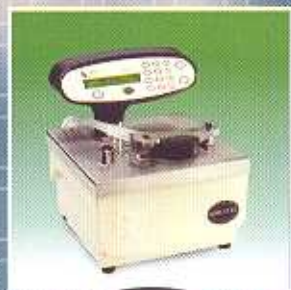
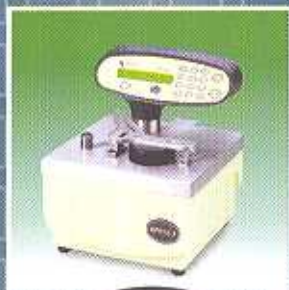


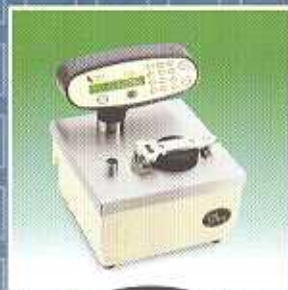
General Purpose (GPR)



GPR 12-70



GPR 53X



GPR
12-70X

For a world of applications



INDEX
INSTRUMENTS LTD

Refractometers

“Index Instruments’ range of general purpose GPR Refractometers offers a choice of models to suit individual needs”



GPR 12-70

Lower Price with a Wide Range

1.32 to 1.68 (0 to 100 Brix).
Accurate to ± 0.0001
(0.1 Brix).

GPR 53X

For High Accuracy over the entire sugar range

0-95 Brix (RI 1.33 to 1.53).



GPR 12-70X

For Wide Range and Enhanced Accuracy

5th decimal place resolution from 1.32 up to 1.68.
Accuracy up to ± 0.00005 depending on refractive index.



“All are temperature controllable, to both prism and sample cover, by flowing fluid from a Thermocirculator temperature range of 5°C up to 70°C.”

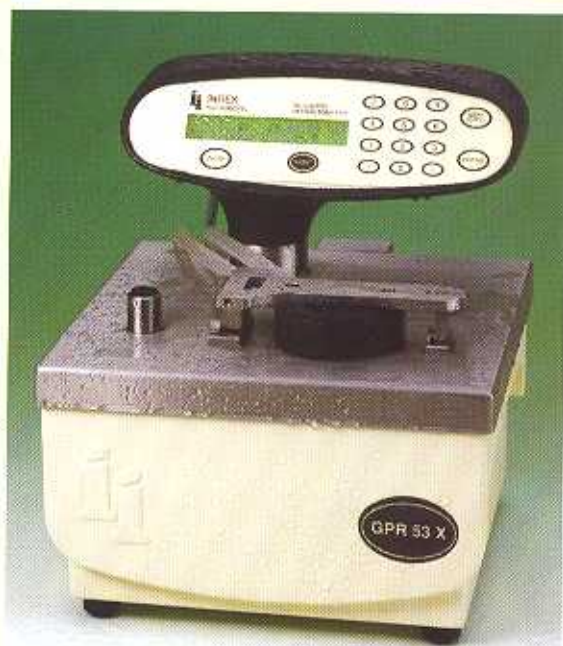
All models feature a small compact design and a robust waterproof construction, with raised display to make cleaning easy and to avoid spillage damage. There are no moving parts to wear out and the LED light source ensures long maintenance free life. The synthetic sapphire prism is virtually impossible to damage.



All models are supplied complete and ready to use with a temperature controllable hinged sample cover suitable for most types of samples from thin

liquids to thick pastes. A selection of alternative sample cells is also available to make these instruments even more versatile. These include a range of volume flow cells and covers for measuring specially prepared solid samples. Full details of the range of cells are given in our leaflet 'Sample Cells for GPR'.

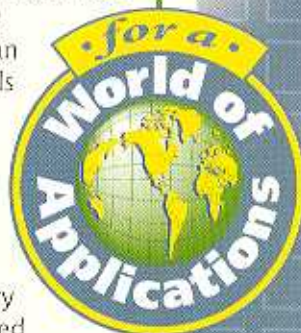
Refractive index (RI), Brix (sucrose percent), temperature corrected Brix, temperature corrected RI and up to 10 user calibrated scales are available on all models. The instruments can be set to read continuously so that the operator just has to apply a sample to the prism and read or print the result. Alternatively any of these refractometers can be set by the user with a delay time to allow for sample stabilisation. A very useful feature is the operating mode where the refractometer automatically monitors the sample stability and only gives the reading when a stable result has been reached. The user can set the level of stability required to minimise the reading time for the required accuracy.



With the GPR 53 series, a model has been designed for the sugar industry. The GPR 53XP Refractometer is supplied complete with built-in software to enable the calculation and automatic reporting of the apparent sugar purity when the instrument is connected to an Optical Activity Polarimeter. Full details are given in our 53X/XP leaflet.

To comply with the growing requirement for good quality control practice and traceability, the GPR models all print time and date and optionally a sample number with every reading. A bar code scanner can be used with the GPRs to further simplify sample identification and recording. Data can be output to a printer and/or a computer via the two RS232 outputs.

A third input/output socket allows remote operation or provides a pulse to start associated equipment. For security some functions of the keypad can be inhibited to prevent unauthorised use. A security code is then required to re-enable the full keyboard.



Technical Specification



GPR 12-70



GPR 53X



GPR 12-70X

Scales	Refractive Index (RI) Brix Temp. corr. Brix 10 user scales, Temp. corr. RI	Refractive Index (RI) Brix Temp. corr. Brix 10 user scales, Temp. corr. RI	Refractive Index (RI) Brix Temp. corr. Brix 10 user scales, Temp. corr. RI
Range	RI 1.32 to 1.68 Brix 0 to 100%	RI 1.33 to 1.53 Brix 0 to 95%	RI 1.32 to 1.68 Brix 0 to 100%
Readability	RI 0.0001 Brix 0.1%	RI 0.00001 Brix 0.01%	RI 0.00001 Brix 0.01%
Accuracy	RI ± 0.0001 Brix ± 0.1	RI $\pm 0.00003@1.33$ Brix $\pm 0.02@0\%$	RI ± 0.00005 From 1.33 to 1.45 ± 0.0001 from 1.45 to 1.68 Brix ± 0.05 from 0 to 65% ± 0.1 from 65 to 100%
Special feature	Touch button selection of normal or emulsion type sample		Touch button selection of normal or emulsion type sample
Scan time	Approx. 2 seconds	Approx. 1 second	2 to 6 seconds, depending on resolution
Wavelength	589nm		
Operating modes	Continuous update OR single scan with user programmable delay time OR single scan with automatic detection of reading stability		
Display	Illuminated alphanumeric, 2 lines of 24 characters; high contrast LCD with contrast control		
Light source	L.E.D.		
Prism material	Synthetic sapphire		
Temperature	Displayed continuously to 0.1 °C with sample reading; calibrated to ± 0.1 °C at 20 °C; worst case deviation in absolute accuracy over entire range 0.5 °C.		
Thermostatic control	By use of circulating fluid, temperature range 5 °C to 70 °C		
Controls	Set zero, print, numeric keyboard for programming functions		
Outputs/inputs	2 x RS232, 1 x remote		
Power requirements	86–265 v ac, 47–63 Hz, less than 7 watts		
Dimensions and weight	Refractometer: w 235 x d 260 x h 255 mm; 8kg Power supply: w 80 x d 160 x h 55 mm; 0.5kg		
Packed weight	12 kg (Dimensions of pack 50 x 40 x 35 cm)		

All sizes and weights are approximate. Due to continuing research and technical advances, we reserve the right to alter the specifications of any of the products in this leaflet.