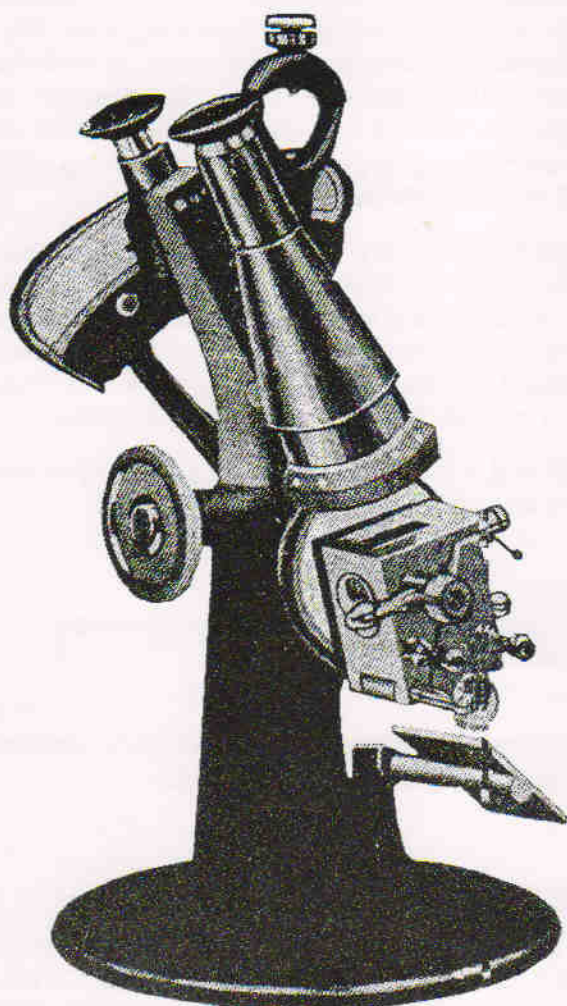




## **ABBE REFRACTOMETER**

**MODEL : RSR-1**

**(combined with sugar scale 0 to 95%)**



### 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 Jacketted 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.

Manufactured by  
**RAJDHANI SCIENTIFIC INSTRUMENTS CO. (REGD.)**  
NEW DELHI (INDIA)



# ABBE REFRACTOMETER MODEL RSR-1

**THE RAJDHANI 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 **RAJDHANI ABBE-REFRACTOMETERS**.

**RAJDHANI 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.

**RAJDHANI 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-RSR-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**

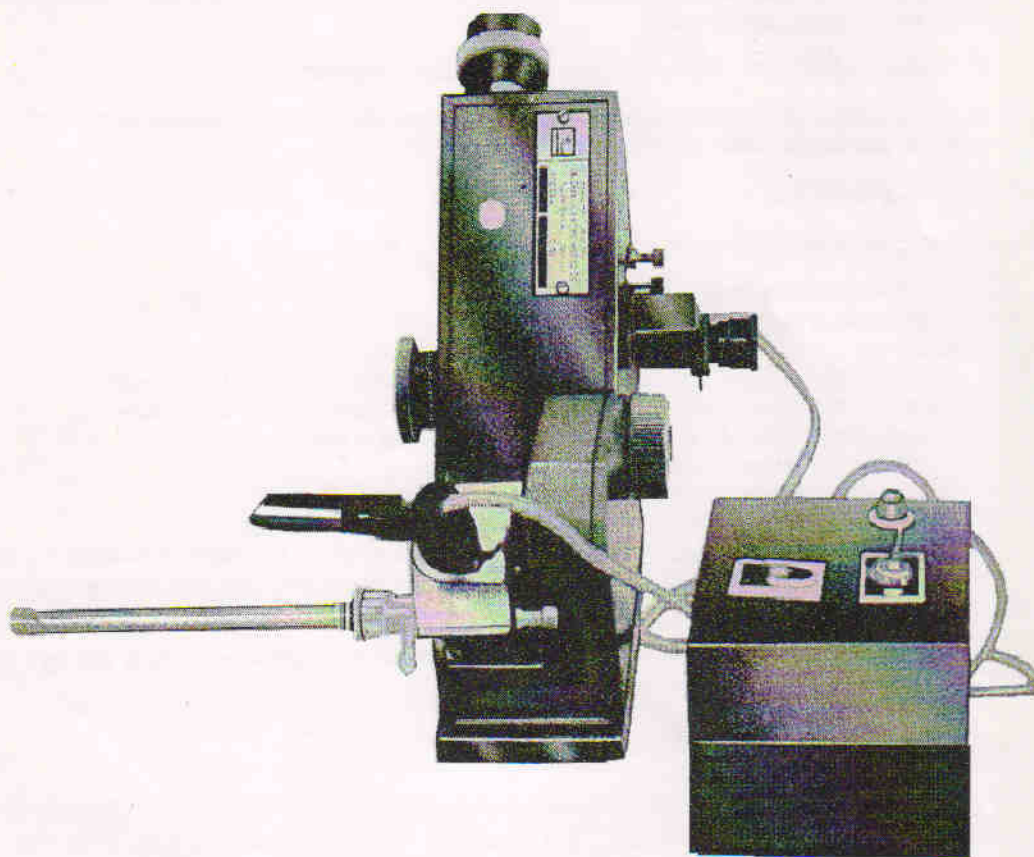
POLARIMETERS, I.R. MOISTURE BALANCE, POCKET REFRACTOMETER, OIL & SUGAR (BUTYROO) REFRACTOMETER, ULTRA VOILET CABINETS, DIGITAL BOMB CALORIMETERS, DIGITAL MOISTURE METER FOR WHEAT AND RICE, AUTOMATIC SCRATCH TESTERS, FLOW CUPS, DIGITAL STORMER/ SAYBOLT/ REDWOOD/ TAR/ ENGLER VISCOMETERS, FLASH AND FIRE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

OUR AUTHORISED DEALER



## **ABBE REFRACTOMETER**

**MODEL : RSR-2**



Manufactured by  
**RAJDHANI SCIENTIFIC INSTRUMENTS CO. (REGD.)**  
NEW DELHI (INDIA)



# ABBE REFRACTOMETER MODEL RSR-2

## SALIENT FEATURES :-

- ☆ Determination can be performed properly and efficiently in the bright field of view under the stable light from the built in illuminator.
- ☆ Dual graduations of Refractive index and Brix percentage are provided on the internal transparent scale.
- ☆ The scale is graduated on the upper side for the refractive index and the lower side is graduated to read directly the percentage of sugar in solution.
- ☆ The main prism is always horizontal so that the liquid sample can be placed on the prism and measured conveniently.
- ☆ The Glass transparent scale is clearly graduated on the glass plate so that readings can be obtained easily without fatigue.
- ☆ The interior optical system is protected from moisture in addition to protect the interior optical system by the sealed construction of the interior portion of the instrument, maintains a dry condition by the moisture absorbant.
- ☆ Viscous substances, like syrups, can also be easily measured.
- ☆ A mechanism is provided to open the sub-prism so that it can be opened easily without undue force, especially when viscous samples are handled.

## SPECIFICATIONS:-

Range of measuring scale :-

- a) refraction index from 1.300 to 1.700
- b) contents of sugar in water solution from 0 to 95%

Accuracy :

For Refractive Index 0.001 by direct reading on scale &  $\pm 0.0001$  by estimation.

For sugar solutions 0.05% direct reading on scale &  $\pm$  by 0.1% by estimations.

Overall dimensions of the refractometer : 115x222x263 mm

Weight of the refractometer : Approximately 4 kg.

Dimensions of case : 160x240x325 mm

Weight of the refractometer in case, including equipment 6.6 kg.

Rajdhani Abbe-Refractometer is supplied with a small glass test-piece indicating the refractive index of the instrument, an instruction manual, dust cover and beautiful wooden cabinet

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 BEND TEST APPARATUS, etc.etc.

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