Handheld Digital Refractometer PCE-DRB 2 Sugars

PCE-DRB 2 Handheld Digital Refractometer

Waterproof IP65-rated refractive index (nD) / dextran / fructose / glucose / lactose / maltose content (%) refractometer with easy-to-read LCD

PCE-DRB 2 is a handheld digital refractometer used to determine the refractive index and dextran, fructose, glucose, lactose and maltose content (%) of liquid. This IP65-rated digital refractometer features automatic temperature compensation (ATC) from +10 ... +40 °C / +50 ... +104 °F, as well as a large, easy-to-read LCD that shows both the measured value and the temperature.

Refractometer is a multifunctional device, which by measuring refractive index is able to measure various parameters and in particular, sugar content in various liquids. Fructose level is one of the parameters, along with sucrose, glycose, invert sugars, which refractometer measure within seconds and very accurately. Knowing the level of fructose allows making conclusions about the quality and ripeness of the products, like different kinds of fruit. The optimal time of harvesting may be now determined not only by means of optical analysis and tasting, but also by means of application a fructose refractometer. The level of fructose in the fruits changes with the time, and it is important to determine the best time with the optimal fructose content so that not only to deliver the best fruits to the consumers, but also to provide the best material for juices and jams production. In its natural condition, fructose is presented mostly in plants and fruits, in the industrial sphere; fructose is obtained from certain plants and is affected by lime. Due to its characteristics it is not used in the confectionary industry as a pure product, but is a part of the invert sugar; and under the influence of temperatures it is destructed much faster and dissolves in water much better than other substances (sugar, glycose). That is why, for the producers it is essential to know the amount of fructose in the raw material, so that they could clearly determine the conditions under which the manufacturing process will be the most effective and how particular amount of fructose will react. The fructose value contained in the fruit during the harvest, easily obtained with the help of the digital fructose refractometer, provides the manufactures with the essential information, which helps them to adjust the amount of sugar and other additives required for the production of jams, jellies, juices and other sweet products containing certain amounts of fruit. It also indicates what the optimal storage conditions should be and what the storage time may be taking in to consideration the level of their ripeness. Fruits, vegetables and berries can all be tested with the help of the fructose refractometer and the whole measurement takes just a few seconds.

Fructose refractometer finds its application not only at the food processing factories, it may be used in the field, before and during the harvesting time. It may be used by the deliverer before the lot of the fruit is prepared for transportation to ensure the quality of the product, as well as by the customer at the market who is interested in selecting the best products meeting his/her requirements.

The fructose refractometer is simple in operation and does not require special training and knowledge. The main requirement to the device is that it should be clean, protected from shocks and negative impacts and timely calibrated. Application of the fructose refractometer is one of the steps on the way to obtaining and production of the best-quality product, may it be fresh fruit, juices, fruit-containing products or jams.
Close lid before measuring

- Measurement parameters: Dextran, fructose, glucose, lactose, maltose, temperature
- Automatic temperature compensation (ATC) from +10 ... +40 °C / +50 ... +104 °F
- Handheld and portable
- User-friendly 3-button operation
- Fast and precise measuring results in approx. 1 sec.
- ABS plastic housing with IP65 ingress protection rating against water and dust
- Large, easy-to-read digital LCD shows both the measured value and the temperature
- Average function measures same sample 15 times and displays the mean value
- Stainless-steel ring on sample well protects glass prism from damage
- Internal light source for improved accuracy
- Small liquid sample size of just 4 to 5 drops
- Easy calibration with distilled water
- Battery-saving automatic power off after 1 min. of inactivity

Specifications

Temperature compensation	automatic +10 ... +40 °C / +50 ... +104 °F
Measurement speed	ca. 1 sec.
Sample size	4 ... 5 drops of liquid
Sample plate	stainless steel ring with glass prism
Housing	ABS, IP 65
Battery	1 x 1.5 V AAA
Automatic shutdown	after 1 min. measurement break
Protection	IP 65
Dimensions	121 x 58 x 25 mm/ 4.76 x 2.28 x 0.98"
Weight	90 g / 0.2 lb without battery

Measuring range

Dextran	0 ... 10.6 %
Fructose	0 ... 68.9 %
Glucose	0 ... 59.9 %
Lactose	0 ... 16.5 %
Maltose	0 ... 15.6 %
Refractive index	1,3330 ... 1,5177 nD
Temperature	0 ... 40 °C / +32 ... +104 °F

Resolution

Dextran	0.1 %
Fructose	0.1 %
Glucose	0.1 %
Lactose	0.1 %
Maltose	0.1 %
Refractive index	0.0003 nD
Temperature	0.1 °C

Accuracy

Dextran	0.2 %
Fructose	0.2 %
Glucose	0.2 %
Lactose	0.2 %
Maltose	0.2 %
Refractive index	0.0003 nD
Temperature	0.5 °C