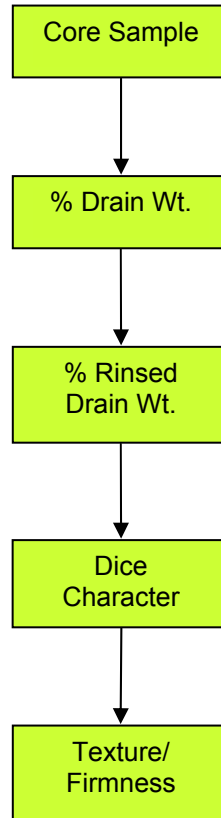




## **DICED TOMATO ANALYSES**

### **Bulk Container Diced Tomatoes**

Diced tomato analyses should be completed in the following order:





## **DICED TOMATO CORE SAMPLING PROCEDURE**

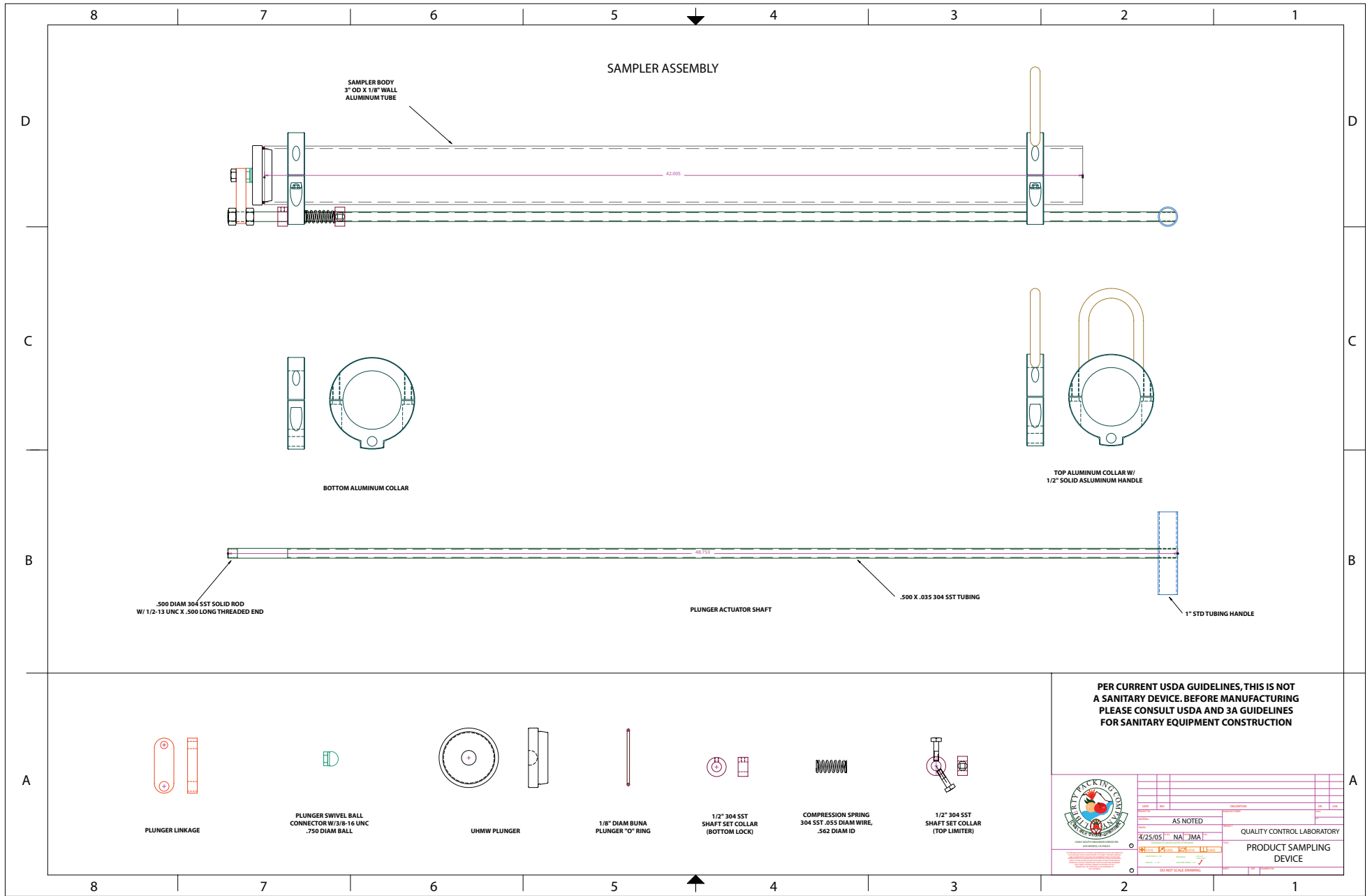
### **Bulk Container Diced Tomatoes**

#### **EQUIPMENT:**

- Recommended core sampler
- Large plastic beaker or bucket

#### **PROCEDURE:**

1. Insert the core sampler very slowly, keeping it vertical, with the hatch fully open, until it hits the bottom of the container. During insertion, move the sampler up and down roughly 6-8 inches to allow the dice to fill the sampler to the product height in the container. Inspect visually before closing the bottom hatch. This part of the procedure should take 30 seconds when done correctly.
2. Close the bottom hatch and remove the sampler from the container.
3. Empty the contents of the core sampler (Sample size - 100 oz.) into a plastic beaker/bucket.
4. This sample is used to sequentially analyze for Drain Weight, Rinsed Drain Weight and Character.





## **% DRAIN WEIGHT**

### **Bulk Container Diced Tomatoes**

#### **DEFINITION:**

Drain weight refers to the proportion of tomatoes to media in canned or bulk container tomatoes. Drain weight is defined as the weight of the retained material after placing a sample of diced tomatoes and media (juice/puree) on a #8 sieve and allowing the sample to drain for 2 minutes divided by the net weight of the sample x 100.

#### **EQUIPMENT:**

- Bench top scale with accuracy of at least +/- 1 gm and a capacity of 6 kg.
- U.S. #8, 12 inch diameter sieve
- White grading tray

#### **SAMPLE COLLECTION:**

1. Obtain tomato sample using recommended core sampler (100 oz sample) or other method that has been correlated to a recommended core sampler and place in a container.
2. Let sample cool to room temperature. ( At time of manufacture)

#### **PROCEDURE:**

1. Record the weight of the tomatoes plus the container to the nearest gm.
2. Empty the container of tomatoes onto the #8 screen, distributing the contents as uniformly as possible over the entire area of the screen.
3. Tilt the screen so that one side is approximately 2 inches higher than the other side. Let drain undisturbed.
4. Exactly 2 minutes after the product is placed on the screen, place the screen containing the drained solids directly on the balance and weigh to the nearest gm.
5. Subtract the weight of the empty (dry) screen.
6. Record the **drained tomato weight** to the nearest gram.
7. Rinse, dry and then weigh the empty container, record the weight. The weight of the full container minus the weight of the empty container = the **Net Weight**.

$$\% \text{ Drain Weight} = \frac{\text{Drained Tomato Weight}}{\text{Net Weight}} \times 100$$



## **% RINSED DRAIN WEIGHT**

### Bulk Container Diced Tomatoes

#### **DEFINITION:**

Rinsed drain weight is defined as the weight of the retained material after placing a sample of diced tomatoes and media (juice/puree) on a #8 sieve, rinsing with water and allowing the sample to drain for 2 minutes divided by the net weight of the sample x 100.

#### **EQUIPMENT:**

- Benchtop scale with accuracy of at least +/- 1 gm and a capacity of 6 kg.
- U.S. #8, 12 inch diameter sieve
- White grading tray

#### **SAMPLE COLLECTION:**

1. Obtain tomato sample using recommended core sampler (100 oz sample) or other method that has been correlated to a recommended core sampler and place in a container.
2. Let sample adjust to room temperature.

#### **PROCEDURE:**

1. Record the weight of the tomatoes plus the container to the nearest gm.
2. Empty the container of tomatoes onto the #8 screen, distributing the contents as uniformly as possible over the entire area of the screen. Gently rinse tomatoes until media is completely removed.
3. Tilt the screen so that one side is approximately 2 inches higher than the other side. Let drain undisturbed.
4. Exactly 2 minutes after the product is placed on the screen, place the screen containing the drained solids directly on the balance and weigh to the nearest gm.
5. Subtract the weight of the empty (dry) screen.
6. Record the **rinsed drained tomato weight** to the nearest gram.
7. Rinse, dry and then weigh the empty container, record the weight. The weight of the full container minus the weight of the empty container = the **Net Weight**.

$$\% \text{ Rinsed Drain Weight} = \frac{\text{Rinsed Drained Tomato Weight}}{\text{Net Weight}} \times 100$$



## DICE CHARACTER

### Bulk Container Diced Tomatoes

#### DEFINITION:

Character is defined as the percentage of identifiable dice pieces with high enough texture to withstand reprocessing.

#### EQUIPMENT:

- Bench top scale with accuracy of at least +/- 0.1 gm
- U.S. #8, 12 inch diameter sieve
- 2 White grading trays

#### PROCEDURE:

1. Tare a small white grading tray.
2. Once the rinsed drain weight has been determined, take the material remaining on the screen and place it into a large, white grading tray of sufficient size to contain the sample at least two times over.
3. Examine the dices to ensure that they are of good texture by lightly pressing down on the dice with a finger. If the dice smashes easily, it is not of good character. If the dice is resilient and firm to the touch, it is of good character. Separate good character dices into a pile.
4. Place the good character dice in the white grading tray previously zeroed on the balance and record the weight.
5. Divide the weight of the good character dice by rinsed drained tomato weight obtained in the Rinsed Drain Weight Determination to get the percentage of good character dice:

$$\% \text{ Good Character} = \frac{\text{Good Character Dice Weight}}{\text{Rinsed Drained Tomato Weight}} \times 100$$



## DICED TOMATO FIRMNESS

### Bulk Container Diced Tomatoes

#### PURPOSE:

This test method is used to determine the firmness of dice pieces in bulk diced tomato products.

#### EQUIPMENT:

- Kramer shear cell -13 blade
- Texture/firmness measurement unit capable of reporting total pounds of pressure required to pass the blade through the sample in the shear cell
- Balance with 0.1g sensitivity or better

#### PROCEDURE:

1. Place the shear cell on the balance and zero the balance. Using the rinsed, drained dice of good character resulting from the character analysis, spoon 170g (+/- 2g acceptable) into the shear cell. It is important that the dice is only selected from the good character portion of the drain weight, and conforms the following parameters:
2. Do not pack the dice into the cell.
3. Do not include any grass- green pieces of dice in the sample
4. Do not include any stem or fibrous core material in the sample.
5. Place the sample in the texture cell, place the lid over the sample, and slide the cell into the measurement unit.
6. Verify that the machine has been zeroed and set to register total pounds of pressure.
7. Start the test and record the total pounds of pressure required to pass the shear cell blade through the sample.