

iPDB Series

icoe

Portable Digital Refractometer



	Range	Accuracy	Resolution
Brix		±2%	0.10%
R.I.		±0.0003	0.0001
Temperature	0.0~60.0°C 32.0~140°F	±5°C ±9°F	0.1°C 0.1°F
Dimensions	12x5.8x2.6cm		
Net Weight	125g		
Protection Grade	IP65		

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Scope of application: Sugar

The following models are particularly suitable for the measurement of the "BRIX" value. They are used to determine the sugar content in food, especially in fruit, vegetables, juice and soft drinks. In the same ideal way these refractometers serve for monitoring processes in the industry (coolant monitoring, oils, lubricants and fats).

The main scope of applications is:

- Industry: Monitoring of lubricants for process and quality control
- Food industry: Beverages, fruits and sweets
- Agriculture: Determination of the degree of ripeness of fruits for quality control in harvesting
- Restaurants and large-scale catering establishment

Model	Scales	Range	Resolution	Accuracy
iPDB B1	Brix	0.0-50.0%	0.1%	±0.2%
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD
iPDB B2	Brix	0.0-90.0%	0.1%	±0.2%
	Refractive Index	1.3330-1.5177nD	0.0001nD	±0.0003nD
iPDB B3	Dextran	0.0-10.6%	0.1%	±0.2%
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD
iPDB B4	Fructose	0.0-68.9%	0.1%	±0.2%
	Refractive Index	1.3330-1.5177nD	0.0001nD	±0.0003nD
iPDB B5	Glucose	0.0-59.9%	0.1%	±0.2%
	Refractive Index	1.3330-1.5177nD	0.0001nD	±0.0003nD
iPDB B6	Lactose	0.0-16.5%	0.1%	±0.2%
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD
iPDB B7	Maltose	0.0-15.6%	0.1%	±0.2%
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD



Scope of application: Wine, Alcohol

The following models are particularly suitable for the measurement of the content of sugar in fruits. It indicates the expected °Alcohol of the fruit. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes.

The main scope of applications is:

- Agriculture: Wine-growing and fruit-growing
- Wine-production
- Must and alcohol production

°Oe = Degree Oechsle, °KMW = Klosterneuburger Must balance

Model	Scales	Range	Resolution	Accuracy
iPDB W1	Brix%	0.0-50.0%	0.1%	±0.2%
	%VOL ap	0.0-22.0%	0.1%	±0.2%
	Oe	0-150	1	±2%
	KMW	0.0-25.0	0.1	±0.2



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Scope of application: Honey

The following models are particularly suitable for the measurement of the “BRIX” value, as well as the water content in honey and “degrees Baumé” to determine the relative density of liquids.

The main scope of applications is:

- Beekeeping
- Honey production

Model	Scales	Range	Resolution	Accuracy
iPDB H1	Brix	0.0-90.0%	0.1%	±0.2%
	Water	38.0%-5.0%	0.1%	±0.2%
	Be'	33.0-48.0	0.1	±0.2%
	Refractive Index	1.3330-1.5177nD	0.0001nD	±0.0003nD



Scope of application: Salinity

The following models are particularly suitable for the measurement and concentration control of the mass fraction of sodium chloride in water as well as of the content of NaCl (salt) in water. This is often used in the preparation and the cooking of sauces, bases for pastries, the production of brines (e.g. for white cheese) and the preparation of seafood and marinades for meat.

The following models are particularly suitable for the measurement of the content of sugar in fruits. It indicates the expected °Alcohol of the fruit. The degree of ripeness of fruit (fruit-sugar) can also be determined, such as e.g. grapes.

The main scope of applications is:

- Food industry
- Restaurants and large-scale catering establishment
- Aquaristic: Fishkeepers/Fishfarmers in sea and sweetwater

Model	Scales	Range	Resolution	Accuracy
iPDB S1 (sodium chloride NaCl)	Salinity	0.0-28.0‰	0.1%	±0.2%
	Salinity	0-280‰	1‰	±2‰
	Specific gravity	1.000-1.217	0.001	±0.002
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD
iPDB S2 (sea water)	Salinity	0-100‰	1‰	±2‰
	Chlorinity	0-57‰	1‰	±2‰
	Specific gravity	1.000-1.070	0.001	±0.002
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD



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Scope of application: Clinical Protein, Urine

The following models are particularly suitable for the measurement of the specific gravity (sg) in urine, the quantity of serum (serumproteine) in urine (doping control among athletes), and the refractive index.

The main scope of applications is:

- Hospitals
- Doctor's surgeries/Physicians
- Medical training institutions
- Nursing homes
- Sports medicine (doping test)
- Veterinary

Model	Scales	Range	Resolution	Accuracy
iPDB P1	URINE SP. G.	1.000-1.050	0.001	±0.002
	SERUM P.	-0.1-12.0	0.1	±0.2
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD



Scope of application: Industry/Automotive

The following models are particularly suitable for the measurement and determination of AdBlue, glycol concentration (ethylene (EG) and propylene (PG)), battery fluid (BF), urea, the freezing point of fountain solution (CW). Furthermore these models are suitable for the measurement of thermal exchange systems.

The main scope of applications is:

- Automotive industry: Car-workshops and producers
- Chemical industry
- Solar industry: Antifreeze monitoring
- Geothermal industry: Brine-concentration-measurement for ground heat
- Forestry/Lumbermen

Model	Scales	Range	Resolution	Accuracy
iPDB A1	Cleaner	(0)-(-60)°C	0.1°C	±0.5°C
	Ethylene Glycol	(0)-(-60)°C	0.1°C	±0.5°C
	Propylene Glycol	(0)-(-70)°C	0.1°C	±0.5°C
	Battery	1.000-1.500sg	0.001	±0.005sg
iPDB A2 (Urea Tester)	Urea (NH ₂) ₂ CO	0-51.0%	0.1%	±0.2%
	Refractive Index	1.3330-1.4200nD	0.0001nD	±0.0003nD
iPDB A3 (Engine Coolant Tester)	Ethylene Glycol	0-60%	0.1%	±0.5%
	Ethylene Glycol (°C)	(0)-(-60)°C	0.1°C	±0.5°C
	Propylene Glycol	0-70%	0.1%	±0.5%
	Propylene Glycol (°C)	(0)-(-70)°C	0.1°C	±0.5°C
iPDB A4 (Brake Fluid Tester)	DOT3	(121)-(260)°C	1°C	±5°C
	DOT4	(125)-(275)°C	1°C	±5°C
	Refractive Index	1.3330-1.5177nD	0.0001nD	±0.0003nD

