
</tr>
<tr>
<td><strong>Style B</strong></td>
<td>Dipped seedless (light brown color, bathed in hot water, and mechanically</td>
</tr>
<tr>
<td></td>
<td>dehydrated)</td>
</tr>
<tr>
<td><strong>Style C</strong></td>
<td>Seedless Zante currants (very dark in color, miniature raisin with a tangy</td>
</tr>
<tr>
<td></td>
<td>flavor(^5))</td>
</tr>
<tr>
<td><strong>Raisin size 1</strong></td>
<td>Select</td>
</tr>
<tr>
<td><strong>Raisin size 2</strong></td>
<td>Small</td>
</tr>
<tr>
<td><strong>Raisin size 3</strong></td>
<td>Mixed</td>
</tr>
<tr>
<td><strong>IV</strong></td>
<td>Fig pieces</td>
</tr>
<tr>
<td><strong>Style A</strong></td>
<td>White figs: Calimyrna, Adriatic, Kadota varieties</td>
</tr>
<tr>
<td><strong>Style B</strong></td>
<td>Black figs: Mission</td>
</tr>
<tr>
<td><strong>Style C</strong></td>
<td>Blended varieties of black and white figs</td>
</tr>
<tr>
<td><strong>V</strong></td>
<td>Pears</td>
</tr>
<tr>
<td><strong>VI</strong></td>
<td>Pineapple</td>
</tr>
<tr>
<td><strong>VII</strong></td>
<td>Apricots</td>
</tr>
<tr>
<td><strong>VIII</strong></td>
<td>Papaya</td>
</tr>
<tr>
<td><strong>IX</strong></td>
<td>Mangoes</td>
</tr>
<tr>
<td><strong>X</strong></td>
<td>Banana(^6)</td>
</tr>
<tr>
<td><strong>XI</strong></td>
<td>Peaches(^6)</td>
</tr>
<tr>
<td><strong>XII</strong></td>
<td>Apples(^6)</td>
</tr>
<tr>
<td><strong>XIII</strong></td>
<td>Cherries(^6)</td>
</tr>
<tr>
<td><strong>Style A</strong></td>
<td>Sweet</td>
</tr>
<tr>
<td><strong>Style B</strong></td>
<td>Red tart</td>
</tr>
<tr>
<td><strong>XIV</strong></td>
<td>Blueberries(^6)</td>
</tr>
<tr>
<td><strong>Style A</strong></td>
<td>Cultivated</td>
</tr>
<tr>
<td><strong>Style B</strong></td>
<td>Wild</td>
</tr>
<tr>
<td><strong>XV</strong></td>
<td>Strawberries(^6)</td>
</tr>
<tr>
<td><strong>XVI</strong></td>
<td>Cranberries(^6)</td>
</tr>
<tr>
<td><strong>XVII</strong></td>
<td>Other (as specified by the purchaser)</td>
</tr>
</tbody>
</table>

\(^4\) See footnote 2 on page 2.
\(^5\) Raisin sizes are not applicable to currants.
A-A-20333A

Piece size a - Diced (plums, dates, figs, pineapple, papaya, mangos, peaches, apples, cherries, and cranberries)

Piece size b - Extruded (provides a uniform product based on specific sizes specified) (date pieces and fig pieces)

Piece size c - Sliced (pineapple, papaya, mangos, cherries, blueberries, strawberries, and cranberries)

Piece size d - Sliced (various sizes by width) (longest measurement obtainable by measuring at right angles to a line running from stem end to calyx end)

Piece size e - Halves - various sizes by diameter (measured across the face of the fruit when restored to its normal shape) (apricots, peaches, and apples)

Piece size f - Chip (wide thin chips) (banana)

Piece size g - Whole (cherries, blueberries, and cranberries)

Piece size h - Other (as specified by the purchaser)

Coating (1) - Dextrose (plums, date pieces, raisins, fig pieces, pears, peaches, and apples)

Coating (2) - Vegetable oil (plums, raisins, pears, peaches, and apples)

Coating (3) - Oat flour (date pieces and fig pieces)

Coating (4) - Rice flour (fig pieces)

Coating (5) - Other (as specified by the purchaser)

Preparation method (i) - Processed with sulfur dioxide (SO2) (fig pieces, pears, pineapple, apricots, papaya, peaches, and apples)

Preparation method (ii) - Processed without SO2

Preparation method (iii) - Evaporation (banana, peaches, apples, blueberries, cranberries, and strawberries)

Preparation method (iv) - Infusion (banana, peaches, apples, blueberries, cranberries, and strawberries)

Preparation method (v) - Potassium sorbate

3.3 Pan-coated candies, chocolates, seeds and legumes, and savory snacks.8

Type I - Pan-coated candy


Style B - Peanut butter (21 CFR §164.150)

Style C - Fruit

Style D - Other (as specified by the purchaser)

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7 Sulfur dioxide (SO2) is used in the drying process to prevent enzymatic browning and aid in color retention.
8 See footnote 2 on page 2.
Type II - Chocolates
  Style A - Chips
  Style B - Morsels
  Style C - Chunks

  Chocolate 1 - Semi-sweet chocolate (21 CFR §163.123)
  Chocolate 2 - Dark chocolate
  Chocolate 3 - White chocolate (21 CFR §163.124)
  Chocolate 4 - Other (as specified by the purchaser)

Type III - Seeds and legumes (hulled)
  Style A - Sunflower seeds
  Style B - Pumpkin seeds
  Style C - Sesame seeds
  Style E - Whole soybean
  Style F - Soy nut
  Style G - Other (as specified by the purchaser)

Type IV - Carob (21 CFR §184.1343)
Type V - Savory snacks
  Style A - Pretzels
  Style B - Sesame sticks
  Style C - Corn kernels
  Style D - Other (as specified by the purchaser)

Type VI - Other (as specified by the purchaser)

3.4 Roasting, flavorings and agricultural practices.9

Roasting A - Dry roasted (almonds, peanuts, cashews, filberts, pistachios, seeds and legumes)
Roasting B - Oil roasted (almonds, peanuts, and cashews)
Roasting C - Not roasted (raw) (almonds, cashews, filberts, pecans, pistachios, seeds and legumes)

Flavoring 1 - Salted
Flavoring 2 - Coated10
Flavoring 3 - Seasoned11
Flavoring 4 - Unflavored

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9 See footnote 2 on page 2.
10 Flavored coating such as chocolate, yogurt, honey, etc., will be specified by the purchaser.
11 Seasonings such as taco, Cajun, BBQ, nacho, etc., will be specified by the purchaser.
Agricultural practice a - Conventional
Agricultural practice b - Organic

4. MANUFACTURER’S/DISTRIBUTOR’S NOTES. Manufacturer’s/distributor’s 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 trail mix must be processed in accordance with Current Good Manufacturing Practice (CGMP) (21 CFR Part 110) or the Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food (21 CFR Part 117) in effect on the date of the solicitation, contract, or purchase order, and as applicable to the production facility.

5.2 Food defense. The trail mix must be processed and transported in accordance with Mitigation Strategies to Protect Food Against Intentional Adulteration (21 CFR Part 121). This 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 defense 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.

5.3 Organic ingredients. When organic trail mix is specified in the solicitation, contract, or purchase order, the organic trail mix 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.

5.4 Date of pack requirements. Unless otherwise specified in the solicitation, contract, or purchase order, the trail mix must be manufactured from the latest year’s crop.
5.5 Shelf life. Once the trail mix is packaged, the trail mix must have a remaining shelf life of at least six months when the product is stored in a cool dry location not exceeding 15.5°C (60°F). NOTE: The shelf life may be doubled if the trail mix is kept at refrigerated temperature below 4.4°C (40°F).

6. SALIENT CHARACTERISTICS.

6.1 Definitions.

6.1.1 Drying by evaporation. Fruit is dried in warm temperatures causing the moisture to evaporate. Low humidity allows moisture to move quickly from the food to the air. Air current speeds up drying by moving the ambient air away from the food.

6.1.2 Drying by infusion. Fruit is soaked in a sugar solution. The moisture from the fruit flows into the surrounding syrup, partially drying the fruit.

6.2 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.

6.3 Percentage of ingredients. The purchaser must specify the ingredients and percentage of each ingredient required in the trail mix in the solicitation, contract, or purchase order. The more ingredients included in the trail mix, the smaller the percentage of each ingredient included. NOTE: The total of all ingredients used in the trail mix must equal 100 percent. The following are examples of possible trail mixes:

**Example 1**

- Dried cranberries, whole or dried cherries, whole, red tart 20.0%
- Dried date pieces, diced, coated with dextrose 20.0%
- Dried fig pieces, diced, coated with dextrose, no SO₂ 20.0%
- Dried pitted plums, diced, coated with dextrose 20.0%
- Shelled walnuts, light amber, small pieces 20.0%
Example 2

Raisins, natural seedless, select, coated with vegetable oil 15.0-20.0%
Shelled peanuts, Virginia blanched, yogurt coated 15.0-20.0%
Shelled peanuts, Virginia blanched, oil roasted 15.0-20.0%
Dried date pieces, diced, coated with dextrose 10.0-15.0%
Hulled seeds, sunflower, not roasted 10.0-15.0%
Raisins, natural seedless, select, yogurt coated 10.0-15.0%
Shelled almonds, unblanched, whole, not roasted, yogurt coated 5.0-10.0%

Example 3

Shelled almonds, unblanched, whole, not roasted 15.0-20.0%
Shelled walnuts, combination, halves and pieces 15.0-20.0%
Chocolate chips, semi-sweet chocolate 10.0-20.0%
Dried, diced, plums, coated with vegetable oil or dextrose 5.0-10.0%
Raisins, natural seedless, select, coated with vegetable oil 5.0-10.0%
Dates, diced, coated with dextrose 5.0-10.0%
Dried apricots, diced, processed with SO₂ 5.0-10.0%
Dried pears, diced, processed with SO₂ 5.0-10.0%
Dried fig pieces, black or white figs, coated with dextrose 5.0-10.0%

6.4 Ingredients.

6.4.1 Raw ingredients.

Table I. Shelled Nuts

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>QUALITY REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almonds</td>
<td>U.S. No. 1 or better</td>
</tr>
<tr>
<td>Walnuts</td>
<td>U.S. No. 1 for shell and foreign matter content, U.S. Commercial or better for all other standards</td>
</tr>
<tr>
<td>Virginia type peanuts</td>
<td>U.S. No. 1 or better for whole peanuts, U.S. Virginia Splits for split peanuts</td>
</tr>
<tr>
<td>Runner type peanuts</td>
<td>U.S. No. 1 Runner or better for whole peanuts, U.S. Runner Splits for split peanuts</td>
</tr>
<tr>
<td>Pecans</td>
<td>U.S. No. 1</td>
</tr>
<tr>
<td>Cashews, filberts, and coconuts</td>
<td>Good Commercial Quality</td>
</tr>
<tr>
<td>Pistachios</td>
<td>U.S. Extra No. 1</td>
</tr>
</tbody>
</table>
Table II. Dried Fruits

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>QUALITY REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitted plums (dried prunes)</td>
<td>U.S. Grade B or better</td>
</tr>
<tr>
<td>Raisins</td>
<td>U.S. Grade A for capstems. U.S. Grade B for maturity and other defects</td>
</tr>
<tr>
<td>Date pieces</td>
<td>U.S. Grade C (Dry) or better</td>
</tr>
<tr>
<td>Figs</td>
<td>U.S. Grade B or better for Diced Figs. Meet U.S. Food and Drug Administration (FDA) tolerances for Defect Action Levels for fig paste, FDA/GCP 500.35, 8.96 for Extruded Figs</td>
</tr>
<tr>
<td>Peaches</td>
<td>U.S. Grade A for pieces of pits, U.S. Grade B or better for all other defects</td>
</tr>
<tr>
<td>Pears</td>
<td>U.S. Grade B or better</td>
</tr>
<tr>
<td>Apples</td>
<td>U.S. Grade B or better</td>
</tr>
<tr>
<td>Apricots</td>
<td>U.S. Grade A for pieces of pits, U.S. Grade B or better for all other defects</td>
</tr>
<tr>
<td>Pineapple, Banana, Papaya, Mangoes, Cherries, Blueberries, Strawberries, Cranberries</td>
<td>Good Commercial Quality</td>
</tr>
</tbody>
</table>

6.4.2 Processing oil. The dried cherries, blueberries, plums, strawberries, and cranberries must be sprayed lightly with sunflower oil or other vegetable oil not greater than 1 percent to prevent clumping. All oils including roasting and coating oils used in processing shall be refined oil. No coconut, palm, or palm kernel oil will be used in the roasting process. The oil must be thoroughly refined, deodorized, and free from rancidity and objectionable flavors. In addition, roasting oils must be stabilized with suitable antioxidants.

6.4.3 Salt. When used, the salt must be Food Chemicals Codex (FCC) purity, white, refined sodium chloride with or without anticaking agents, free from extraneous matter.

6.4.4 Additional processing ingredients. When used, all additional ingredients must meet the standards specified in the FCC or, in the absence of FCC specification at a minimum, meet the specifications for quality set by the U.S. Pharmacopoeia (USP)-National Formulary quality. The additional ingredients must be approved for those particular uses by FDA’s regulations on food additives (21 CFR Part 170) or Direct Food Substances Affirmed as Generally Recognized as Safe (GRAS) requirements (21 CFR Part 184).

6.5 Finished product.

6.5.1 Flavor and aroma. The trail mix will have no foreign odors or flavors, such as, but not limited to, stale, yeasty, burnt, musty, rancid, or moldy.
6.5.2 **Color.** The dried fruit processed with SO$_2$ must have a bright color that is typical of the fruit variety. The roasted nuts will be slightly browned.

6.5.3 **Consistency.** The trail mix must be free flowing with minimal clumps and stickiness.

6.5.4 **Preservatives.** Dried pitted plums over 25 percent moisture and dried figs over 22 percent moisture will be processed with at least 400 parts per million (ppm) and less than 1,200 ppm of potassium sorbate. Dried peaches, pears, apples, pineapple, papaya, figs, and apricots processed with SO$_2$ to protect the color will be processed with less than 2,500 ppm SO$_2$.

6.6 **Aflatoxin testing.** When raw nuts are specified by the purchaser to be used in the trail mix, the nuts must be tested by Science and Technology Program (S&TP), Agricultural Marketing Service (AMS), USDA for aflatoxin. The aflatoxin content of the finished product will not be greater than 15 parts per billion (ppb) as evidenced by an AMS, USDA certificate. When trail mix is certified by the manufacturer, a Certificate of Analysis as verification of aflatoxin testing will be provided by the manufacturer. The aflatoxin content of the finished product must not be greater than 15 ppb.

6.7 **Foreign material/defects.** Trail mix components that have a FDA tolerance for Defect Action Levels must not exceed the tolerances specified in 21 CFR §110.110. All other nuts and fruits with additional defects must meet the requirements in Table III. All additional ingredients must be clean, sound, wholesome, and free from foreign material, such as, but not limited to, extraneous plant material, dirt, plastic, insects, insect pieces or rodent or insect infestation.

**TABLE III. Product defect limits for ingredients not covered by the Defect Action Levels**

<table>
<thead>
<tr>
<th>Product</th>
<th>Defect</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelled raw nuts</td>
<td>Rancidity, mold, decay, insect or worm injury</td>
<td>Less than 2 percent by weight</td>
</tr>
<tr>
<td>Dried diced plums</td>
<td>Pits or pit fragment 2mm (0.08 inches) with attached fruit</td>
<td>Less than 0.1 percent by weight</td>
</tr>
<tr>
<td>Dried diced figs</td>
<td>Stem count</td>
<td>Less than 10 per 0.45 kilogram (kg) (1 pound (lb))</td>
</tr>
<tr>
<td>Dates</td>
<td>Calyxes</td>
<td>None</td>
</tr>
<tr>
<td>Cherries</td>
<td>Pits</td>
<td>Practically free of pits with a maximum of 1 pit per 2.27 kg (5 lb)</td>
</tr>
</tbody>
</table>
7. ANALYTICAL REQUIREMENTS.

7.1 Analytical and microbiological requirements. Unless otherwise specified in the solicitation, contract or purchase order, the following analytical and microbiological requirements for the trail mix must conform to those in Tables IV and V:

TABLE IV. Individual fruit and nut analytical and microbiological requirements

<table>
<thead>
<tr>
<th>Products</th>
<th>Aerobic (Standard) Plate Count</th>
<th>Yeast and Mold</th>
<th>Coliform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apricots, apples, peaches, papaya, pears, pineapple, banana, cherries, blueberry, strawberries, and cranberries</td>
<td>Less than 1,000 per gram (g) in any sample</td>
<td>Less than 1,000 Colony Forming Units (CFU) per g</td>
<td>Less than 10 per g using the Most Probable Number (MPN) technique</td>
</tr>
<tr>
<td>Figs</td>
<td>Less than 100,000 per g in any sample</td>
<td>Less than 20,000 CFU per g</td>
<td>Less than 100 per g using the MPN technique</td>
</tr>
<tr>
<td>Dates</td>
<td>Less than 50,000 per g in any sample</td>
<td>Less than 5,000 CFU per g</td>
<td>Less than 100 per g using the MPN technique</td>
</tr>
<tr>
<td>Coconut</td>
<td>Less than 5,000 per g in any sample</td>
<td>Less than 1,000 CFU per g</td>
<td>Less than 10 per g using the MPN technique</td>
</tr>
<tr>
<td>Plums</td>
<td>Less than 1,000 per g in any sample with up to 2,000 per g in 20 percent of the samples</td>
<td>Less than 500 CFU per g sample average with up to 1,000 per g in 20 percent of the samples</td>
<td>Less than 100 per g using the MPN technique</td>
</tr>
<tr>
<td>All other nut types</td>
<td>--</td>
<td>Less than 5,000 CFU per g</td>
<td>Less than 200 per g using the MPN technique</td>
</tr>
</tbody>
</table>
### TABLE V. Additional analytical and microbiological requirements

<table>
<thead>
<tr>
<th>Test</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture</td>
<td>Finished product will not exceed 25.0 percent(^{12})</td>
</tr>
<tr>
<td><em>E. coli</em></td>
<td>Less than 10 per g using the MPN technique</td>
</tr>
<tr>
<td><em>S. aureus</em></td>
<td>Less than 10 per g using the MPN technique</td>
</tr>
<tr>
<td>Aflatoxin - peanuts, walnuts, and filberts</td>
<td>Less than 15 ppb</td>
</tr>
<tr>
<td>Potassium sorbate</td>
<td>More than 400 ppm and less than 1,200 ppm</td>
</tr>
<tr>
<td>SO(_2)</td>
<td>Less than 2,500 ppm in each individual dried fruit processed with SO(_2)</td>
</tr>
<tr>
<td>SO(_2)</td>
<td>Less than 10 ppm when the fruits are processed without SO(_2)</td>
</tr>
</tbody>
</table>

\(^{12}\) It is recommended that the tree nuts that go into the finished product be below 4 percent moisture to prevent the nuts from becoming soft from moisture migration (osmotic gradient) from the fruit.

7.2 **Analytical verification.** Purchaser must specify manufacturer’s/distributor’s 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 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 (7 CFR §52.38). The contents of each will be used to create a composite sample that will be used in the analytical testing.

7.3.2 **Analytical testing and reporting.** When specified in the solicitation, contract, or purchase order, the analyses must be made in accordance with the following methods from the AOAC International Official Methods of Analysis (OMA) or as specified in Table VI. Any result not conforming to the analytical requirements may be cause for rejection of the lot.
TABLE VI. Analytical testing and reporting

<table>
<thead>
<tr>
<th>Test</th>
<th>Method</th>
<th>Reported as</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample preparation</td>
<td>935.52</td>
<td>--</td>
</tr>
<tr>
<td>Moisture (when mix contains more than 50 percent nuts)</td>
<td>925.40</td>
<td>Nearest 0.1 percent</td>
</tr>
<tr>
<td>Moisture (when mix contains less than 50 percent nuts)</td>
<td>934.06</td>
<td>Nearest 0.1 percent</td>
</tr>
<tr>
<td>SO₂</td>
<td>990.28</td>
<td>Nearest ppm</td>
</tr>
<tr>
<td>Potassium sorbate</td>
<td>983.16</td>
<td>Nearest ppm</td>
</tr>
<tr>
<td>Aerobic (Standard) Plate Count</td>
<td>966.23 and/or 990.12</td>
<td>CFU per g</td>
</tr>
<tr>
<td>Yeast and Mold</td>
<td>997.02(^{13})</td>
<td>CFU per g</td>
</tr>
<tr>
<td>Coliform</td>
<td>996.24 and/or 992.30, 991.14</td>
<td>MPN per g or CFU per g</td>
</tr>
<tr>
<td>\textit{E. coli}</td>
<td>996.2, and/or 992.30, 991.14</td>
<td>MPN per g or CFU per g</td>
</tr>
<tr>
<td>\textit{S. aureus}</td>
<td>987.09 and/or 2003.07, 2003.08, 2003.11</td>
<td>MPN per g or CFU per g</td>
</tr>
<tr>
<td>Aflatoxin - peanuts, walnuts, and filberts</td>
<td>998.03 and 991.31</td>
<td>Nearest ppb</td>
</tr>
</tbody>
</table>

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

9. REGULATORY REQUIREMENTS. The delivered trail mix must comply with all applicable Federal, State, and local mandatory requirements and regulations relating to the preparation, packaging, labeling, storage, distribution, and sale of the trail mix in the commercial marketplace. Delivered trail mix 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 trail mix, the trail mix must comply with the allergen labeling requirements of the FD&C Act. Major allergens identified in the FD&C Act include: wheat, fish, milk, soy, tree nuts, eggs, peanuts, and Crustacean shellfish or those in effect on the date of the solicitation, contract, or purchase order.

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, 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; and (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 Mitigation Strategies to Protect Food Against Intentional Adulteration (21 CFR Part 121).

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 Mitigation Strategies to Protect Food Against Intentional Adulteration (21 CFR Part 121).

10.2 Manufacturer’s 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 contract. The plant survey audit verifies that, at the time of the survey, the manufacturer produces products in a clean, sanitary environment in accordance with CGMP (21 CFR Part 110) or the *Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food* (21 CFR Part 117) in effect on the date of the solicitation, contract, or purchase order, and as applicable to the production facility.

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. The PSA verifies the manufacturer's capability to produce products in a clean, sanitary environment in accordance with CGMP (21 CFR Part 110) or the *Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food* (21 CFR Part 117) in effect on the date of the solicitation, contract, or purchase order as applicable to the production facility, and verifies that the manufacturer has in place an internal quality assurance program.

10.3 **Manufacturer’s/distributor’s certification.** When required in the solicitation, contract, or purchase order, the manufacturer/distributor must certify that the trail mix delivered 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 trail mix 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 trail mix in accordance with SCI Division procedures, which include selecting random samples of the trail mix, 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 trail mix 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 trail mix 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@usda.gov.

13.1.2 USDA FDSS, plant survey, and PSA. For a USDA FDSS, plant survey, and PSA contact the Chief, Auditing 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 (866) 230-9168, or via E-mail: SCAudits@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) 690-4089 or via E-mail: KerryR.Smith@usda.gov.

13.2 Sources of documents.

13.2.1 Sources of information for nongovernmental documents are as follows:


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 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 U.S. standards and inspection instructions for fruits, vegetables, and other specialty products may be obtained from: USDA, AMS, SCP, SCI Division, 831 Mitten Road, Room 200, Burlingame, CA 94010, telephone (650) 552-9073, fax (650) 552-9147, or via E-mail: depot@usda.gov or on the Internet at: http://www.ams.usda.gov/grades-standards/how-purchase-equipment-and-visual-aids.

Questions and comments on the U.S. standards and inspection instructions for fruits, vegetables, and other specialty products may be directed to: USDA, AMS, SCP, SCI Division, Riverside Business Park, 100 Riverside Parkway, Suite 101, Fredericksburg, VA 22406-1016 or on the Internet at: http://www.ams.usda.gov/grades-standards.


CIVIL AGENCY COORDINATING ACTIVITY:

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

PREPARING ACTIVITY:

USDA - SCP

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