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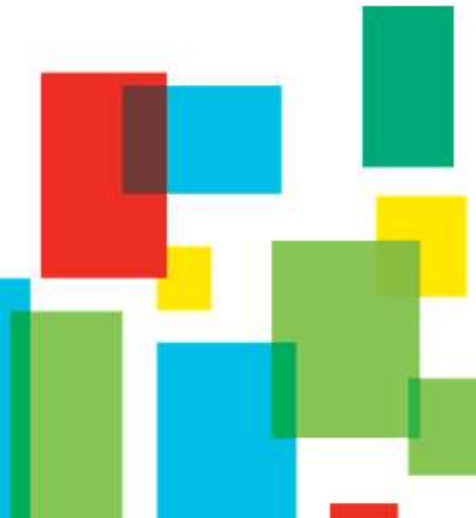
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Color & Comfort

Potato Juice Extraction & Preparation Procedure FOR GLUCOSE, SUCROSE & FRUCTOSE MEASUREMENTS Volumetric Extraction Edition

This document is intended to provide information about the extraction process of potato juice, in processed potatoes.



This extraction procedure is based on the method outlined by the "Maintenance of Potato Processing Quality by Chemical Maturity Monitoring (CMM)" by Joseph R. Sowokinos and Duane A. Preston, Station Bulletin 586-1988 (Item No. AD-SB-3441), Minnesota Agricultural Experiment Station, University of Minnesota, January 1988.

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Items Required

Potato Juicer

Measuring Cylinders

Beakers

Potato Peeler (or small knife for peeling)

Knife (for cutting potatoes into chunks) & Chopping Board

Scales

Pipette & Pipette Tips

Eppendorfs & holder (or small vial)



Juice Extraction & Preparation Procedure

1. Select the tubers from the batch that you wish to test.

The number of tubers and the selection method is the decision of the user and not provided by Sun Chemical.

2. Peel the potatoes and cut all of them in the same manner (from the stem end to the bud end).

The decision to cut the potatoes into halves, quarters or other fraction is based on factors such as the number of potatoes and sizes. A collective weight of the fractions is required to be over 200 g.

3. Cut the fractions into cubes. Place a beaker onto the scales and “Tare”. Randomly add the potato cubes to the beaker until 200 g is achieved.

If the weight should be between 195 and 205 g, take a note of the weight. This can be entered into the application later and will adjust the calculations accordingly.

Enter the Weight of Potato Slices Used (g)
200
Continue

4. Place the 200 g of potato cubes into a juicer and collect the juice in a beaker.

5. Once all the juice is collected, pour 100 ml of cold tap water into the juicer, and collect the juice. Repeat this once again.



6. Pour the collected juice into a measuring cylinder (500 ml size or more) and make up to 430 ml with cold tap water. Pour the juice back into the beaker (this will mix the juice and make it homogenous).

If the volume should be between 425 and 435 ml, take a note of the volume. This can be entered into the application later and will adjust the calculations accordingly.

Total volume after addition of water (ml)

430

Enter the Weight of Potato Slices Used (g)

200

Continue

7. Take the pipette, with a fresh pipette tip, and pipette 100 μ l of the juice into a fresh Eppendorf. Using a fresh pipette tip, add a further 200 μ l of cold tap water (2 x 100 μ l). Close the Eppendorf lid and shake.

This will produce a three times dilution factor, therefore a value of "3" is required to be placed into the application.

If the three times dilution provides a reading less than the limits of detection, then a two (2) times dilution can be acquired with 100 μ l of potato juice and 100 μ l of cold tap water.

Please enter the dilution factor used and press continue.

1

Continue

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8. The sample is now ready to be used on the sensors.
No refrigeration or standing time is required.

