HI 96801 • HI 96802 • HI 96803 • HI 96804

Digital Refractometers for Sugar Analysis Throughout the Food Industry

HANNA offers four sugar refractometers to meet the requirements of the food industry. The HI 96801 Sucrose, HI 96802 Fructose, HI 96803 Glucose and HI 96804 Invert Sugar digital refractometers are rugged, portable and water resistant for measurements in the lab or field. Each instrument offers a specific analysis to determine accurate sugar concentration.

These optical instruments employ the measurement of the refractive index to determine parameters pertinent for sugar concentration analysis.

The actual measurement of refractive index is simple and quick and provides the operator a standard accepted method for sugar content analysis. Samples are measured after a simple user calibration with deionized or distilled water. Within seconds these instruments measure the refractive index of the sample and convert it to percent by weight concentration units (or %Brix for HI 96801). These digital refractometers eliminate the uncertainty associated with mechanical refractometers and are easily portable for measurements in the field.

These four instruments utilize internationally recognized references for unit conversion and temperature compensation and employ methodology recommended in the ICUMSA Methods Book (internationally recognized body for sugar analysis).

Temperature (in °C or °F) is displayed simultaneously with the measurement on the large dual level display along with icons for low power and other helpful messages.

Making a standard % Brix solution

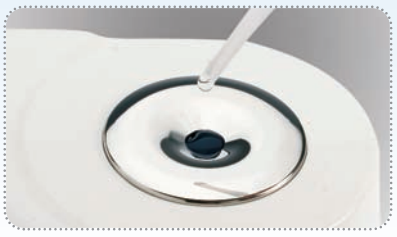
To make a Brix Solution, follow the procedure below:

- Place container (such as a glass vial or dropper bottle that has a cover) on an analytical balance.
- Tare the balance.
- To make an X BRIX solution weigh out X grams of high purity sucrose (CAS #: 57-50-1) directly into the container.
- Add distilled or deionized water to the container so the total weight of the solution is 100 g.

Note: Solutions above 60 %Brix need to be vigorously stirred or shaken and heated in a water bath. Remove solution from bath when sucrose has dissolved. The total quantity can be scaled proportionally for smaller containers but accuracy may be sacrificed.

Example with 25 %Brix:

% Brix	25
g Sucrose	25.000
g Water	75.000
g Total	100.000



SPECIFICATIONS		HI 96801	HI 96802	HI 96803	HI 96804
Range	**Sugar Content**	0 to 85% Brix (% Brix)	0 to 85% (by weight) (% fructose)	0 to 85% (by weight) (% glucose)	0 to 85% (by weight) (% invert sugar)
	Temperature	0 to 80°C (32 to 176°F)			
Resolution	**Sugar Content**	0.1 % Brix	0.1	0.1	0.1
	Temperature	0.1°C (0.1°F)			
Accuracy (@20°C/68°F)	**Sugar Content**	±0.2% Brix	±0.2%	±0.2%	±0.2%
	Temperature	0.3°C (0.5°F)			