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#### OPTi Digital Handheld Refractometer Order code: 0507.3801



#### All the accuracy you need in an easy-to-use handheld device

OPTi® Digital Handheld Refractometer - A high performance refractometer with a vast choice of scales for a wide range of applications – all in the palm of your hand.

#### Software

- Quick 2 second read time of sample
- Onboard library of 50 scales
- Up to 3 active scales on a single device
- High Ambient Light (HAL) sensor detects and warns of too much light entering the sensor
- Unique "AG Test Mode" that allows the use of long-life non sucrose based certified reference materials
- Programmable read delay for sample temperature stabilisation

#### Hardware

- Clear digital LCD display
- Ergonomic & durable handheld design
- IP65 rated
- Easy-clean, stainless steel prism dish
- Rapid temperature stabilisation

The OPTi® Digital Handheld Refractometer is a high quality, UK made, simple-to-use, accurate, pocket sized refractometer offering measurement between 0-95 Brix and over 40 other scales.

The OPTi refractometer is constructed using the latest manufacturing techniques. Stainless steel injection moulding to form the easy clean prism dish and ultrasonic welding to bond the housing. Each OPTi displays information to the user via and easy-to-read LCD display, helping to make readings even easier than using a standard optical handheld refractometer.

#### Full 0-95 Brix Scale

The Brix scale is the most common scale used in refractometry, yet many refractometers cover only a small portion of it. OPTi gives you more, with coverage of the full Brix range (0-95) at no extra cost.

### **50 Common Refractometer Scales**

Each OPTi comes with 3 interchangeable scales pre-loaded from an onboard library of 50 individual choices - meaning there are over 9880 possible OPTi combinations.

## A Durable Design For Versatile Use

Thanks to its durable design and vast range of scales, the OPTi is suitable for a wide range of applications; from the clinical laboratory to the harshest of environments. OPTi is the refractometer that fits in your pocket. With a long battery life, true portability, and durable design: OPTi refractometers are ready when you are. Readings from an OPTi refractometer are clear and defined thanks to the bold digital LCD display.

All OPTi refractometers feature a four decimal place LCD display, Temperature Compensation (ATC), robust design with IP65 rating, a choice of three scales in a single device.

## **Typical Specifications**

Typical Specifications	Sucrose (Brix)	Refractive Index	Specific Gravity (SG)	Concentration %
Range	0-95	1.33-1.53	1.000-1.050	0-95
Resolution	0.1	0.0001	0.001	0.1
Accuracy	0.2	0.0003	0.003	0.2
Temperature Compensation (ATC)	Brix (ICUMSA)	Application Specific or Brix		
Ambient Temperature Range	5-40°C (Ambient)	5-95°C (Sample)		

# Scale List

Complete list of OPTi scales selectable through the onboard library.

Application	Scale	Units	Range	Resolution	Accuracy	ATC
Primary	°Brix (ATC)		0-95	0.1	±0.2	°Brix
Primary	°Brix		0-95	0.1	±0.2	None
Primary	Refractive Index (ATC)		1.33-1.53	0.0001	±0.0003	°Brix
Primary	Refractive Index		1.33-1.53	0.0001	±0.0003	None
Automotive	AdBlue®/DEF (NOx reduction)	% Weight / Weight	0-40	0.1	±0.2	AUS32
Automotive	Ethylene Glycol	°C Freezing Point	0 to -50	1	±1	EG
Automotive	Ethylene Glycol	°F Freezing Point	30 to -40	1	±1	EG
Automotive	Propylene Glycol	°C Freezing Point	0 to -50	1	±1	PG
Automotive	Propylene Glycol	°F Freezing Point	30 to -40	1	±1	PG
Food & Beverage	°Butyro		0-100	0.1	±0.5	Butyro
Food & Beverage	42 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0-95	0.1	±0.2	°Brix
Food & Beverage	55 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0-95	0.1	±0.2	°Brix
Food & Beverage	90 HFCS (High Fructose Corn Syrup)	% Weight / Weight	0-95	0.1	±0.2	°Brix
Food & Beverage	Fructose	% Weight / Weight	0-85	0.1	±0.2	°Brix
Food & Beverage	Glucose	% Weight / Weight	0-85	0.1	±0.2	°Brix
Food & Beverage	Invert Sugar	% Weight / Weight	0-85	0.1	±0.2	°Brix
Food & Beverage	Maltose	% Weight / Weight	0-60	0.1	±0.2	°Brix
Food & Beverage	Salinity (NaCl)	% Weight / Volume	0-28	0.1	±0.2	NaCl
Food & Beverage	Total Solids of Waste Milk	%	5-15	0.1	±0.5	°Brix
Food & Beverage	Water in Honey	% Weight / Weight	10-30	0.1	±0.2	Honey
Industrial	Arbitrary		0-95	0.1	±0.2	
Industrial	Calcium Chloride	% Weight / Weight	0-40	0.1	±0.2	CaCl2
Industrial	Ethanol	% Volume / Volume	0-20	0.5	±1	Ethanol
Industrial	Ethylene Glycol	% Volume / Volume	0-60	0.1	±0.4	EG
Industrial	Ethylene Glycol	% Weight / Weight	0-60	0.1	±0.4	EG
Industrial	FSII DIEGME (ASTM D 5006)	% Volume / Volume	0.0-0.25	0.01	±0.02	°Brix
Industrial	Hydrogen Peroxide	% Weight / Weight	0-50	0.2	±0.5	°Brix
Industrial	Methanol	% Weight / Weight	0-40	1	±0.2	Meth
Industrial	Propylene Glycol	% Volume / Volume	0-60	0.1	±0.4	PG
Industrial	Sodium Sulphate	% Weight / Weight	0-22	0.1	±0.2	Na2SO4
Industrial	Starch	%	0-30	0.1	±0.2	°Brix
Industrial	Sulphuric Acid (Battery Acid)	Specific Gravity (d20/20)	1.000-1.501	0.001	±0.003	SA
Industrial	Urea (CRC data)	% Weight / Weight	0-40	0.1	±0.2	AUS32
Life Science	Colostral Quality		Poor / PASS	Poor / PASS	±0.2	°Brix
Life Science	Seawater (Practical Salt Units)	Part Per Thousand	0-180	1	±1	NaCl

Life Science	Seawater (Practical Salt Units)	Specific Gravity (d20/20)	1.000-1.090	0.0005	±0.001	NaCl
Life Science	Serum Protein	g/100ml	0-30	0.1	±0.2	°Brix
Life Science	Urine (SG) Human	Specific Gravity (d20/20)	1.000-1.050	0.0005	±0.0010	°Brix
Life Science	Urine (SG) Large Mammal	Specific Gravity (d20/20)	1.000-1.050	0.0001	±0.0010	°Brix
Life Science	Urine (SG) Small Mammal	Specific Gravity (d20/20)	1.000-1.050	0.0005	±0.0010	°Brix
Wine & Beer	°Baumé		0-50	0.1	±0.2	°Brix
Wine & Beer	°Zeiss (ABV)	% Volume / Volume	10-135	0.1	±0.5	°Brix
Wine & Beer	Alcohol Probable (AP)		0-22	0.1	±0.2	°Brix
Wine & Beer	KMW (Babo)		0-25	1	±1	°Brix
Wine & Beer	Oechsle (German)		30-130	1	±1	°Brix
Wine & Beer	Oechsle (Swiss)		0-130	1	±1	°Brix
Wine & Beer	°Plato		0-30	0.1	±0.2	°Brix
Wine & Beer	Mass Sugar (°Brix) (ATC)	% Weight / Weight	0-95	0.1	±0.2	°Brix
Wine & Beer	Mass Sugar (°Brix)	% Weight / Weight	0-95	0.1	±0.2	None
Wine & Beer	Wort (Sucrose Equivalent)	Specific Gravity (d20/20)	1.000-1.120	0.0005	±0.001	°Brix

Range0.951.33-1.531.000-1.0500.95Resolution0.10.0010.010.1Accuracy0.20.0030.030.2Temperature Compensation (ATC)Shi'k (ICUMSA)Application Specific or BrixVAmbient Temperature Ranee5-40°C (Ambient)5-95°C (Sample)VSpecial Features-HAL- High Ambient Light - tection, Error messaging, Battery life indicator, AG - Text Mode, Scale library, Delay before reading, *F/°C switz Mode, Scale library, Delay before reading, *F/°C switzVPrism DishMoulded Stainless SteVVPrism SealSiliconeSiliconeVSample IlluminationLED (yellow)VVKey FunctionsREAD, ZEROVVRetargingSilicone rubberVVIn RatingOsilicone rubberVVIn RatingSilicone rubberVVHumidity95% RH (non-condensure)VVIn Rating15 grams (including bacture)VVHumidity25% Silix (including bacture)VVIn RatingSilis Silix (including bacture)VVIn Rating (including bacture)VVVIn Rating (including bacture)Silix (including bacture)VVIn RatingSilix (including bacture)VVVIn Rating (including bacture)Silix (including bacture)VVVIn Rating (including bacture)Silix (including bacture)V <th>Typical Specifications</th> <th>Sucrose (Brix)</th> <th>Refractive Index</th> <th>Specific Gravity (SG)</th> <th>Concentration %</th>	Typical Specifications	Sucrose (Brix)	Refractive Index	Specific Gravity (SG)	Concentration %	
Accuracy0.20.0030.0030.030.2Temperature Compensation (ArC)Brix (ICUMSA)Application Specific or BrixAmbient Temperature Rame5-40°C (Ambient)5-95°C (Sample)Special Featuresb-40°C (Ambient)5-95°C (Sample)Special Featuresb-40°C (Ambient)E-95°C (Sample) <td< th=""><td>Range</td><td>0-95</td><td>1.33-1.53</td><td>1.000-1.050</td><td>0-95</td></td<>	Range	0-95	1.33-1.53	1.000-1.050	0-95	
Temperature Compensation (ATC)Brix (ICUMSA)Application Specific or BrixAmbient Temperature Range5-40°C (Ambient)5-95°C (Sample)Special Features-HAL- High Ambient Light detection, Error messaging, Battery life indicator, AG Test Mode, Scale library, Delay before reading, °F/°C switch, Serial & Version No, PIN controlPrism DishMoulded Stainless SteelPrism SealSiliconePrismBmm optical glassSample IlluminationLED (yellow)Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialSilicone rubberCase MaterialSilicone rubberIP RatingP65Humidity<95% RH (non-condensing)Battery / Battery Life3V, 2 x AAA (LR03) / 10,000 readingsNett Weight115 grams (including batteries)Gross Weight295 gramsDimensions (instrument)22 x 5 x 3.5cm (L x W x H)Dimensions (packed)88:01	Resolution	0.1	0.0001	0.001	0.1	
(Arc)S-40°C (Ambient)S-95°C (Sample)Ambient Temperature Range5-40°C (Ambient)S-95°C (Sample)Special FeaturesHAL- High Ambient Light detection, Error messaging, Battery life indicator, AG Test Mode, Scale library, Delay before reading, °F/°C switch, Serial & Version No, PINPrism DishMoulded Stainless SteelPrism SealSiliconePrismBmm optical glassSample IlluminationLED (yellow)Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialSilicone rubberIP RatingIP65Humidity<95% RH (non-condensing)Battery / Battery Life3V, 2 x AAA (LR03) / 10,000 readingsNet Weight115 grams (including batteries)Gross Weight295 gramsDimensions (instrument)22 x 5 x 3.5cm (L x W x H)Dimensions (packed)38:01	Accuracy	0.2	0.0003	0.003	0.2	
Special FeaturesHAL- High Ambient Light detection, Error messaging, Battery life indicator, AG Test Mode, Scale library, Delay before reading, "F/°C switch, Serial & Version No, PIN controlPrism DishMoulded Stainless SteelPrism SealSiliconePrismBarm optical glassSample IlluminationLED (yellow)Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialSilicone rubberIP RatingIP65Humidity<95% RH (non-condensing)		Brix (ICUMSA)	Application Specific or Brix			
Prism DishBattery life indicator, ÅG Test Mode, Scale library, Délay before reading, *F/°C switch, Serial & Version No, PIN controlPrism DishMoulded Stainless SteelPrism SealSiliconePrismBattery Life indicator, de la sum optical glassSample IlluminationLED (yellow)Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialSilicone rubberIP RatingIP65Humidity<95% RH (non-condensing)	Ambient Temperature Range	5-40°C (Ambient)	5-95°C (Sample)			
Prism SealSiliconePrismSmm optical glassSample IlluminationLED (yellow)Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialAcrylonitrile Butadiene Styrene (ABS)IP RatingIP65Humidity<95% RH (non-condensing)	Special Features	Battery life indicator, AG Test Mode, Scale library, Delay before reading, °F/°C switch, Serial & Version No, PIN				
Prism8mm optical glassSample IlluminationLED (yellow)Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialAcrylonitrile Butadiene Styrene (ABS)IP RatingIP65Humidity<95% RH (non-condensing)Battery / Battery Life3V, 2 x AAA (LR03) / 10,000 readingsNett Weight115 grams (including batteries)Gross Weight295 gramsDimensions (instrument)12 x 5.5 x 3.5cm (L x W x H)Dimensions (packed)38-01	Prism Dish	Moulded Stainless Steel				
Sample IlluminationLED (yellow)Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialAcrylonitrile Butadiene Styrene (ABS)IP RatingIP65Humidity<95% RH (non-condensing)Battery / Battery Life3V, 2 x AAA (LRO3) / 10,000 readingsNett Weight115 grams (including batteries)Gross Weight295 gramsDimensions (instrument)12 x 5.5 x 3.5cm (L x W x H)Dimensions (packed)38-01	Prism Seal	Silicone				
Display4 1/2 digital LCDKey FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialAcrylonitrile Butadiene Styrene (ABS)IP RatingIP65Humidity<95% RH (non-condensing)	Prism	8mm optical glass				
Key FunctionsREAD, ZEROKeypad MaterialSilicone rubberCase MaterialAcrylonitrile Butadiene Styrene (ABS)IP RatingIP65Humidity<95% RH (non-condensing)	Sample Illumination	LED (yellow)				
Keypad MaterialSilicone rubberCase MaterialAcrylonitrile Butadiene Styrene (ABS)IP RatingIP65Humidity<95% RH (non-condensing)	Display	4 1/2 digital LCD				
Case MaterialAcrylonitrile Butadiene Styrene (ABS)IP RatingIP65Humidity<95% RH (non-condensing)	Key Functions	READ, ZERO				
IP RatingIP65Humidity<95% RH (non-condensing)	Keypad Material	Silicone rubber				
Fundity<95% RH (non-condensing)	Case Material	Acrylonitrile Butadiene Styrene (ABS)				
Battery / Battery Life3V, 2 x AAA (LR03) / 10,000 readingsNett Weight115 grams (including batteries)Gross Weight295 gramsDimensions (instrument)12 x 5.5 x 3.5cm (L x W x H)Dimensions (packed)25 x 10 x 6.5cm (L x W x H)Code No.38-01	IP Rating	IP65				
Nett Weight   115 grams (including batteries)     Gross Weight   295 grams     Dimensions (instrument)   12 x 5.5 x 3.5 cm (L x W x H)     Dimensions (packed)   25 x 10 x 6.5 cm (L x W x H)     Code No.   38-01	Humidity	<95% RH (non-condensing)				
Gross Weight   295 grams     Dimensions (instrument)   12 x 5.5 x 3.5 cm (L x W x H)     Dimensions (packed)   25 x 10 x 6.5 cm (L x W x H)     Code No.   38-01	Battery / Battery Life	3V, 2 x AAA (LR03) / 10,000 readings				
Dimensions (instrument) 12 x 5.5 x 3.5cm (L x W x H)   Dimensions (packed) 25 x 10 x 6.5cm (L x W x H)   Code No. 38-01	Nett Weight	115 grams (including batteries)				
Dimensions (packed)   25 x 10 x 6.5cm (L x W x H)     Code No.   38-01	Gross Weight	295 grams				
<b>Code No.</b> 38-01	Dimensions (instrument)	12 x 5.5 x 3.5cm (L x W x H)				
	Dimensions (packed)	25 x 10 x 6.5cm (L x W x H)				
<b>EAN</b> 5060322030470	Code No.	38-01				
	EAN	5060322030470				