

Application Note

Rev. 0

Determination of the Total Sugar Content in Potatoes

Overview

Parameter	Fructose / Glucose
Test	QUANTOFIX® Total Sugar (REF 91352)
General	The determination of sugar content allows the potato processing industry to guarantee food safety, ensure uniform product color, and maintain consistent taste during high-heat cooking. To obtain correct results with QUANTOFIX® Total Sugar, we recommend an adapted measuring method for measurements in potatoes.



Sample Preparation Procedure and Calculation of the Result

Procedure

- Add a representative amount of the sample to be tested (e.g., 150 g) to a mixer.
- Add the same mass of distilled water (150 mL).
- Blend the potatoes for 20 s.
- Add distilled water (e.g., 450 mL or 950 mL). The dilution should match the measuring range of the test strip.
- Filter through a pleated filter (e.g., REF 534015). The filtrate represents the sample to be examined.
- Measure the sample immediately!

Evaluation

Visual Evaluation	1. Mix 1 mL of the sample with 10 mL of demineralized water. 2. Add 5 drops of Fru/Glu-1. 3. Mix by swirling the reaction vessel. 4. Dip test strip into the prepared test solution for 2 s. 5. Shake of excess liquid. 6. After exactly 10 min compare the test pad with the color scale and recalculate.
On the QUANTOFIX® Relax (version 3)	1. Select the Fru/Glu method. 2. Mix 1 mL of the sample with 10 mL of demineralized water. 3. Add 5 drops of Fru/Glu-1. 4. Mix by swirling the reaction vessel. 5. Dip test strip into the prepared test solution for 2 s. 6. Shake of excess liquid. 7. Place the test strip on the strip holder 8. Read off the test result once the reaction time has elapsed and recalculate.

Calculation:

$$\text{total sugar content [g/kg]} = \frac{\text{test result [mg/L]} \times \text{final sample volume [L]}}{\text{sample weighing [kg]} \times 1000}$$

Contact

If you have any further questions, please do not hesitate to contact us:

Technical support and customer service	tel.:	+49 24 21 969-333
	e-mail:	support@mn-net.com
Orders	e-mail:	sales@mn-net.com