



Method sheet: Process technology – Mixer
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Machine: Mixer
Criteria: Accuracy of ° Brix from mixed beverage

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Accuracy of ° Brix from blended beverage

1. Definition: Machine and Criteria

An important parameter of a mixer is the accuracy of the amount of °Brix in the blended beverage. For all actions the relevant safety instructions must be strictly adhered to.

Further related documents:

- Handbuch Erfrischungsgetränke (Südzucker)

2. Inspection

2.1 Scope

Detection of the deviation of ° brix to a set point in blended beverages.

2.2 Apparatus

For detection of the sugar content a measuring device is needed.

Two ways of measuring are possible:

- Refractometer gauged in °Brix. or gram per 100 gram sugar solution
- Electric density measuring device e.g. from Anton Paar.

The recommended accuracy of measurement instruments is • 0.2 % of the result or better than 0,025 ° Brix. A visual inspection of the used measurement devices by a person is necessary.

2.3 Procedure

The ° Brix of the blended product has to be measured accurately. Put one drop of the blended beverage from the beverage buffer tank on the hand held refractometer, hold the unit against a bright light source and meter the shown brix value. Gauge the refractometer against pure distilled water (brix = 0).

To ensure a correct use of measuring devices follow the user manual.

The temperature affects the measurement, therefore a temperature of 20 °C is recommended.



3. Sampling

To check the blending quality, beverage-samples are needed. Samples have to be taken after 15 minutes of production in standard operation and at nominal capacity.

Quantity of samples: Several samples during a time period e.g. ten minutes.

The temperature should be 20°C.

3.1 Calculation

Free

3.2 Results and data sheets

3.2.1 Data sheet

Date: _____ Site: _____ Line: _____

Fill in the results from measuring: The time and ° brix can be read from the refractometer.

| number n: | x_i [g/100g] |
|-----------|-------------------|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |
| 17 | |
| 18 | |

Product parameters:

Product: _____

Filling temperature: _____ °C

Conversion of units:

1 ° Brix = 1 g sugar in 100 g solution



4. Evaluation and Documentation

4.1 Evaluation

Max. measured Brix: _____ g / 100 g

Min. measured Brix: _____ g / 100 g

Brix set: _____ g / 100 g

Range (+): _____ g / 100 g

Range (-): _____ g / 100 g

Brix _{(Range (-))} _____ g / 100g ≤ _____ Brix_{measured} g / 100 g ≤ _____ Brix _{(Range (+))} g / 100g

4.2 Documentation

Accuracy of ° Brix is o.k.

Accuracy of ° Brix is not o.k.

Name and signature of inspector: _____