

# ABBE REFRACTOMETER

MODEL : RSRT-1

(combined with sugar scale 0 to 95%)



Established 1973

## SALIENT FEATURES

- *Finely marked glass (translucent scale.)*
- *Measurable range from 1.3000 to 1.7000.*
- *Accuracy 0.001 by direct reading & 0.0001 by estimation.*
- *Only a drop or two of the sample is sufficient for analysis*
- *Water Jacketed prism box allows measurement of index of refraction at the desired temperature*

## TYPICAL EXAMPLES:

- Sugar Solutions, Confectionery Products, Pharmaceutical preparations, Glues Chemicals, Oil, Plastics & prepared solids such as Glass and Synthetic crystals.



Water Bath



Oil & Sugar  
(Butyrago Refractometer)



**THE RICO ABBE-REFRACTOMETER** provides a rapid and convenient method of measuring the refractive index and dispersion of liquids and solids, Besides its obvious value as an indispensable tool for optical work it also offers a convenient means of determining the concentration of many liquids or solids materials in solution thus becoming a convenient basis for control in many chemical processes.

The refractive index of a substance is the ratio of the speed of light of a given wave length through it, as compared with the speed of light of the same wave length in vacuum. The refractive index of a given substance varies with the wave length of light by which it is measured. Refractive index for the D line of the Sodium spectrum (589 mu) is generally used as the standard of comparison. This is commonly expressed in scientific literature as  $n_d$ .

When the light passes from a medium of one refractive index to that of another at a flat boundary surface, the light is reflected or refracted depending upon the angle at which it strikes and the relative indices of the media if the angle of incidence can be varied, it is found that beyond certain definite angle refraction no longer occurs, but a total reflection begins. This is so-called critical angle and its measurement forms the underlying principle of most refractometers, including the **RICO ABBE-REFRACTOMETERS**.

**RICO ABBE-REFRACTOMETER** is a very reliable and sturdy instrument for the accurate measurement of indices of refraction of transparent liquids, solutions and solids. It can also be used for measurement of dispersion and also for measurement of percentage in sugar solution. Its scale is very finely marked on a translucent glass arc and is visible through a magnifier by transmitted light. It is mounted on a bearing, driven by a control knob, giving a smooth movement free from backlash.

**RICO ABBE-REFRACTOMETER** is supplied with a small glass test-piece contact Liquid, Dust cover, instruction manual and Beautiful wooden cabinet.

#### **SPECIFICATIONS:**

Range of Refractive index : 1.3000 to 1.7000

ACCURACY : 0.001 by direct reading on scale &  $\pm 0.0001$  by estimation.

SCALE : Translucent glass arc scale Minimum Div..001

ORDERING INFORMATION: Model-RSRT-1 (with combined scale)

Note :- Because of a policy to continual development, the company reserves the right to amend specifications, designs and price without notice.

#### **WE ALSO MANUFACTURE**

POLARIMETERS, I.R. MOISTURE BALANCE, POCKET REFRACTOMETER, OIL & SUGAR (BUTYROO) REFRACTOMETER, ULTRA VOILET CABINETS, DIGITAL BOMB CALORIMETERS, DIGITAL MOISTURE METER FOR WHEAT AND RICE, AUTOMATIC SCRATCH TESTERS, FLOW CUPS, DIGITAL STORMER/ SAYBOLT/ REDWOOD/ TAR/ ENGLER VISCOMETERS, FLASH AND FIRE POINT APPARATUS, DIGITAL GLOSS METER, SALINOMETERS, ZAHN CUP, HEGMAN GAUGE, FILM APPLICATORS, DIGITAL MELTING POINT FREEZ-DRIER (LYOPHILYSER), CONICAL/ROUND BENDTEST APPARATUS, ABBE REFRACTOMETER IMPROVED MODEL RSR-2 etc.