



# TECHNO SCIENCE INSTRUMENTS

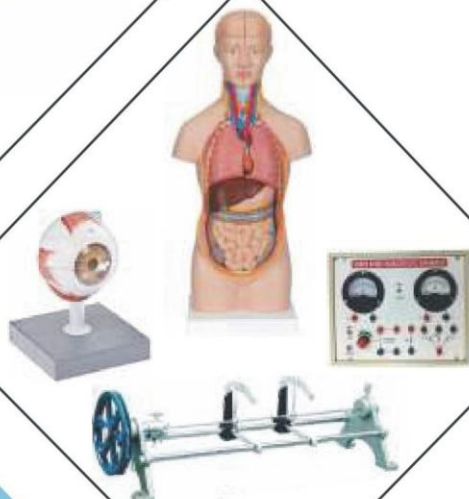


**OUR INSTRUMENTS ARE  
DEVELOPED UNDER THE GUIDANCE OF  
TDC, IISc, CHALLAKERE**



## TECHNO SCIENCE INSTRUMENTS

**NO.951, 1ST B MAIN ROAD  
NAGARABHAVI 2ND STAGE  
9TH BLOCK, BANGALORE 560072  
9743739168 / 9902951323**



## TECHNO SCIENCE INSTRUMENTS

**Email:** [technoscience.instruments@gmail.com](mailto:technoscience.instruments@gmail.com);

[technoscience.india@yahoo.com](mailto:technoscience.india@yahoo.com);

**Website:** [www.technoscience.in](http://www.technoscience.in)

**Mobile:** +91 9845943963 | **Phone:** +91 9743739168

PLUS  
LAB



# PHYSICS

## OR-0001 METER SCALE ONE METER & HALF METER

Made from seasoned wood, accurately graduated in cm with clear and fine divisions.



## OR-0002 VERNIER CALLIPERS I.M.E. TYPE

In velvet case.



## OR-0003 VERNIER CALLIPERS WITH DIGITAL READ OUT

Conversion button, on/off switch and zero setting switch. Metal knob for locking the device is provided at the top.



## OR-0004 MICROMETER SCREW GAUGE

Micrometer with ratchet stop, dull chromium plated brass body, accurately threaded M.S rod. Available in: 10mm, 15mm, 20mm, 25mm



## OR-0005 MICROMETER SCREW GAUGE WITH DIGITAL READ OUT

For taking direct reading. The micrometer is provided with mm/inch conversion button, on/off switch and zero setting switch.



## OR-0006 SCREW GAUGE DEMONSTRATION MODEL

20cm long, made of silver alloy useful for class instructions, packed in card box.



## OR-0007 SHPEROMETER BRASS

Brass scale and disc, base fitted with threaded rod and legs, packed in printed duplex box. L.C.I / 100MM. Available in Single & Double Disc



## OR-0008 ANALYTICAL WEIGHT BOX

Tested, presented in seasoned cabinet polished velvet lined box packed in printed duplex box. Available in : 50gms, 100gms & 200gms



## OR-0009 PHYSICAL WEIGHT BOX BRASS/IRON

Brass NP, cabinet polished wooden box, duly tested, packed in printing duplex box.



## OR-0010 SLOTTED WEIGHT BRASS/IRON

C.P., Precisely machined & carefully adjusted Set of 5 including hanger.

A	5gms x 5	25gms
B	10gms x 5	50gms
C	20gms x 5	100gms
D	50gms x 5	250gms
E	100gms x 5	500gms



## OR-0011 SPRING BALANCE

Flat form, high impact polystyrene body with zero adjustment, anodized metal scale with clear and accurate divisions. Available in : 100gms, 250gms, 500gms & 1000gms.



## OR-0012 SPRING BALANCE ACRYLIC

Tubular body in card box. Available in: 100gms, 250gms, 500gms & 1000gms.





# PHYSICS

## OR-0013 STOP CLOCK

Smith type, fly back action, metal body with new Superior machine.



## OR-0015 STOP WATCH

1/5 & 1/10 mechanical in metal case.



## OR-0017 DOUBLE CONVEX LENS

Highly polished and well edged, manufactured from plate glass optically true:



## OR-0014 DIGITAL STOP CLOCK

Star/stop operation is by means of a mini toggle switch and reset by a push button.



## OR-0016 CONCAVE AND CONVEX MIRROR

Superior, optically true, back nicely silvered with has protective coating any focal length from 15 to 100 cm.



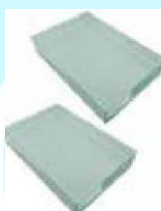
## OR-0018 MAGNIFIERS

	Diameter
A	50MM
B	75MM
C	100MM



## OR-0019 GLASS SLAB

Made from superior quality moulded glass with glossy.



## OR-0021 DIFFRACTION GRATING

15000 lines per inch



## OR-0023 NEWTON RING APPARATUS

A pair of glasses. One plane, other convex 50mm in metal frame with three screws for applying pressure.



## OR-0020 GLASS PRISM

Equilateral, highly polished surface. Available in : 38 & 50mm



## OR-0022 SPECTROMETER PRISM

	(i)	(ii)	(iii)
A	Crown Glass R.I. 1.51	Dense Flint R.I. 1.65	Extra Dense Flint R.I. 1.65
B	25x25MM	25x25MM	25x25MM
C	32x32MM	32x32MM	32x32MM
C	38x38MM		



## OR-0024 LENS HOLDER

V-shaped wooden polished.



## OR-0025 UNIVERSAL LENS HOLDER

Metal on adjustable stand.



## OR-0026 KALIEDOSCOPE

Brass N.P



## OR-0027 PIN HOLE CAMERA

Provided with special circular scale. Available in: Wooden & Brass



## OR-0028 PERISCOPE

Made from wood polished.



## OR-0029 TICKER TAPE TIMER

Complete workable on AC. Mains.







# PHYSICS

## OR-0030 DIRECT VISION SPECTROSCOPE

(Hand Spectroscope) wide spectrum 10 X 10 direct vision prism with precision slit, fitted in brass body with telescopic focusing.



## OR-0031 PULLEYS

A	Single
B	Double long or parallel
C	Triple long or parallel



## OR-0032 WHEEL AND AXLE

Hardwood polished, comprising of 1 grooved wheel, 2 axles of different diameter, mounted jointly on wooden stand.



## OR-0033 CYLINDER OF METALS

Set of 6 different metal cylinders. (Brass, Aluminum, Copper, Zinc, Iron and Lead) All surfaces & edges are smooth.



## OR-0034 PENDULUM BOB

Set 6 different metal bobs with hook. (Brass, aluminum, Copper, Zinc, Iron and Lead) different size up to 50 mm.



## OR-0035 DRAWING BOARD

Made from seasoned soft wood.

A	B	C
18"x12"x5/8"	23"x16"x5/8"	24"x18"x5/8"



## OR-0036 DYNAMO WHEEL TYPE

Working model fitted on sunmica base with LED, packed in card box.

A	B	C
AC/DC	AC	DC



## OR-0037 MOTOR MODEL

Mounted on sunmica clad wooden base workable on 2-4 volt DC.



## OR-0038 HYDRO POWER TURBINE

Mounted on sunmica clad wooden base, packed in card box.



## OR-0039 NEWTON COLOUR DISC

Disc 6" hand operated, on metal base.



## OR-0040 COPPER, NICHROME, EUREKA OR CONSTANTAN, MANGANIN, BRASS & STEEL WIRES



## OR-0041 PITH BALL PENDULUM

Fitted on stand with on insulated arm.



## OR-0042 GOLD LEAF ELECTROSCOPE



## OR-0043 CONDUCTOR SET OF 3

Made of brass, fitted on insulated stand, provided with cone, sphere and cylinder.



## OR-0044 DENIAL CELL

To draw current in open or closed circuit, comprising of polished copper vessel with terminal, empty porous pot covered with copper lid and a zinc rod.







# PHYSICS

## OR-0045 GOOD & BAD CONDUCTOR

Fitted on base, provided with three different materials.



## OR-0047 COPPER VOLTAMETER

To demonstrate the principle of Electroplating complete in plastic jar with three copper plates suspended from a molded Bakelite cover.



## OR-0049 WATER VOLTAMETER

With glass jar on wooden base, provided with two glass tubes.



## OR-0051 BATTERY CHARGER

Workable on 230 volts AC with heavy transformer, bridge. Available in : 1, 2 & 3Amp.



## OR-0053 STEP DOWN TRANSFORMER

Fitted in metal box. Output 2, 4, 6, 8, 10, 12 volts AC Input - 220 volt. Available in: 1, 2 & 3Amp.



## OR-0055 CHEMICAL BALANCE

Capacity 200gm sensitivity 1/5 gm, brass beam has 50 engraved divisions on either side, each division represents 1/5 mg rider on scale.



## OR-0057 TRIPPLE BEAM BALANCE

For direct reading with sliding riders, fitted on metal base.



## OR-0059 DISPENSING BALANCE

Double pan, packed in wooden box. Capacity 100gm.



## OR-0046 SIMPLE VOLTAIC CELL

Comprising of PVC jar zinc copper plates, fitted on Bakelite cover with LED.



## OR-0048 LECLANCHE CELL

To draw strong current for short durations, comprising a thick plastic jar, charged porous pot and zinc rod.



## OR-0050 BATTERY ELIMINATOR

With heavy transformer, bridge rectifier, rotary switch for output selection, on/off switch. Available in: 1,2&3Amp.



## OR-0052 ACCUMULATOR MASS TYPE

Mass type, 2 volts, plastic container with molded lid and terminals. Available in : 20Ah, 45Ah



## OR-0054 PHYSICAL BALANCE

Capacity 200 gm sensitivity 2 mg. The balance is mounted on sturdy wooden base with leveling screws. Teakwood showcase with panel doors.



## OR-0056 ANALYTICAL BALANCE

Most accurate with straight, extended beam and rider attachment, capacity 200gm, sensitivity 1/10mg. Brass beam has 100 graduated divisions with 0 at the centre.



## OR-0058 BAR RANGER BALANCE

Metal body, SS Pan packed in card box. Available In : 5 & 10 kg.



## OR-0060 PERSONAL WEIGHING SCALE

Maximum capacity 120 kg. Least count 0.5 kg.





## OR-0061 DIGITAL BALANCE

Top pan, digital display, battery/mains operated. Capacity 300 gm, sensitivity 10 mg.



## OR-0063 POHL'S COMMUTATOR & REVERSING SWITCH

For use hysteresis experiment-with brass C.P. Parts fitted on thick Bakelite base.



## OR-0065 CHARGE & DISCHARGE KEY

For charging and discharge of a capacity, fitted on thick bakelite base with silver contact.



## OR-0067 RESISTANCE BOX DIAL TYPE

A	B	C	D	E
One Dial	Two Dial	Three Dial	Four Dial	Five Dial



## OR-0069 RHEOSTATS PORCELAIN TUBE

Mounted with heavily oxidised eureka wire and mounted on ducro painted metal feet.



## OR-0071 RESISTANCE BOX PLUG TYPE

In teak wood box fitted with rectangular brass block, double silk covered non inductive winding, interchangeable plug.



## OR-0072 POST OFFICE BOX PLUG TYPE

Fitted with rectangular brass blocks, lacquered, interchangeable plugs are connected with double nut system. 10-10000 ohms.



## OR-0062 PLUG KEY

A	B	C	D	E	E
One way	Two way	Three way	Four way	Six way	Tapping Key



## OR-0064 POTENTIOMETERS

Fitted on nicely polished plywood base with sunmica top, soft wood graduated scale 100cmx mm, provided with pencil jockey. Available in 4 wire & 10 wire.



## OR-0066 METER BRIDGE

(Wheatstone Bridge) one meter long, plywood base and sunmica top, graduated scale, constantan wire is stretched on top.



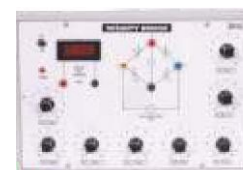
## OR-0068 KOHLRAUSCH CONDUCTIVITY BRIDGE

For direct measurement of electrolytic resistance. Comprising a calibrated scale 0.01-10 ohms and multiplier ratio dial giving 6 ratios 0.1, 1, 10, 100, 1000 and 10000. It is useful for quick determination of resistance too when galvanometer replaces the headphone in the detector circuit. With circular scale, accuracy  $\pm 0.1\%$ .



## OR-0070 DE-SAUTY'S BRIDGE

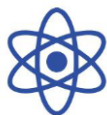
For comparison of capacities of condensers. It consists an AC source, a detector, 5 unknown values. Circuit diagram is printed on board and 2 ratio dials of  $\times 10$  &  $\times 100$  are provided. Accuracy  $\pm 0.05\%$  to  $\pm 0.1\%$



## OR-0073 CALLENDER AND GRIFFITH'S BRIDGE

Callender and Griffith's Bridge Carry foster bridge and potentiometer combined in one instrument. 50cm long slide wire of 1 ohms resistance is calibrated into 100 equal part s.





# PHYSICS

## OR-0074 PLATINUM RESISTANCE THERMOMETER

Consisting of heat teased winding of the purest form of platinum having resistance of 2.8 ohms, enclosed in a borosilicate glass grounded tube, provided with four terminals, two for non-inductive winding and two for compensating leads.



## OR-0075 MILLIAMMETER, MICRO-AMMETER, VOLTMETER, MILLIVOLTMETER

Available in 10 mV 100 mV, 500 mV range.

A	B	C
M065	MR80	MR100
Top Terminals	Delux-Square	(80x100) Rectangular



## OR-0076 REYLEIGH'S BRIDGE

For measurement of self-inductance of a coil, provided with ratio arm resistance arm, slide wire and special double key, calibrated to  $\pm 0.05$  to  $\pm 0.1\%$



## OR-0078 ANDERSON BRIDGE

Used to measure inductance of a coil, provided with three resistance arm, one inductance and one capacitance.



## OR-0080 PORTABLE WHEATSTONE BRIDGE

It is fully portable with build in galvanometer and battery, designed to provide an accurate and sensitive measurement to resistance and locking faults in cables by adopting the murray and varley loop circuit for tests. Separate terminals for current, battery and galvanometer are provided on bakelite panel.



## OR-0077 MULTIMETER DIGITAL

Workable on 9 volt battery. Provided with test leads.



## OR-0079 STEWART AND GEE'S APPARATUS

To determine the variation of magnetic field along the axis of a coils, a circular non magnetic frame has copper wire wound on it.



## OR-0081 BALLISTIC GALVANOMETER

Housed in bakelite body for measurement of small quantities of electrical charge, deflection closely proportional to the electric charge, robust and rigid in construction, easy to operate, provided with zero adjustable and locking devices. Time period 10-12 seconds.



## OR-0082 KELVIN DOUBLE BRIDGE

For precise measurement of low resistance, capable of measuring resistance from 0.1 micro-ohm to 1.1 ohms. Ten standard resistance of manganin are provided in steps of 0.01 ohm each in dial form wire five multiple ratio of 0.001, 0.01, 0.1, 1 and 10 ohms.



## OR-0083 TANGENT GALVANOMETER

The whole assembly rotates on a non magnetic tripod base with non magnetic leveling screws. Compass box is mounted on non-magnetic metallic cup and is free to rotate around it. Available in : Aluminum, Brass & Wooden Parts



## OR-0084 DIGITAL PANEL METER

3 1/2 Digital display with 9 volt battery.



## OR-0085 SPOT REFLECTING GALVANOMETER

Highly sensitive instrument to be used as null detector in wheatstone bridge and potentiometer experiments.





## OR-0086 LAMP AND SCALE OUTFIT

Suitable for use with ballistic galvanometer, provided with 6 volt step down transformer, 6V/20W lamp housed in metal container, a translucent Perspex scale attachment graduated in 25-0-25 or 0-50 cm, plug and cord.



## OR-0088 PNP TRANSISTOR

Fitted on board with banana socket and circuit diagram.



## OR-0087 DIODE VALVE CHARACTERISTIC APPARATUS

With build-in stabilized power supply and two moving coil meters, fitted with diode valve on front panel. Consists of High Voltage.



## OR-0089 ZENER DIODE CHARACTERISTIC APPARATUS

With build-in stabilized power supply and two moving coil meters 1 5V and 100 mA.



## OR-0090 RESISTANCE IN SERIES AND PARALLEL KIT

It consists of two circuit boards, one rheostat, one ammeter (MR-80) and patch cords.



## OR-0092 TRIODE VALVE CHARACTERISTIC APPARATUS

With build-in stabilized power supply workable on 230 volts AC, fitted with Triode valve on front panel, with two moving coil meters.



## OR-0094 PN JUNCTION DIODE CHARACTERISTIC APPARATUS

To study Forward & Reverse Characteristics of PN Junction Diode. Instrument comprises of two DC Regulated Power Supplies 0-3VDC/150mA & 0-30 VDC/150mA, two dual range round meters for voltage & current measurement, PN Junction Diodes mounted behind the panel, connections of Supplies, Meters & Diodes brought out at 4 mm Sockets.



## OR-0096 NPN TRANSISTOR

Fitted on board with banana socket and circuit diagram.



## OR-0098 OHM'S LAW APPARATUS

Instrument comprises of Two moving coil meters to measure voltage & current, one wire wound Potentiometer. Circuit diagram Printed.



## OR-0091 PLANK'S CONSTANT APPT.

With build-in power supply having 2 meters, workable on 220 volts AC, photo electric cell mounted in a metal box with slit to hold fitted provided with a light source.



## OR-0093 E/M BY THOMSON METHOD (Bar Magnet Method)

With build-in power supply to operate cathode ray tube, one voltmeter shows deflection voltage, C.R.T. is mounted on teak is provided to hold bar magnets and deflection magnetometer.



## OR-0095 MILIKAN'S OIL DROP APPARATUS

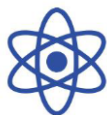
It consists of a condenser, a light source and a measuring microscope all mounted on a common platform. A strong pillar mounted on a heavy base carries microscope and lamp house. An oil container with a pump is provided at the top of the pillar and oil drops pass through a hole in the plate (placed just below the oil container). The microscope has up-down and sideways adjustment knobs provided with power supply.



## OR-0097 COLPITT OSCILLATOR

To study frequency and waveshape generated by Colpitts Oscillator, instrument comprises of 1 2V DC regulated power supply.





# PHYSICS

## OR-0099 WEIN BRIDGE OSCILLATOR

Using Operational Amplifier IC 741 instrument comprises of 12V DC regulated power supply components mounted on front panel.



## OR-0101 CHARGING AND DISCHARGING OF CONDENSER

To study the RC time constant during charging and discharging of a capacitor, with build-in stabilizer power supply workable on 220 AC.



## OR-0103 E/M BY LONG SOLENOID/ HELICAL METHOD

Kit comprises of high voltage power supply unit with intensity, focus X and Y, deflection solenoid current controls, two meters are provided for acceleration voltage control & for solenoid current control, solenoid unit comprises of one solenoid mounted on wooden stand & 3" cathode ray tube is kept in the solenoid pipe.



## OR-0105 HARTLEY OSCILLATOR

To study frequency and waveshape generated by Hartley Oscillator, instrument comprises of 30V DC regulated power supply.



## OR-0107 PHASE SHIFT OSCILLATOR

To study frequency and waveshape generated by Phase Shift Oscillator, instrument comprises of 12V DC regulated power supply.



## OR-0109 FUNCTION GENERATOR

Range 1 Hz to 100 KHz.



## OR-0111 FET VOLT-OHM METER SOLID STATE

(VTVM) triple range, fitted with deluxe meter with transparent cover, input impedance 11 megohms.



## OR-0100 TWO STAGE RC COUPLED TRANSISTOR AMPLIFIER (Frequency Response)

Instrument comprises of DC regulated power supply printed circuit diagram.



## OR-0102 ENERGY BAND GAP OF PN JUNCTION DIODE

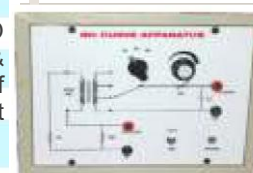
To plot reverse saturation current  $I_s$  vs temperature in reverse biased PN

junction diode, instrument comprises Of DC regulated power supply 0-20 volt /150mA two moving coil meters 20V and 100uA for voltage & current measurement, one PN junction diode (Ge type) kept in oven with temperature control knob.



## OR-0104 BH CURVE APPARATUS

To trace hysteresis curves on CRO using resistance, capacitance & inductance, instrument comprises of AC power supply 3-15V, output selectable using band switch.



## OR-0106 THERMISTOR CHARACTERISTIC APPARATUS

With build-in stabilized power supply, workable on 230 volts AC, a thermistor fitted with build-in oven and thermometer is mounted on front panel.



## OR-0108 STUDY OF OPERATIONS AMPLIFIER ADDER, SUBTRACTOR, INTEGRATOR AND DIFFERENTIATION

Instrument comprises of DC regulated power supplies of 0-5 Volt and  $\pm 15$  volt, one digital meter to measure input and output voltages, combination of resistances, capacitors mounted on front panel.



## OR-0110 SOLAR CELL CHARACTERISTICS APP.

To draw V characteristics of solar cell, instrument comprises of moving coil meters fitted on panel with power supply, lamp house, solar cell mounted supplied with wooden plank.





## OR-0112 VERIFICATION OF KCL AND KVL

Instrument comprises of DC regular power supply 0-3 V/250mA, two moving coil meters 5V, 250mA for voltage & current measurement, combination of resistance mounted on front panel.



## OR-0114 CLOTHED RAY OSCILLOSCOPE Dual Trace, Band Width DC to 20 MHz

Workable on 220 Volt, 50 Hz. Vertical deflection coefficients 5mV to 20V/div., Time base 20 ns - 0.2 s/div., Variable hold off, X10 magnification, triggering DC 20 Mhz., Active TV sync sep., Alternate triggering, LED indication for stable triggering, XY mode, Z modulation, saw tooth output (5 Vpp approx) component tester, 2 level calibrator.



## OR-0116 DIGITAL STORAGE OSCILLOSCOPE (DSO)

Signal bandwidth 25 Mhz., Independent vertical scale and position control knobs for each channel, 24 parameters of automatic measurements, low-pass, high-pass, band-reject digital filters with adjustable cut-off frequency.



## OR-0118 DIELECTRIC CONSTANT APPARATUS

To calculate dielectric constant of solid. The instrument consists of high frequency oscillator of tuneable frequency, optimum tuning of oscillator between parallel plates, change is detected on difference is noted for calculation.



## OR-0120 RESISTIVITY OF SEMICONDUCTORS BY FOUR PROBE METHOD

The experiment consists of the following :

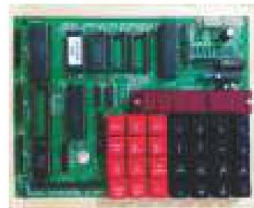
- Four Probe Arrangement
- Oven( up to 200-C)
- Sample : Ge Crystal mounted
- Thermometer (0-200-C)



## OR-0113 MICROPROCESSOR TRAINING KIT

Kit is based on 8085 microprocessor and is designed to provided ease in interaction with 8 bit microprocessor capabilities.

This kit can be used to train engineers about the microprocessor technology to control and industrial process and to develop software for this system.



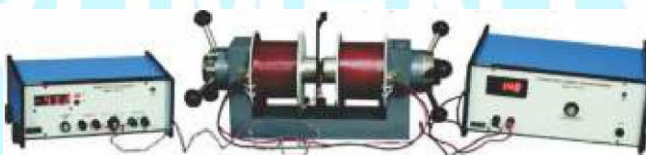
## OR-0115 SUSCEPTIBILITY OF FE CL<sub>3</sub> SOLUTION (Quinck's Tube Method)

To study susceptibility of ferrous solution in strong magnetic field, it consists of electromagnet of 7.5 K.G. Strength, 0-100V 4 Amps. Variable power supply. Digital gauss meter 0-20 Kg with hall probe and graduated capillary tube.



## OR-0117 HALL EFFECT EXPERIMENT

The setup consists of electromagnet of 7.5Kg., Power supply for electromagnet 0- 100V/ 4 amps, germanium crystal mounted, constant current power supply 0-20 mA fitted with two digital meters, digital gauss meter 0-20 kilo gauss and hall probe.



## OR-0119 G.M. COUNTER DIGITAL

Instrument consists of power supply for G.M. Tube with digital read out meter. 6 digit counting system with its power supply. Controls for reset, start and stop fixed on panel. One presetable time with 3 digit display and thumb wheel switch. Complete with G.M. Tube stand, and one radio active source.







## OR-0121 ULTRASONIC INTERFEROMETER

It is a simple device to determine the ultrasonic velocity in liquids, the principle is based on accurate measurement of wave length in the medium. Ultrasonic waves of known frequency are produced by a quartz plate fixed at the bottom of the cell. The waves are reflected by a moveable metallic plate.



## OR-0123 SPECTROMETER

A basic instrument for performing spectroscopy experiments, designed to give best possible results, mounted on stable cast iron base, protracted scale 150mm is divided on precision machine, vernier reading 1 min., Telescope is fitted with 25mm dia.



## OR-0125 NEWTON'S RING MICROSCOPE

Compact with all the necessary arrangements for conducting Newton's Ring experiment, a standard microscope unit with 30x magnification and rotatable cross line.



## OR-0127 SIX POSITION VERNIER MICROSCOPE

Consisting of cast iron heavy base accurately machined with travelling carriage on top, microscope is fitted with 10X Ramsden's eye and achromatic objective of 75mm working distance.



## OR-0129 TRAVELLING MICROSCOPE

Sliding carriage is fitted on the top carriage which moves at right angle to the horizontal motion by means of rack & pinion, for certain experiment like Newton Ring and group reading this microscope is very convenient to use. Supplied plywood box.



## OR-0131 POLAROID

It consists of two identical units each with Polaroid disc in a rotatable mount, brass scales are divided into 360° with Least Count of 1 min.



## OR-0122 MICHELSON INTERFEROMETER

It is divided in two parts : (i)

Mechanical

- a) Bed : It is optically ground and stable.
- b) Lead Screw : it is also optically ground with 200mm length and 1mm pitch.
- c) Optical Mirror Mount :
- d) Kinematic mirror mounts are provided to hold the mirror.
- ii) Optical Part:
  - a) Beam splitter: It is optically work with 10 surface flatness.
  - b) compensating Plates : Two plates are provided.
  - c) mirror : 2Nos mirror of focal length 20mm are provided.



## OR-0124 SEXTANT STANDARD

Designed to give maximum accuracy with 160 mm stainless steel scale divided to 130°, vernier reading 12 seconds.



## OR-0126 SEXTANT STAND

Nice duco painted heavy base with steel C.P. Rod.



## OR-0128 WOODEN BOX FOR SODIUM & MERCURY VAPOR LAMP

Wooden box with slits on three sides to perform 3 experiments at a time, each slit has two rides to adjust the length of slit or close it when no experiment is being performed.

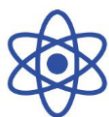


## OR-0130 OPTICAL BENCH DOUBLE ROD

Consists of two 1 meter long metal rods, one of the rods evenly divided in mm, supported on heavy cast iron feet. Provided with four heavy metal slider and accessories. Two of the sliders have transverse motion.

- A Half shape red accessories
- B Full shaped accessories





# PHYSICS

## OR-0132 READING TELESCOPE

One meter to infinity provided with 10 X Ramsden eye piece with cross wire, achromatic objective. Focusing with rack & pinion, height of telescope is adjustable, fitted on cast iron base.



## OR-0134 BIPRISM ASSEMBLY

To demonstrate the phenomenon of interference light using bi-prism and to understand the concept of interference images- formation and width of fringes.



## OR-0133 RAY OPTICS KIT

An ideal instrument to demonstrate basic principles of light like reflection, refraction, deviation of light through prism or slab, with standard accessories.



## OR-0135 NODAL SLIDE ASSEMBLY

It consists of a 1½ meter long stainless-steel double rod optical bench with the following accessories.

- Lamp house
- Metal screen white with cross slit:
- Plane true tiltable mounted mirror.
- Lens assembly consisting of combination of single & double lens holder.



## OR-0136 SODIUM & MERCURY VAPOR LAMP TRANSFORMER

Metal box with piano type on/off switch. Output is through a 3 pin socket. The transformer is auto leak type and given starting voltage of 440 V which reduces itself when the lamp glows.



## OR-0137 HE-NE LASER ASSEMBLY WITH OPTICAL BENCH

For demonstration of interference, diffraction and holography. Laser source and switch mode power supply are housed in a thick aluminum box with a hole through which laser beam comes out. The laser unit is mounted on a precision 1 meter double rod SS optical bench. Intensity of laser beam is 2mW and it is red in color.



## OR-0138 ASTRONOMICAL TELESCOPE

A telescope for school students for general purpose use. The telescope is mounted on a pillar having universal motion. The whole assembly is fitted on ducro painted metal stand of 4 feet adjustable height. The telescope is packed in velvet box.



## OR-0140 LUMMAR BRODHUM PHOTOMETER ASSEMBLY

Complete with 1.5 meter ss rod optical bench having the following components:-

- L.B. Photometer Head
- Lamp House



## OR-0142 DIODE LASER ASSEMBLY

Diode laser, provided with set of 13 laser gratings to perform simple experiments.



## OR-0139 INCLINED PLANE 3"

Fitted with glass plate and clamping arrangement to change angle, provided with frictionless pulley, metal roller, scale-pan and graduated arc.



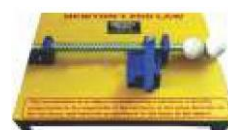
## OR-0141 FRICTION BOARD APPARATUS

Fitted with glass plate, provided with frictionless pulley, wooden block, pan and a set of friction rollers.



## OR-0143 NEWTON'S SECOND LAW OF MOTION

Consisting of two iron balls, one spring loading rod and a clamp fitted on wooden board.





# PHYSICS

## OR-0144 INERTIA TABLE

An aluminum disc of 150mm dia, accurately turned, supports three or more masses fitted into a groove concentric with the circumference, fitted with chunk & mirror, supported by steel C.P. Rods, fitted on a heavy base with levelling screws.



## OR-0146 COMPOUND BAR PENDULUM

To study variation of time with length for a compound pendulum. Complete with power coated wall bracket.



## OR-0148 KATER'S REVERSIBLE PENDULUM

Consists of steel C.P. Rod one meter long, two adjustable knife edges facing each other, two cast iron weight are provided to slide along the length of the bar and can be clamped in any position.

## OR-0150 INERTIA APPARATUS (NEWTON'S 1ST LAW)

All metal big size export quality, packed in card box.



## OR-0152 G BY FREE FALL

To determine the value of G. It consists of an electronic unit having four sockets and a switch to help hold or release the ball. A heavy retort stand carries a solenoid. When toggle switch is on catch position, current flows through solenoid producing a magnetic field and holding the ball.



## OR-0154 BIFILAR PENDULUM

To find the moment of inertia of given mass of rectangular cross section. It consists of heavy cast iron rectangular plate having 6 holes.



## OR-0145 TORSION PENDULUM

A carefully turned brass disc 125mm dia 12mm thickness is provided with split chuck in the centre.



## OR-0147 MAXWELL'S VIBRATION NEEDLE

Brass C.P. For experiments on rigidity. It consists of a hollow cylindrical brass tube open at both ends with chuck carrying a mirror.



## OR-0149 TORSION APPARATUS SEARLE'S HORIZONTAL PATTERN

Consists of two cast iron feet, two supporting rods, one wheel with groove moving on ball bearings is provided with chunk to hold the test rod, alluminium scales with pointed are attached to specimen rod.



## OR-0151 YOUNG'S MODULUS APPARATUS (SEARLE'S)

To determine young's modulus of a wire. It consists of two rectangular frames connected by a link. The frames are fitted with self centering chucks, provided with a spirit level.



## OR-0153 FLY WHEEL

20cms in dia and 45mm wide, accurately balanced wheel is mounted on a horizontal shaft held in ball bearings. The wheel is marked and a pointer is fixed to the bracket.



## AEI-PFA-621 PARALLELOGRAM OF FORCES APP.

Board covered with sunmica on both sides, three sets of 50gm iron slotted weight & two special export quality pulleys.



## OR-0155 SEARLE'S RIGIDITY APPARATUS

To find the modulus of rigidity & young's modulus for a wire. The 30cm long wire under test is connected to two brass rods 30cm long.





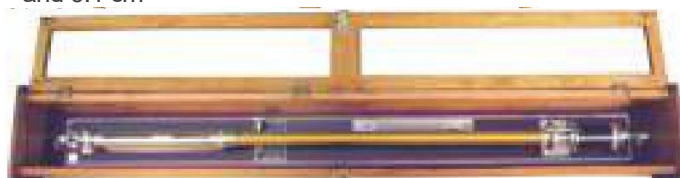
## OR-0156 TORSION APPARATUS SEARL'S (VERTICAL PATTERN) BARYONS APP.

It consists of a mild steel frame mounted on a heavy cast iron base fitted with levelling screws, three sliding circular scales graduated in degrees are provided which can be clamped at any position.



## OR-0157 FORTIN'S BAROMETER

An instrument measure atmospheric pressure in laboratories. With metric and English system scales reading 25" to 32" and 64cm to 81cm. Vernier operating with rack pinion, reads 0.1" and 0.1 cm



## OR-0158 BENDING OF BEAM APPARATUS

Comprising a metal bar one meter long resting on knife edges of two heavy table clamps, hanger with knife edges moves on metal bar, spherometer fitted on cast iron stand with electric contacts is also provided.



## OR-0159 ANEROID BAROMETER

Demonstration type. The aneroid movement with dial is mounted vertically inside a transparent case.



## OR-0161 PARALLELOGRAM OF FORCES APPARATUS

For verifying the relation between forces acting at a point, provided with two clamp type pulleys for mounting at any position.



## OR-0160 BUCKET AND CYLINDER

To demonstrate the achimedes principle, made form iron and brass.



## OR-0162 BOYLE'S LAW APPARATUS

Two glass tubes one closed at the top and other open are help in clmps which can be locked at any position, clamps can slide on two steel C.P. Rods, wooden plank carrying a meter scale is mounted on heavy cast iron base with levelling screws.



## OR-0163 K CONSTANT APPARATUS SPRING CONSTANT APP.

Provided with half meter scale, spring with pointer and slotted weights, fitted on nicely painted iron base.



## OR-0165 HOOK'S LOW APP.

Fitted on stand with 6"-meter scale and hanger.



## OR-0164 RAIN GAUGE APP.

A non rusting metal vessel having a funnel approx 4" dia fitted on top of a cylindrical container of same diameter, provided with polythene measure.



## OR-0167 AIR PUMP

Fitted with aluminum plate of dia. 15cm and steel C.P. Barrel on wooden base, provided with a stop cock, on inlet screw and a connecting for pressure rubber tubing.



## OR-0166 ARCHIMEDES PRINCIPLE APP.

It consists of a 8x7" base and a rod, spring balance with clamp, plastic measurement cylinder, a brass bob of 25mm dia.





# PHYSICS

## OR-0168 BELL IN BELL JAR

Experiment to demonstrate that sound cannot travel in vacuum, it consists of a bell Jar fitted with electric bell. Operates on 6 volt.



## OR-0170 WIND VANE

Small sized, cock shaped, fitted on base with NW ES arm clearly visible.



## OR-0172 ANEMOMETER

Cup shape with counter. The instrument has a wheel consisting of three conical cups in horizontal plane.



## OR-0173 JAEGER'S SURFACE TENSION APPARATUS

This method is suitable for the purpose of studying the variation of surface tension with concentration of solution of common salt in water.



## OR-0175 SURFACE TENSION BALANCE (SEARLE'S)

For measuring surface tension of soap film or any transparent liquid, deflection of pointer on scale gives the reading, steel wire is stretched on a tripod stand. With tightening screw, scale-pan and side clip.



## OR-0177 U-TUBE APPARATUS

For use as a manometer, provided with a glass tube, meter scale and fitted on wooden stand.



## OR-0169 VISCOSITY APPARATUS STOKES'S METHOD

The instrument is based on principle of fall of spherical ball through liquid. This instrument is used to determine viscosity of a transparent liquid like glycerine.



## OR-0171 RESONANCE APP.

To determine the velocity of sound, it consists of a vertical wooden plank which carries a wooden scale at one side, a brass tube on another and a transparent tube in between.



## OR-0174 ELECTRICAL VIBRATOR

To determine the frequency of AC mains, e.m.f. Of cells and capacity of condenser. A thin steel is clamped at one end and passes through a small solenoid. One end of the rod is flattened and a thread is tied to it. The solenoid is connected to AC mains through a suitable lamp resistance.



## OR-0176 STEAM ENGINE BOILER TYPE WORKING MODEL

It consists of two part  
1. Steam Boiler  
2. Engine



## OR-0178 RISING TABLE (SLOW MOTION STAND)

A machine cast aluminium table 10cm dia having a stem of 12cm can be lowered or raised to desired height and it can be tightened with a thumb screws.





# PHYSICS

## OR-0179 MELDE'S APPARATUS

Consists of electrically maintained tuning fork with frequency of 60 vibrations per sec., An electro magnet is placed between prongs of the fork with touching it, a small type strip is attached to one of the prong, can be silk cord, pulley, stand, scale-pan and G-clamp.



## OR-0182 WAVE MOTION APPARATUS

With heavy discs supporting a series of rods. On revolving the handle, motion is transmitted from one rod to next appearing as a travelling wave, fitted on nicely polished wooden base.



## OR-0184 REFLECTION OF SOUND APPARATUS

To show that angle of incidence and angle of reflection are same for a particular setting.



## OR-0186 RIPPLE TANK

To study propagation, reflecting, refraction diffraction and interference of waves, consists of an enameled M.S. Sheet frame with four adjustable legs, complete with all the accessories and working instructions, size of tank is 30x30cm.



## OR-0180 RING & BALL APPARATUS

To explain thermal expansion. It consists of a brass ring fitted on brass rod with wooden handle and a brass ball attached by chain.



## OR-0181 COMPOUND METAL STRIP BIMETALLIC STRIP

Consists of 30 cms. Long strips of two different metals rivetted together end to end, as thermal expansion of two material is unequal, the strips will band when heated, provided with wooden handle.



## OR-0183 PYROMETER

(Simple Linear Expansion) it consists of a metallic base with two vertical pillars. One pillar supports a pointer pivoted at its upper end and the other end moving freely on an arbitrary scale. The other pillar supports the specimen rod with one end touching the adjustment screw for setting the pointer to zero, supplied with three test rods.



## OR-0185 CO-EFFICIENT OF LINEAR EXPANSION APPARATUS

Vertical type, specially designed to measure the linear expansion of metals with the help of spherometer, provided with three test rods of different metal.



## OR-0187 NEWTON'S LAW OF COOLING

Two aluminum calorimeters are hung inside a double walled metal tank inside with a wooden top with 2 holes for thermometers.



## OR-0188 COPPER CALORIMETER

Consists of well insulated copper vessel in outer wooden case, fitted with thermometer holder and stirrer, packed in card box.







## OR-0189 SEARLE'S THERMAL CONDUCTIVITY APPARATUS

To find co-efficient of thermal conductivity of copper, it consists of a 30cm. Long with its one end surrounded with a steam jacket for heating it from a boiler and the other end is kept cool by a steam of water flowing through a spiral tube fitted to the rod, the whole assembly is kept in a wooden case.



## OR-0191 CONDUCTIVITY APPARATUS LEE'S AND CHARLTON'S

For determining the relative conductivity of thin layers of material, consists of cylindrical slab of 11.5cm in dia and 12mm thick, a 5cm deep hollow cylinder of the same dia with inlet and outlet tubes for steam rests on this slab.



## OR-0194 CALLENDER AND BARNE'S CONTINUOUS FLOW CALORIMETER

To determine mechanical equivalent of heat, the apparatus consists of glass tube open at both ends carrying inside a spiral of wire. The inlet and outlet system are connected to glass tube trough rubber tubing and carry terminals for electrical supply.



## OR-0196 GLAZEBROOK AND SHAW'S CALORIMETER

(Regnault Calorimeter) improved pattern with water cooled jacket below the steam heater to prevent radiation.



## OR-0199 STEAM BOILER COPPER

Cylindrical body with conical top and a short neck, having an outlet tube.



## OR-0190 HOPE'S APPARATUS

Consists of a cylindrical vessel surrounded by an annular trough and two thermometers opening above and below the trough. Mixture of ice and salt is placed in the trough and temperature of water at top and bottom of cylindrical vessel is recorded.



## OR-0192 HYPSONETER COPPER

It consists of a copper boiling vessel with a steam jacket in a tube. A lid with a tube is provided which holds the thermometer under test in a cork. Supplied without cork and thermometer.



## OR-0193 BAR MAGNET

Powerful alnico alloy permanent magnet with ground surface, thickness 8x1 2mm, north and south poles are clearly marked.

A	B	C	D
50MM	75MM	100MM	150MM



## OR-0195 U-SHAPE MAGNET

Alnico alloy magnet, highly effective when high magnetic strength is required, permanent & powerful.

A	B	C
50MM	75MM	100MM



## OR-0197 CYLINDRICAL MAGNET

Round bar magnet with poles clearly marked.

A	B	C
50MM	75MM	100MM



## OR-0198 ELECTROMAGNET U-SHAPED

Soft iron core, wound with insulated copper wire with bare ends, working on 6 volt DC.



## OR-0200 VIBRATION MAGNETOMETER

It consists of a wooden box having a front glass door and glass on back side. It has a glass tube fitted with simple torsion head to support a strip that can hold a magnet, by means of a thread.



## OR-0201 DEFLECTION MAGNETOMETER

To compare the magnetic moments of gives short magnet. It consist a compass box mounted at the centre of a wooden base about one meter long.



## OR-0202 MAGNETIC NEEDLE STAND

Consists of a brass and a pillar. The pillar carries a pin on which magnetic needle is suspended. Made form non-magnetic material.



## OR-0203 DIP CIRCLE STANDARD

Heavy and sturdy construction comprising an extra sensitive needle mounted on practically frictionless bearing and moving in vertical plane over an engine divided circular scale, enclosed in duco painted metal case, fitted with hardened steel pivot.



## OR-0204 SPECTRUM TUBES

Straight form with a piece of fine capillary in the middle to provided bright spectrum, total length 20cms filled with spectroscopically pure sample of gases. It is suggested that spectrum tubes be used in 30 sec. "NO" and 30 sec "OFF" cycle in order to increase life of the tube. Available in: Krypton, Helium, Neon, Hydrogen



## OR-0205 EARTH ENDUCTOR

Coils of insulated copper wire is wound on metal ring. A spring is arranged to turn the ring quickly through 180° when a catch is released. After having turned through 180° the coil is automatically fixed. Terminals for connection are fitted on the cradle.



## OR-0206 POWER SUPPLY FOR SPECTRUM TUBES

Easy to use and suitable for beginners. Operates on 220VAN 50 Hz. Tube is mounted from the font. Spring contacts are provided to ensure grip and minimize and transmission loss.



A	B	C	D
500 turns	1000 turns	2000 turns	5000 turns

## OR-0207 ELECTRIC BELL

Demonstration type, all parts easily visible, mounted vertically on sunmica board, workable on 4-6 volt DC.



## OR-0208 CATHODE RAY TUBE

Horizontal tube fitted with fluorescent painted aluminum plate, the cathode side of plate is bent at right angle and provided with a slit.



## OR-0209 MAGNETIC COMPASS

Highly magnetized needle in aluminum body with glass top. Dial shows cardinal points. North pole of the needle is colored red.



## OR-0211 INDUCTION COIL

In cabinet polish wooden box, coils are made from best quality enamelled copper wire and paraffin insulation is provided throughout. Fitted with metal contact with removable spark discharger.



## OR-0210 CROOK'S RADIOMETER

A glass sphere having set of mica vanes placed on a vertical spindle, one side of the mica vanes is blackened and the other is bright, when placed in sun light or near any source of heat, the vanes rotate.



## OR-0212 SOLAR FAN



A	B	C	D	E	F	G
10mm	15mm	20mm	25mm	50mm	75mm	100mm



# PHYSICS

**OR-0213 SOLAR PUMP**



**OR-0214 SOLAR WATER HEATER**



**OR-0215 WIND MILL**



**OR-0216 SOLAR ENERGY KIT**



**OR-0217 SOLAR COOKER WOODEN**



**OR-0218 BIO GAS PLANT**



**OR-0219 SPACE SHUTTLE MODEL**



**OR-0220 BLAST FURNACE MODEL**



**OR-0221 TUNING FORK WELCH TYPE C\_I**

Due to large cross-sectional area these forks have better accuracy stability and duration of frequency. Supplied in velvet box. Set of 8, frequencies 256 to 512



**OR-0222 POISSON'S RATIO OF RUBBER APPARATUS**

To find relationship between longitudinal strain and lateral strain in case of rubber tube. Consists of a cycle rubber tube of about one meter length with a small pointer, fitted on a heavy cast iron stand.



**OR-0223 POISEUILLE'S VISCOSITY APPARATUS**

With the help of this opp. One can find the coefficient of viscosity of water by noting its flow through a capillary tube of uniform bore.



**OR -0224 SONOMETER**

Consists of a wooden box one meter long with meter scale on both edges of box, provided with two wooden riders and 3 different wires each 100cm long attached to a fixed bridge.



**OR-0225 LAMINATED PORTRAIT OF SCIENTISTS**



**OR-0226 NEWTON'S LAW OF COOLING UNIVERSITY PATTERN**

Set of two units, each with double walled jointless brass vessel and a non-conducting cover. A copper calorimeter 3"x2" hangs inside the brass vessel. The two vessels are joined by metallic tubes and rubber coils.







# CHEMISTRY

## OR-0227 GANONG POTOMETER

Simple type, borosilicate glass parts and stand.



## OR-0228 FARMERS POTOMETER

Simple glass bottle and borosilicate glass fittings.



## OR-0229 SIMPLE POTOMETER

To demonstrate suction due to transpiration, having a graduated capillary tube with cylindrical funnel shaped top.



## OR-0230 RESPIROMETER

Complete with graduated and levelling tubes, rubber tubing and stand, borosilicate glass.



## OR-0231 OSMOTIC PRESSURE APPARATUS

For determination of Osmotic pressure complete with simple glass jar



## OR-0232 T.A. APPARATUS

For determining the rate of absorption of water by transpiring plants under varying circumstances.



## OR-0233 KUHNE'S FERMENTATION VESSEL

Made from borosilicate glass, fitted on a plastic stand.



## OR-0234 TRANSPIRATION APP.

Apparatus for determination of quantity of water absorbed and given off by transpiring plants.



## OR-0235 WILLMOTH BUBBLER

Borosilicate glass parts and soda glass bottle.



## OR-0236 DEFLAGRATING SPOON



## OR-0237 ROOT PRESSURE APP.

T-tube with stop cock and graduated cylinder.



## OR-0238 GANONG LIGHT SCREEN

Made of brass sheet.





# CHEMISTRY

## OR-0239 CRUCIBLE TONG

iron C.P.

A	B
6"	8"



## OR-0240 SPATULA STAINLESS STEEL

Flat at one end and spoon at other end.



## OR-0241 WIRE GAUGE

6"x6" with asbestos coating in center.



## OR-0242 WATCH GLASS

A	B	C
50mm	75mm	100mm



## OR-0243 PLATINUM LOOP WITH WIRE

school type in test tube.



## OR-0244 WATER BATH

Concentric rings, copper die pressed and polished hemispherical type with handle.



## OR-0245 TEST TUBE BRUSH



## OR-0246 SPIRIT LEVEL

With sunmica top 6" wooden.



## OR-0247 pH PAPER

Each packet consists of 10 books of 50 leaves each.



## OR-0248 LITMUS PAPER RED/ BLUE

Each packet consists of 10 books of 50 leaves each.



## OR-0249 TEST TUBE STAND WOODEN



## OR-0250 TEST TUBE HOLDER

Flat form with wooden handle.



## OR-0251 FILTER PAPER ROUND



## OR-0252 RUBBER TUBING

Suitable for general laboratory use, soft and strong coil of 10 meters tubing.



## OR-0253 PIPETTE BULB

A	B	C
Small	Medium	Large



## OR-0254 PLASTIC CELL HOLDER BOX

A	Two Cells
B	Four Cells



## OR-0255 TEST TUBE STAND METAL

Available in aluminum & stainless steel (SS)



## OR-0256 SPIRIT LAMP ALUMINUM

Die pressed 4 oz.





# CHEMISTRY

## OR-0257 GAS TAPS

Brass C.P. Leak proof, packed in card box.

A	B	C	D
One way	Two way	Three way	Four way



## OR-0258 CORK BORER GERMAN PATTERN

With handle brass C.P.

A	B	C
Set of 3	Set of 6	Set of 12



## OR-0259 WATER TAP

Swan neck type bras metal  
C.P. leak proof.

A	B	C
One way	Two way	Three way



## OR-0260 SURETTE CLAMP FISHER TYPE

Made form thick steel die pressed,  
powder coated, staple grey finish.



## OR-0261 THREE FINGER CLAMP

Made form aluminium, staple colour,  
iron rod, finger convered with rubber  
tubing with iron boss head.



## OR-0262 RETORT STAND SHEET METAL

Thick iron sheet 12 SWG, die pressed  
base and thick rod, powder coated  
staple colour, having wire for extra  
tightening of rod.



## OR-0263 TRIPOD STAND

Duco painted triangular top and  
zinc plated rods with plastic feet.



## OR-0264 CHEMICAL THERMOMETER

Made form yellow or while capacity tube,  
mercury filled by head process,  
calibrated under controlled conditions,  
approx. 12 inches long and 7-8 mm thick.



## OR-0265 WALL THERMOMETER DEMONSTRATION

Mounted on a wooden  
plank and filled with red  
spirit.



## OR-0266 DRY-WET THERMOMETER

Moulded body, superior  
quality packed in printed  
duplex box, humidity  
chart on centigrade &  
Fahrenheit included.



## OR-0267 MAXIMUM & MINIMUM THERMOMETER

Mounted on plastic body,  
temperature range -30°C to 50°C,  
calibrated in C & F, magnet  
contained on special holder for  
ease in operation.



## OR-0268 CLINICAL THERMOM (C&F)



## OR-0269 DIAL TYPE THERMOMETER

Made in plastic molded  
body, diameter of scale is  
75mm.



## OR-0270 LACTOMETER REGULAR QUALITY

Black base, shot & Wax poised, adjusted  
for use at 84°F.



## OR-0271 URINOMETER REGULAR QUALITY

Black base, Short & Wax poised,  
adjusted for used at 20°C.







# CHEMISTRY

## OR-0272 DENSITY HYDROMETER

ISI marked, Shot & Wax poised, adjusted for use at 15°C M-50 SP, maximum length 270 mm accuracy  $\pm 0.0002$ . Any range from 0.650 - 0.700 Sp. Gr. To 0.950 - 1.000 Sp. Gr. Available.

## OR-0273 BEAUMES HYDROMETER

Short & Wax poised, adjusted for use at 20°C. Any range from 0.00 - 10.0° Be to 40.0 - 60.0° be available. In card box.



## OR-0274 HYDROCARBON CLASSIFICATION MODEL

- |                |                |              |
|----------------|----------------|--------------|
| a) Methane     | b) Ethane      | c) Propane   |
| d) Butane      | e) Iso-butane  | f) N-pentane |
| g) Iso pentane | h) Neo pentane |              |
| i) Ethene      | j) Ethylene    |              |



## OR-0275 MOLECULES MODEL SET OF 5

1. Water
2. Ammonia
3. Chlorine
4. Phosphorus
5. Sulphur



## OR-0276 CRUCIBLE WITH LID

Tall font with lid, glazed inside and outside except for bottom surface and rim.



## OR-0277 CHINA DISH

Superior quality, round from with lip, glazed both inside and outside.



## OR-0278 BEEHIVE SHELF

All glazed except bottom and top rim. Size 3"



## OR-0279 PESTLE & MORTAR

Mortal with lip, glazed outside except bottom and unglazed inside, pestle unglazed at grinding surface and oversized size comfort for hand comfort in grinding.



## OR-0280 BUCHNER FUNNEL

With thin stem, fixed perforated plate, glazed inside and outside except for rim



## OR-0281 CLAY PIPE TRIANGULAR

With wire and unglazed pipes. 3"



## OR-0282 KLINOS

With new clock movement having start and stop system, fitted on heavy cast iron base, a plant carrying cup is also provided.



## OR-0283 ARC INDICATOR



## OR-0284 BUNSEN BURNER MANSFIELD TYPE

Fitted on nicely duco painted heavy cast iron base provided with threaded air regulator and collar, packed individually in printed duplex box.



## OR-0285 MEKER BURNER

Brass lacquered with ceramic grid cap to provide a wide flame.



## OR-0286 CENTRIFUGAL MACHINE

Hand operated, metal parts with clamp, aluminium body, superior quality with plastic tubes.



# GEOGRAPHY



## OR-0287 SLIDE PROJECTOR

Aluminum molded compact body fitted with heavy transformer, 24volts 150watt halogen lamp, on on/off switch, blower cooler with 2"x2" slide carrier and focus tube, packed in sturdy case for storage and safety in transportation.



## OR-0289 OVER HEAD PROJECTOR

A Modern, compact, lightweight and sturdy model with clear aperture 240x240mm, provided with 24volt 250watt halogen lamp with heavy transformer, focusing by rack & pinion, cooling fan, folding projection arm, rotating projection head 360°, high optics, superior Fresnel lens, efficient light intensity dim/bright switch, packed in thermocole case with card box.



## OR-0288 OVER HEAD PROJECTOR DELUXE MODEL

Trouble free performance, economically priced. Working stage 285x285 mm folding arm and head for easy storage anti-glare Fresnel lens External color fringe control twin halogen lamp 24V-250 Watt Tilt angle 0-60° head rotation 360° safely cut off switch approx. 2500 output lumens. Packed in thermocole, supplied in outer sturdy corrugated box for safe transportation.



## OR-0291 PROJECTION SCREEN

Wall mounting type automatic spring action. It can roll automatically with the help of spring

A	90 x 120cm
B	130 x 175cm



## OR-0290 PROJECTION SCREEN

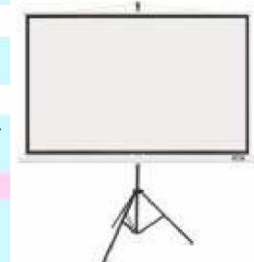
Simple, map type made of show white synthetic cloth rolled on two fixed metal tubes.

A	90 x 120cm
B	130 x 175cm



## OR-0292 PROJECTION SCREEN

150cm x 150cm portable, spring action type, ideal for classroom and conference room. Superior image resolution and accurate color reproduction, high grain with a contrasting border.



## OR-0293 SLIDSCOPE

For viewig slides in available light.



## OR-0294

### METALLIC AND ALLOYS SET OF 24



### OR-0295 MINERALS SET OF 30 ROCK SET OF 20



## OR-0296 METALLIC ORES SET OF 20



## OR-0297 COLLECTION OF METAMORPHIC ROCKS



## OR-0298 COLLECTION OF 10 METAL







# GEOGRAPHY



## OR-0299 POLITICAL GLOBE

Political Globe with steel/unbreakable ABS plastic graduated acc. Available Language: English & Hindi. Other languages available only in 20 & 30 cms Dia. Arabic, Bengali, Gujrati, Kanada, Marathi, Oriya, Punjabi, Tamil, Telugu.



## OR-0300 ILLUMINATED GLOBE

Physical relief with light off and Physical Cum Political with light on, with unbreakable die casted steel base and arc in attractive cardboard box.



## OR-0301 ANTIQUITY GLOBE

Shows the latest political boundaries with capitals & other important cities & towns with illumination to high light the Globe & make it attractive.



## OR-0302 THE EARTH'S LAYER MODE

This model shows the layers inside the earth. It is in seven detachable parts which indicate the interior of the earth.



## OR-0303 MODEL OF EARTH INTERNAL STRUCTURE



## OR-0304 MODEL OF THE SUN



## OR-0305 VISUAL 3D MAPS

This is entirely a new concept, although done of flat PVC sheet which is unbreakable, markable and washable, they look like a actual '3D' map with naked eyes.



## OR-0306 WORLD PHYSICAL



## OR-0307 INDIAN SUBCONTINENT PHYSICAL



## OR-0308 OCEAN FEATURES

53 X 73 cms complete with hard backing and elegant wooden framed.



## OR-0309 WORLD RELIEF & BATHYMETRIC

We can produce any of our customer requirement in similar 3D view either it is a map or poster in any size up to 65x 125 cms in National or Regional Language.



## OR-0310 3D LARGE SIZE MAP OF THE WORLD

Size 140 x 92 cms. This is the raised relief model map of the world showing the earth surface in relief as well as the relief of the world ocean are also to be seen. Complete with hard backing, frame with hanging hooks.





# GEOGRAPHY



OR-0311 MODEL OF BOARD CONFORMATION AND THE EARTH



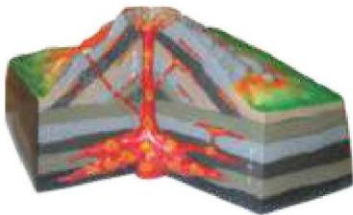
OR-0312 MODEL OF PLATE STRUCTURE AND SURFACE MORPHOLOGY



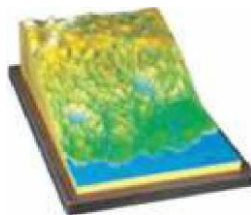
OR-0313 FAULT BOARD MODEL



OR-0314 MODEL OF VOLCANO



OR-0315 MODEL OF CRUSTAL MOVEMENT



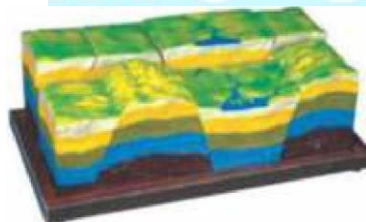
OR-0316 MODEL FO FOLD STRUCTURE AND ITS GEOGRAPHIC EVOLUTION



OR-0317 MODEL OF CONTOUR MAP INTERPRETATION



OR-0318 MODEL OF DIASTROPHISM, FRACTURE STRUCTURE AND HORST GARDEN



OR-0319 MODEL OF FLUVIATION SEDIMENTATION DEMONSTRATION DEVICE



OR-0320 MODEL OF ISLAND FORMATION



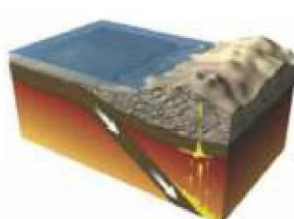
OR-0321 MODEL OF BOTTOM CONFIGURATION



OR-0322 FOLD STRUCTURE AND ITS GEOMORPHIC EVOLUTION MODELS



OR-0323 GEOGRAPHICAL TERMS MODEL

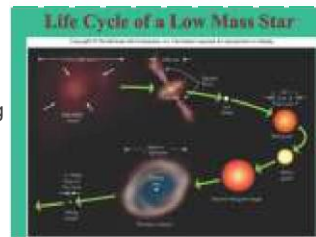




## OR-0324 GEOGRAPHY / GEOLOGY CHARTS

1. Solar System
2. Solar, Lunar Eclipses & Tides
3. Distribution of Earth Quakes
4. Distribution of Volcanoes
5. Activity of Volcanoes
6. Rivers and their Geological Action
7. Continental Drift
8. Types of Folds
9. Attitudes assumed by an Axial Plane & an Axis of folds
10. Description of Folds
11. Structure of the Earth and isostasy

12. Description & Classification of Faults-I
13. Description & Classification of Faults-II
14. Unconformity Structure
15. Forms of Igneous Rocks
16. Structural Features of Rocks - I
17. Structural Features of Rocks - II
18. Mountains and Mountain Building
19. Glaciers
20. Star : Life Cycle
21. Latitude & Longitude
22. Geological Time Scale
23. Atmosphere - Layers



### OR-0325 GEOLOGIST HAMMER



### OR-0326 PRISMATIC BINOCULAR

Imported very superior Mag. 20x50



### OR-0327 POCKET STEREOSCOPE

in case complete.



### OR-0328 CLINOMETER COMPASS

7.5 cm with brass sight magnetic needles mounted on jewel graduated dial with leather case full brass



### OR-0329 BRUNTON COMPASS

For topographic or preliminary survey on surface or sub-surface with leather case-do all brass very superior quality.



### OR-0330 RAIN GAUGE SELF RECORDING

Comprising of a receiver placed at the top of a sensitive dial pattern balance as illustrated.



### OR-0331 LASER DISTANCE METER (IMPORTED)

It can measure in inches/feet as well as in mts. the range is 60 mts or 197ft.



### OR-0332 MIRROR STEREOSCOPE

in wooden case complete.



### OR-0333 BARIGO (GERMANY) ELECTRONIC ALTIMETER-BAROMETER-THERMOMETER ELECTRONIC COMPASS COMBINED



### OR-0335 ROBINSON'S CUP ANEMOMETER



### OR-0334 PARALLEX BAR

for use with mirror stereoscope in box





# GEOGRAPHY



OR-0336 STEVENSON  
METEOROLOGICAL  
SCREEN WOODEN



OR-0337 PHASE OF MOON



OR-0338 EARTH MOVEMENT MODEL



OR-0339 STUDENT  
PLANETARIUM  
ILLUMINATED



OR-0340 ELECTRICAL  
APPARATUS DAY & NIGHT



OR-0341  
STANDARD TIME  
INDICATOR



OR-0342  
SOLAR SYSTEM MODEL



OR-0343  
PLANE TABLE COMPLETE



OR-0344  
ALIDADE (SIGHT VANE)  
BRASS



OR-0345  
MAGNETIC TROUGH COMPASS  
IN WOODEN CASE 15 CM



OR-0346  
OPTICAL SQUARE



OR-0347  
BRASS PLUMBOB



OR-0348  
PLUMBING FORK



OR-0349  
CROSS STAFF



OR-0350  
SURVEY CHAIN



OR-0351  
INDIAN PATTERN CLINOMETER  
TANGENT COMPLETE IN CASE



OR-0352  
ABNEY LEVEL WITH SLOW  
MOTION 5"







# GEOGRAPHY



**OR-0353**  
**THEODOLITE MODEL**



**OR-0354**  
**VERNIER TRANSIT THEODOLITE**



**OR-0355**  
**QUICK SETTING DUMPY LEVEL**



**OR-0356**  
**TELESCOPIC ALIDADE**



**OR-0357**  
**TRACING TABLE**



**OR-0358**  
**DRAFTING MACHINE**



**OR-0359**  
**PRISMATIC COMPASS**



**OR-0360**  
**SURVEY UMBRELLA**

7' dia special quality can be inclined at any angle light in weight-all metal, cloth used in multicolor.



**OR-0361**  
**RANGING RODS**

2M with shoe, duly painted made of conduit pipe.



**OR-0362**  
**LEVELLING STAFF ALUMINUM**

Levelling staff aluminum folding type 4meter.



**OR-0363**  
**PLANIMETER SLIDING BAR PATTERN**

For measuring areas direct from drawing and maps complete in case with instructions.



**OR-0364**  
**FRENCH CURVES ARCHITECTURAL**



**OR-0365**  
**MINI DRAFTING MACHINE**



**OR-0366**  
**ROTRING STENCIL PEN**

Set of 8 complete pens with ink, compass attachment in original plastic box.



## OR-408 DISSECTING MICROSCOPE

Provided with cast iron base, closed glass stage having clips to hold specimen, plano concave reflector and detachable hand rests, two eye pieces 10x, 20x. With Bakelite parts, packed in thermocole box.



## OR-409 SINGLE NOSE MICROSCOPE

It has a cast iron base and including body, coarse motion is through rack & pinion, supplied with 10x objective and 10x eye piece, stage is fitted with iris diaphragm underneath and stage clip on it, packed in thermocole box.

## OR-410 STUDENT MICROSCOPE

It has a U-shaped heavy cast iron base with 90° inclinable body stage size is 110x110 mm with stage clips, separate knob for coarse and fine motion are provided on the body, revolving triple nose piece carries the objectives, illumination is by plano-concave reflector, a bright field condenser is fixed to the stage.



## OR-411 JUNIOR MEDICAL MICROSCOPE

It has a U-shaped heavy cast iron base with 90° inclinable body stage is 110x110 mm with stage clips, separate knobs for coarse and fine motion are provided on body, revolving triple nose piece carries the objectives, illumination is by plano-concave reflector, a bright Abbe condenser with diaphragm can be moved up and down through a knob provided on the lower left side of the body.

## OR-412 MEDICAL MICROSCOPE

It is suitable for observation of cells and microorganisms, it has a U-shaped heavy cast iron base with 90° inclinable body, stage is 110x110 mm with stage clips, separate knob for coarse and fine motion are provided on the body, the slow motion is drum type. A detachable mechanical stage.



## OR-413 INCLINED MEDICAL MICROSCOPE

Robust metal construction having a revolving quadruple nose piece to carry four objectives, fully rotatable 45° inclined tube illumination by 6V-20W halogen lamp with solid state control, the large is fitted with a ca-axial mechanical stage for easy manipulation of slide, Abbe type moving condenser with diaphragm and swing out filter holder is provided below the stage. Optical combination.



## OR-414 BINOCULAR RESEARCH MICROSCOPE

It consists of a heavy aluminum base with electrical fittings inside and an inclined metal stand. Large stage fitted with co-axial mechanical stage for easy manipulation of slide. 45° inclined binocular head is attached to the stand by means of a clamping screw. Binocular head has adjustable interpupillary distance adjustment and diopter adjustment on the left tube.

Boll bearing type quadruple nose piece is provided for precise movement of objectives. Illumination is by 6V-20W halogen lamp with on/off switch and intensity control knob. Abbe type condenser having glass of 1.25 Numerical Aperture with iris diaphragm and swing out filter holder is provided.



## OR-415 COAXIAL BINOCULAR MICROSCOPE

Most modern Equipped with co-axial focusing system based on four stage gear reduction, travelling on ball bearing guides, locking device in coarse motion, coaxial mechanical stage, illumination by 6V / 20W halogen lamp, binocular head fitted with superior hard coated strain free prisms.

Optical Combination

Eye piece 5x paired Huygenian, 10x paired Wide Field.

Objectives 5x, 10x, 40x (Spring Loaded) 100x (Spring Loaded, parfocalised, oil Immersion)



## OR-416 CO-AXIAL TRINOCULAR MICROSCOPE

Most modern equipped with co-axial focusing system based on four stage gear reduction, travelling on ball bearing guides, locking device in coarse motion, coaxial mechanical stage, illumination by 6V-20W halogen lamp with trinocular observation head for micro-Photography & C.C.T.V. Facility. Optical combination: Eye piece 5x paired (Hug.) Paired wide filed. Objective 5x 10x 40x (SL) 100x Oil immersion (SL) (Self Parfocalised)



## OR-417 TRINOCULAR BIOLOGICAL MICROSCOPE WITH CAMERA ATTACHMENT

Trinocular head inclined at 30° and rotatable at 360°. Diopter adjustment ring on ocular tube. interpupillary distance adjustment from 55-75 mm. Vertical tube for digital photography.

Paired eye piece EWF 10XFOV 18mm.

Objectives 4X S-Plan Achromatic, 10X S-Plan Achromatic, 40X (Spring Loaded, S-Plan Achromatic), 100X (Oil immersion, S-Plan Achromatic.)

## OR-418 PROJECTION MICROSCOPE 4"

The microscope is provided with one objective 10x, one eyepiece 10x, 100 mm dia projection screen, built in illumination system in the base and a focusing knob.





## OR-419 SENIOR PROJECTION MICROSCOPE

A dual-purpose instrument equipped with 150mm dia meter, build in fine grain glass which is removable to project the image on the wall or screen. Equipped with 12V-100W halogen lamp, loop and arrow pointer, mechanical stage, two objectives 10x, 40x, eyepiece 10x and an cooling fan, packed in a card board box.



## OR-420 PROFILE PROJECTOR

Compact, lightweight table top model. 250 mm diameter screen with 90° cross line and chart holders. Screen is graduated to 360° with vernier reading 6 minutes. Projection light source 24V/150W halogen lamp. Double opaque light source for surface illumination. Two adjustable dichoric reflector lamps 12V/100W each. Focusing through a knob. Optical distortion below 0.15%. Standard magnification 10x. Cooling by built-in Noiseless & vibration free fan.

## OR-421 HAND AND TABLE MICROTOME



## OR-424 MECHANICAL STAGE



## OR-429 ACCULAR MICROMETER



## OR-432 DISSECTING BOARD

Soft wood with lead

A	20x15cm
B	20x25cm



## OR-422 POINTER EYE PIECE

A huygenian eye piece with an accurately centered fine pointer in velvet case.

- (a) 10x  
(b) 5x



## OR-425 CAMERA LUCIDA MIRROR TYPE



## OR-426 DOUBLE DEMONSTRATION EYE PIECE



## OR-423 MICROSCOPE LAMP

Pin type sub stage lamp, having a plastic ventilated body with a blue filter on one side and plain ground glass filter on the opposite side. Provided with on/off switch.



## OR-427 STAGE MICROMETER



## OR-428 COVER SLIP

Pack of 10 gms.

A	Square
B	Round

## OR-430 CAVITY SLIDE

A	One Cavity
B	Two Cavity
C	Three Cavity



## OR-431 SLIDE PREPARED

On Botany & Zoology, school standard.



## OR-433 DISSECTING TRAY

Heavy, G.I. Sheet without wax

A	12"x10"
B	15"x12"





# BIOLOGY

## OR-434 INSECT NET

Ring 12" dia with metal handle.



## OR-435 DISSECTION BOX

Stainless steel in velvet box.



A	13 Instruments
B	17 Instruments

## OR-436 FORCEPS

Stainless steel, superior heavy (pointed)

A	B	C
4"	5"	6"



## OR-437 DISSECTING NEEDLE

Plastic handle.

## OR-438 BONE CUTTER

Stainless steel.

A	B
5"	6"



## OR-439 SCISSORS

With plastic handle.

A	B	C
4"	5"	6"



## OR-440 SCISSORS S.S. HEAVY

A	B	C
4"	5"	6"



## OR-441 CRUCIBLE TONGS S.S.

A	B	C	D	E
6"	8"	10"	12"	18"



## OR-442 STAINING RACK

Wooden 6 hole

A	30 ml Bottle
B	60 ml Bottle
C	125 ml Bottle



## OR-443 INSECT BOX

With cork sheet (12"x15")

A	25 Slides
B	50 Slides
C	100 Slides



## OR-444 SLIDE BOX WOODEN

With Aluminium Grooves



## OR-445 SLIDE BOX PLASTIC

A	25 Slides
B	50 Slides
C	100 Slides



## OR-446 SLIDE CABINET

Each drawer to hold 100 slides drawer fitted with index card pulling knob and slider over metal rails with aluminum grooves.



## OR-450 PARAMECIUM MODEL



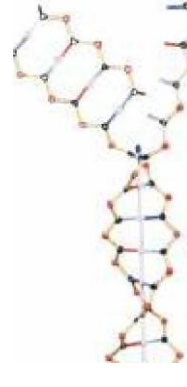
## OR-451 AMOEBA PROTEUS MODEL



## OR-447 MODEL DNA



## OR-448 MODEL RNA



## OR-449 ANIMAL CELL



## OR-452 PLANT CELL





**OR-453  
EYE MODEL**



**OR-454  
BRAIN MODEL**



**OR-455  
EAR MODEL**



**OR-456  
HEART MODEL**



**OR-457  
KIDNEY WITH  
BLADDER MODEL**



**OR-458  
SKELETON**



**OR-459  
SKIN MODEL**



**OR-460 HEAD  
& NECK MODEL**



**OR-461  
TEETH WITH  
JAW MODEL**



**OR-462  
LUNGS MODEL**



**OR-463  
LARYNX MODEL**



**OR-464  
REPRODUCTIVE SYSTEM  
MALE/FEMALE MODEL**



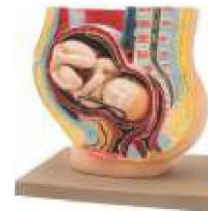
**OR-465  
CIRCULATORY  
SYSTEM MODEL**



**OR-466  
NERVOUS  
SYSTEM MODEL**



**OR-467  
PELVIS WITH  
BABY MODEL**



**OR-468  
HYDRA MODEL**



**OR-469  
RESPIRATORY  
SYSTEM MODEL**



**OR-470  
DIGESTIVE  
SYSTEM MODEL**



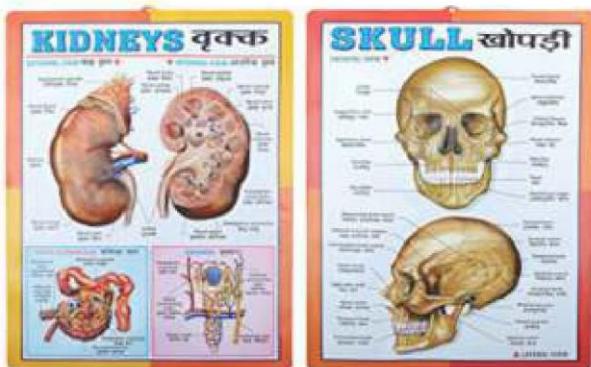
**OR-471  
TORSO SMALL**



**OR-472 PRESERVED EMBEDDED  
SPECIMEN**



**OR-473 CHARTS**



**OR-474 PRESERVED SPECIMEN**







## OR-475 JUNIOR MATHS LAB KIT

- |  |                                      |
|--|--------------------------------------|
| 1. Geometrical Shapes 4x7cms (Set of 20) Colored | 18. Half-Meter Scale-Wooden          |
| 2. Geometry Box-Canvas Bag                       | 19. Shape Sorter Moulds (Plastic)    |
| 3. Measuring Tape-3 mtrs.                        | 20. Dice (Set of 2)                  |
| 4. Measuring Jugs & Beakers (Plastic)            | 21. Playing Cards (Plastic)          |
| 5. Wall Thermometer                              | 22. Set of Cups (Plastic)            |
| 6. Spring Balance                                | 23. Stencil Set (Set of 5)           |
| 7. Weight Set (Metal)                            | 24. Time Teaching Stamps (Set of 15) |
| 8. Kitchen Balance (Plastic)                     | 25. Dummy Currency Notes             |
| 9. Geo Board-Square (Wooden)                     | 26. Dummy Currency Coins             |
| 10. Transparent Geo Board (Plastic)              | 27. Shapes magic (Wooden)            |
| 11. Counting Abacus (Wooden)                     | 28. Standard Time Indicator          |
| 12. Student Abacus (Wooden)                      | 29. Add & Count Rods (Wooden)        |
| 13. Dummy Wooden Clock (Wooden)                  | 30. Tangram Puzzle (Acrylic)         |
| 14. Game of Place Value (Wooden)                 | 31. Flash Cards                      |
|  | 32. Fractions of Circle (Wooden)     |
| 15. Chart (Set of 6) 50x75cms Laminated          | 33. Fractions of Square (Wooden)     |
| 16. Graph Roll-up Chart 67x100cms                | 34. Fractions of Triangle (Wooden)   |
| 17. Meter Scale-Wooden                           | 35. Shapes Board-Big (Wooden)        |



## OR-476 SENIOR MATHS LAB KIT

- |   |  |
|---|--|
| 1. Geo Board-Circle (Wooden)                        | 15. Probability Kit  |
| 2. Circle Fraction Disk                             | 16. Geometry Kit (Acrylic)                                 |
| 3. Set of Cups (Volumetric) (Plastic)               | 17. Magnetic Graph Co-ordinate Board with Marker (Acrylic) |
| 4. Mensuration Kit (Acrylic & Wooden)               | 18. Power of Two   |
| 5. Charts (Set of 16) 50x75cms Laminated            | 19. Perpendicular Line Segment is the Shortest (Acrylic)   |
| 6. Optical Square (Metal)                           | 20. Triangle Kit (Acrylic)                                 |
| 7. Cross Staff (Metal)                              | 21. Ratio of Area of Similar Triangles (Acrylic)           |
| 8. Standard Time Indicator                          | 22. Identity Set- 1 (Acrylic)                              |
| 9. Measuring Tape-15mtrs.                           | 23. Identity Set- 11 (Acrylic)                             |
| 10. Geometry Box-Canvas Bag                         | 24. Identity Set- 111 (Acrylic)                            |
| 11. Geometrical Shapes 5x10cms (Coloured) Set of 12 | 25. Ranging Rod (2 Pcs.) (Metal)                           |
| 12. Geometrical Shapes 10x5cm (coloured) Set of 12  | 26. Cylinder cut in 8 parts (Wooden)                       |
| 13. Volume Relationship Set (Crystal Plastic)       |  |
| 14. Measuring Jugs & Beakers (Plastic)              |  |





# MATH

## OR-477 ADVANCED MATHS LAB KIT

### FIELD OBSERVATION EQUIPMENT

1. Solar Rod (One) Metal
2. Ranging Rod (2 Pcs.) Metal
3. Tripod Stand for Ranging Rod (Metal)
4. Measuring Tape-15 mtrs.
5. Plum Bob (Metal)
6. Optical Square (Metal)
7. Cross Staff (Metal)
8. Theodolite Model (Metal)

### OFFICE WORKING EQUIPMENT

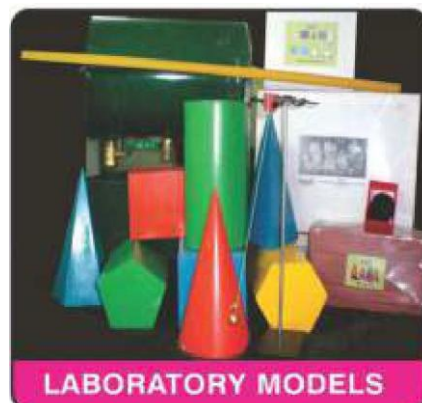
9. Magnetic Graph Co-ordinate Board with Maker (Acrylic)
10. Vernier Calliper (Metal)
11. Screw Gauge (Metal)
12. Geometry Box-Canvas Bag
13. Law of Equilibrium Forces
14. Geo Board-Square (Wooden)
15. Geo Board-Circle (Wooden)
16. Graph Roll-up Chart 100x135cms (2 pcs.)
17. Kitchen Balance (Plastic)
18. Measuring Jugs & Beakers (Plastic)
19. Set of Cups (Volumetric) (Plastic)
20. Spring Balance

### LABORATORY MODELS

21. Model of Inverse Ratio (Metal)
22. Geometrical Shapes 15x30cms (Coloured) Set of 12
23. Stop Watch
24. Pendulum Set (Metal)
25. Volume Relationship Set (Crystal Plastic)
26. Transparent Geometrical Shapes (Set of 10)
27. Conic Section (Set of 4) Wooden
28. Meter Scale-Wooden

### CREATIVITY AND CRAFT WORK TOOLS

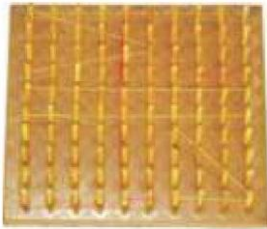
29. Identity Set-I (Acrylic)
30. Identity Set-II (Acrylic)
31. Identity Set-III (Wooden)
32. Mensuration Kit (Acrylic & Wooden)
33. Circle Fraction Disk
34. Cylinder 8 Parts (Wooden)
35. Perpendicular Line Segment is the Shortest (Acrylic)
36. Octant 3-D (Acrylic)
37. Teacher Abacus (Wooden)
38. Geometry Kit (Acrylic)
39. Fraction of Circle (Wooden)
40. Fraction of Square (Wooden)
41. Fraction of Triangle (Wooden)
42. Triangle Kit (Acrylic)
43. Ration of Area of Similar Triangles (Acrylic)
44. Probability Kit
45. Rqw Material



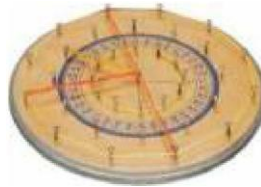




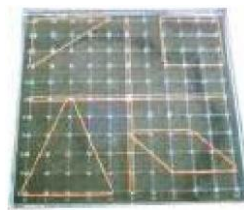
**OR-478 GEO BOAR SQUARE (WOODEN)**



**OR-479 GEO BOARD CIRCLE (WOODEN)**



**OR-480 GEO BOARD (PLASTIC)**



**OR-481 GEOMETRY BOX (PLASTIC)**



**OR-482 GEOMETRICAL SOLIDS (WOODEN)**

Set of 12 three dimensional wooden shapes.



**OR-483 TRANSPARENT GEOMETRICAL SHAPES (Set of 10) ACRYLIC**

Geometrical shapes to show: Inner Area, Slant Height & Vertical Height



**OR-484 POLYHEDRON & THEIR NETS (Set of 11) ACRYLIC**



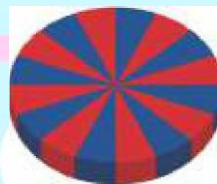
**OR-485 CONIC SECTION (Wooden)**



**OR-486 CYLINDER CUT IN 8 PARTS (Wooden)**



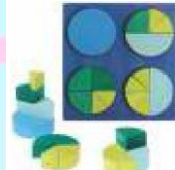
**OR-487 DERIVATION OF VALUE OF PIE: (Wooden)**



**OR-488 CIRCLE FRACTION DISK**



**OR-489 FRACTIONS OF CIRCLE (Wooden)**



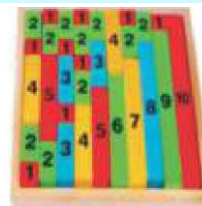
**OR-490 FRACTIONS OF SQUARE (Wooden)**



**OR-491 FRACTIONS OF TRIANGLE (Wooden)**



**OR-492 ADD & COUNT RODS (Wooden)**



**OR-493 COUNT & MATCH (Wooden)**



**OR-494 PICTORIAL NUMBERS (Wooden)**



**OR-495 NUMBERS FLASH CARDS (1-20)**



**OR-496 SHAPES BOARD (Big) Wooden**



**OR-497 SHAPES MAGIC (Wooden)**







# MATH

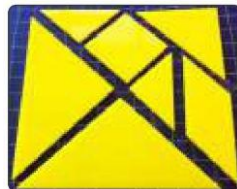
**OR-498 STENCIL SET**  
(Plastic) (Set of 5 Stencil)



**OR-499 SHAPES SORTER MOULDS** (Plastic)



**OR-500 TANGRAM PUZZLE**  
(Acrylic)



**OR-501 TIME TEACHING STAMPS**  
(Wooden-Rubber)  
(Set of 15)



**OR-502 STANDARD TIME INDICATOR** (Metal)



**OR-503 VOLUME RELATIONSHIP SET**  
(Crystal Plastic)

Hemi-Sphere Sphere  
Cone 2Cylinders  
Cube Frustum



**OR-504 VOLUME MEASURING HOLLOW SHAPES**  
(Set of 4) (Plastic)



**OR-505 DRAWING INSTRUMENTS SET**



**OR-506 PROBABILITY KIT COMPLETE**

Dice -Set of 2 Pcs.

A Playing Cards (Plastic)

B Set of Pearls: Set of 400 Marbles

C



**OR-507 DUMMY CURRENCY NOTES**



**OR-508 DUMMY CURRENCY COINS** (Plastic)

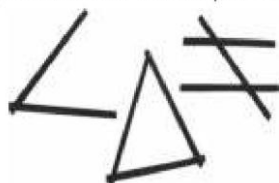


**OR-509 DUMMY CHEQUE BOOK & DUMMY PAY-IN-BANK SLIP**



**OR-510 GEOMETRY KIT**  
(Acrylic)

An all in one kit for teaching entire geometrical concepts & shapes.



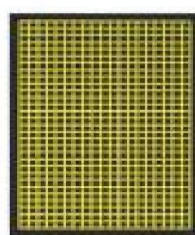
**OR-511 PERPENDICULAR LINE SEGMENT IS THE**

**SHORTEST** (Acrylic)



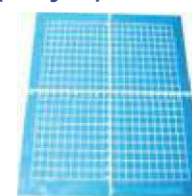
**OR-512 GRAPH ROLL UP CHART**

A 67 X 100cms  
B 100 x 135cms



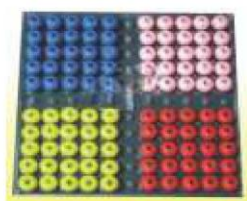
**OR-513 MAGNETIC GRAPH CO-ORDINATE BOARD**

**WITH MARKER PEN**  
(Acrylic)



**OR-514 POWER 2 (POWER OF TWO)** (Plastic)

To understand the concept of square number. It can also be used to learn Cartesian co-ordinates.



**OR-515 CONSTRUCTION OF PARABOLA** (Wooden)



**OR-516 PYTHAGORAS THEOREM** (Acrylic)



**OR-517 WORKING MODEL OF PYTHAGORAS THEOREM**  
(Wooden)



OR-518  
CUBES (Plastic)



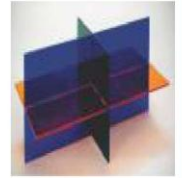
OR-519  
TRIANGLE KIT  
(Group Activity  
Set of 5 kits) Acrylic



OR-520  
RATIO OF **AREA** OF  
SIMILAR TRIANGLES  
(Acrylic)



OR-521  
OCTANT-3D (Acrylic)



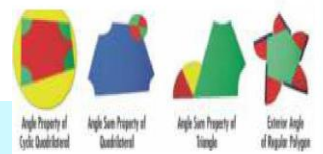
OR-522 IDENTITY SET-I  
(Acrylic)



OR-523 IDENTITY SET-II  
(Acrylic)



OR-524 IDENTITY SET-III (Wooden)



OR-525  
MENSURATION KIT  
(Acrylic)



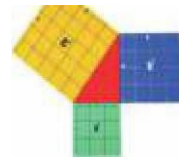
OR-526  
SKIP COUNTING  
GAME



OR-527  
PATTERN TRIANGLES



OR-528 JUNIOR  
PYTHAGORAS



OR-529  
SENIOR PYTHAGORAS



OR-530  
**RAIN GAUGE**  
**BRASS**



OR-531  
RING OF THEOREM



OR-532  
HOLLOW SPHERE



OR-533  
HOLLOW CYLINDER



OR-534  
COMBINATION OF  
CUBE & SPHERE



OR-535  
CLINOMETER COMPASS



OR-536  
DECIMAL PLATE

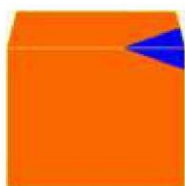






# MATH

OR-537 FORMATION OF TETRAHEDRON



OR-538 CUSINAIRE STRIPS



OR-539 PARALLELOGRAM KIT



OR-540 BASE & PLACE VALUE KIT



OR-541 ROMAN NUMBER KIT



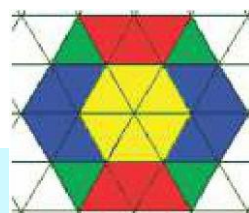
OR-542 INTEGER NUMBER LINE BAR



OR-543 METRIC WHEEL



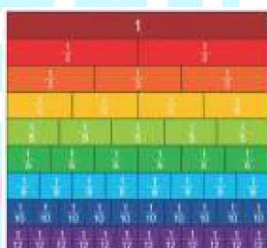
OR-544 COUNT YOUR OWN DESIGNER FRACTIONS



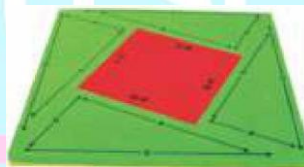
OR-545 TIME & WORK KIT



OR-546 FRACTION BAR



OR-547 PYTHAGORAS THEOREM REVERSE METHOD



OR-548 3D-PAPER NETS



OR-549 GEO BOARD PIN TYPE



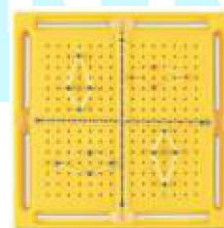
OR-550 DOUBLE SIDE GEO BOARD



OR-551 TRIGONOMETRY BOARD



OR-552 X-Y AXIS CO-ORDINATE BOARD



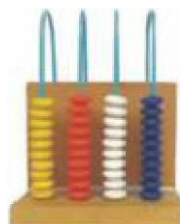
OR-553 MULTI LINKING CUBES



OR-554 JODO BLOCKS (100 Pcs.)



OR-555 FOUR LINE ABACUS



OR-556 STUDENT ABACUS 17 RODS







**OR-557 SIT & SET**



**OR-558 MAGNETIC COUNTER (Set of 48 in two colours)**



**OR-559 TRIANGLE & ITS PARTS**



**OR-560 CIRCLE KIT**



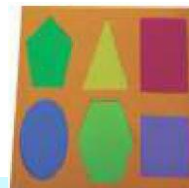
**OR-561 FIBRE DUMMY CLOCK**



**OR-562 PALM CLOCK**



**OR-563 SHAPES 2-DIMENSIONAL**



**OR-564 SHAPES STAMPS (Set of 10)**



**OR-565 DUMMY CLOCK (WOODEN)**



**OR-566 CONSTRUCT-A CLOCK (WOODEN)**

Student can pull out the numbers and fix back to learn counting, shapes and time.



**OR-566 COUNTING ABACUS (1-10) (WOODEN)**

**OR-566 COUNTING ABACUS (10-10) (WOODEN)**



**OR-567 TEACHER ABACUS (WOODEN)**



**OR-568 STUDENT ABACUS (WOODEN)**



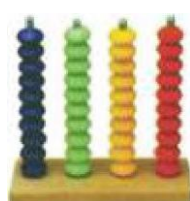
**OR-569 GEARED TEACHER CLOCK**



**OR-570 TRUNDLE WHEEL**



**OR-571 GAME OF PLACE VALUE (WOODEN)**



**OR-572 NUMBER PLANET**



**OR-573 BEAR BALANCE**



**OR-574 VERTEX WONDER**





# MATH

OR-575 PENTOMINOES



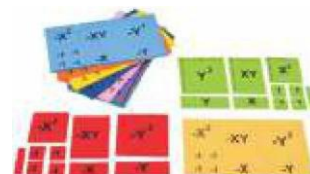
OR-576  
1cm INTERLOCKING  
C



OR-577  
ALGEBRA TILES



OR-578  
ALGEBRA KIT



OR-579  
FLIP & FRACTION GEOBOARD  
(with Circle cut outs)



OR-580  
BASE TEN STAMP SET



OR-581  
METER SCALE-FOLDING



OR-582  
MEASURING TAPE 60"



OR-583  
SET THEORY BY VENN  
DIAGRAM



OR-584  
CONIC SECTION  
WITH STANDARD  
EQUATION



OR-585  
CLASSROOM BASE  
TEN BLOCKS



OR-586  
3D SOLID 5 ems (Set of 12)  
3D SOLID 10 ems (Set of 12)



OR-587  
3D SOLID 5 CMS OPAQUE  
(Set of 12)



OR-588  
BOARD GAMES  
(Set of 7)



OR-589  
INTELLIGENCE STICK  
GAME



OR-590  
ORAL TANGRAM



OR-591  
ATTRIBUTE BLOCKS



OR-592  
MAGNETIC NUMBERS  
MAGNETIC ALPHABET



OR-593  
MATH MAT (10/10)  
MATH MAT (5/5)



OR-594  
DATA COLLECTION  
BOARD WITH DATA  
CUBES



## OR-609 BEAKER (PP)

A	B	C	D
50ml	100ml	250ml	500ml
E	F	G	
1000ml	2000ml	5000ml	



## OR-610 REAGENT BOTTLE N/M

A	B	C	D
4ml	8ml	15ml	30ml
E	F	G	H
125ml	250ml	500ml	1000ml



## OR-611 BURETTE

A	B
25ml	50ml



## OR-612 DROPPING BOTTLE

A	B
60ml	125ml



## OR-613 DESICCATOR (PLAIN)

A	B	C	D
150mm	200mm	250mm	300mm



## OR-614 MEASURING CYLINDER

A	B	C	D
10ml	25ml	50ml	100ml
E	F	G	
250ml	500ml	2000ml	



## OR-615 PIPETTE STAND HORIZONTAL

12 Pipettes



## OR-616 PIPETTE STAND VERTICAL

28 Pipettes



## OR-617 WASH BOTTLE

A	B	C	D
125ml	250ml	500ml	1000ml



## OR-618 FUNNEL-LONG STEM

A	B	C	D
50mm	62mm	75mm	100mm





# HEATING & COOLING EQUIPMENTS

## OR-651 AUTOCLAVES LABORATORY (Portable)

Size dia x Height in mm	
A	300 x 300mm (Seamless)
B	300 x 375mm (Jointed)
C	300 x 500mm (Jointed)



## OR-652 AUTOCLAVE VERTICAL DOUBLE WALL

All deluxe models are fitted with S.S./Gun Metal Lid. and having inner & outer chamber made of S.S., are also fitted with vacuum breaker as a safety device. All autoclaves are fitted with standard accessories such as pressure gauge, steam release cock and safety valve to work on 220VoltAC supply.

	Chamber Size in (Dia x Depth)	Load	Cap. (Approx.)
A	250 x 450mm	2KW	22 Ltrs.
B	300 x 500mm	3KW	40 Ltrs.
C	350 x 550mm	4KW	50 Ltrs.
D	400 x 600mm	5KW	78 Ltrs.
E	450 x 600mm	5KW	98 Ltrs.
F	550 x 750mm	6KW	152 Ltrs.



### Optional:

- (i) Automatic low-water level cutoff-device.
- (ii) Pressure Control Switch.
- (iii) Water level arrangement.
- (iv) Dressing bins for various size.
- (v) Radial lock.
- (vi) Digital Temp. indicator.

## OR-653 AUTOCLAVE VERTICAL HIGH PRESSURE (Triple Walled)

	Chamber Size in (Dia x Depth)	Load	Cap. (Approx.)
A	250 x 450mm	2KW	22 Ltrs.
B	300 x 500mm	3KW	40 Ltrs.
C	350 x 550mm	4KW	50 Ltrs.
D	400 x 600mm	5KW	78 Ltrs.
E	450 x 600mm	5KW	98 Ltrs.
F	550 x 750mm	6KW	152 Ltrs.

### Optional:

- (i) Automatic low-water level cut off-device.
- (ii) Pressure Control Switch.
- (iii) Dressing bins for various size.



# HEATING & COOLING EQUIPMENTS



## OR-654 LAMINAR AIR FLOW S.S. (Horizontal)

Made of S.S 304 complete with HEPA Filter and Pre Filter, motor blowers, static manometer, cock for gas and air or vacuum line. Front doors are made of plexiglass transparent thick sheet built in U.V tube. Work table is illuminated by florescent light. Front door can be kept full open/half open, fully closed as desired. The equipment is fitted with safety attachments of international standards.

**OPTIONAL: MICROPROCESSOR BASED DIGITAL CONTROLLER.**

### FEATURES OF CONTROLLER:

1. U.V LIGHTTIMER UPTO 99 MINUTES.
2. BLOWER TIMER UPTO 24 HOURS.
3. U.V AGE DISPLAY.
4. 9 STEP SPEED CONTROL.
5. BUZER ALARM SYSTEM



	A	B	C	D
working Chamber	2' x 2' x 2'	3' x 2' x 2'	4' x 2' x 2'	6' x 2' x 2'
Size of HEPA Filter	2' x 2' x 6"	3' x 2' x 6"	4' x 2' x 6"	3' x 2' x 6"
No. of HEPA Filter	1	1	1	2
No. of Pre Filter	1	1	1	1
Illumination	1 x 20W	1 x 20W	1 x 20W	2 x 20W
U.V. Germicidal Light	1 x 1½ ft	1 x 1½ ft	1 x 3 ft	1 x 3 ft

# HEATING & COOLING EQUIPMENTS

## OR-655 LAMINAR AIR FLOW M.S. (Horizontal)

Made of Mild Steel covered with duly powder coated, complete with HEPA Filter and Pre Filter, motor blowers, static manometer, cock for gas and air or vacuum line. Front doors are made of plexiglass transparent thick sheet built in U.V tube. Work table is illuminated by florescent light. Two table supports are detachable and can be taken out and fixed within minutes. Front door can be kept full open/half open, fully closed as desired. The equipment is fitted with safety attachments of international standards.

■ **OPTIONAL: MICROPROCESSOR BASED DIGITAL CONTROLLER.**

### ■ FEATURES OF CONTROLLER:

1. U.V LIGHTTIMER UPTO 99 MINUTES.
2. BLOWER TIMER UPTO 24 HOURS.
3. U.V AGE DISPLAY.
4. 9 STEP SPEED CONTROL.
5. BUZER ALARM SYSTEM



	A	B	C	D
working Chamber	2' x 2' x 2'	3' x 2' x 2'	4' x 2' x 2'	6' x 2' x 2'
Size of HEPA Filter	2' x 2' x 6"	3' x 2' x 6"	4' x 2' x 6"	3' x 2' x 6"
No. of HEPA Filter	1	1	1	2
No. of Pre Filter	1	1	1	1
Illumination	1 x 20W	1 x 20W	1 x 20W	2 x 20W
U.V. Germicidal Light	1 x 1½ ft	1 x 1½ ft	1 x 3 ft	1 x 3 ft



# HEATING & COOLING EQUIPMENTS

## OR-656 BIOSAFETY CABINET (S.S. & M.S.)

These Biological Safety Cabinet are made of Stainless Steel 304 Grade.

These Biological Safety Cabinets are class II/Type 2 and are designed for universities, research laboratories, pharmacies and pharmaceuticals companies to protect both users and procedures from contamination when working with biological fields.

**How it Works:** Minimum airflow velocity is 100 fpm (0.51 m/s) through face opening. HEPA filtered downflow air is a portion of the mixed downflow and inflow air from a common exhaust plenum. All contaminated ducts and plenums are under the negative pressure.



### FEATURES :

Class II Design : Personal, product and environmental protection.  
Safety : HEPA filtration.

### PROTECTION:

1. **Personal Protection:** Protects personal from potentially harmful agents used inside the cabinet.
2. **Product Protection:** Protects the research materials for product/experiment from contaminants.
3. **Environmental Protection:** Protects your environment from research material for contaminants generated used inside the cabinet.



Model No.	A	B	C	D
Dimensions (Feet)	2' x 2' x 2'	3' x 2' x 2'	4' x 2' x 2'	6' x 2' x 2'
Size of HEPA Filter	2' x 2' x 6"	3' x 2' x 6"	4' x 2' x 6"	3' x 2' x 6"
No. of HEPA Filter	1	1	1	2
Illumination	1 x 20W	1 x 20W	1 x 40W	2 x 40W

# HEATING & COOLING EQUIPMENTS

## OR-657 FUME HOOD (S.S. & M.S.)

Fabricated out of Stainless Steel 304 grade. It designed so as to throw out all toxic/harmful vapors & fumes thus protecting costly instruments and the persons working in the lab. Outer is hairline mat finish and inner epoxy coated. Working table top is acid/alkali resistant and a small wash basin with connections provided for inlet and outlet of water. The front door moves vertically up and down with concealed counter balanced weights. The unit is fitted with fluorescent light and a gas cock for gas/air supply. The front facing panel is fitted with 15/5 Amp. socket with switches for exhaust system and fluorescent light. To work on 220 volts AC 50 Hz supply.

### OPTIONAL:

- (i) High CFM exhaust system (for duct exceeding 10 feet in length)
- (ii) S.S. Lining on work bench.
- (iii) PVC Fume Duct (per ft.)



	A	B	C	D
working Chamber	2' x 2' x 2'	3' x 2' x 2'	4' x 2' x 2'	6' x 2' x 2'



# HEATING & COOLING EQUIPMENTS

## PASS BOX Dynamic & Static



### OR-658 PASS BOX Dynamic

Dynamic Pass Box made of stainless steel 304 grade, double walled, fitted with magnetic interlocking system on two doors. Complete with motor blower and HEPA filter' magnehelic gauge for pressure, fluorescent light, UV light for germinal free area.

	A	B	C	D
Sizes	18" x 18" x 18"	24" x 24" x 24"	36" x 24" x 24"	36" x 36" x 36"

### OR-659 PASS BOX Static

Static Pass Box made of stainless steel 304 grade, double walled, complete with magnetic interlocking system on two doors, U.V light, fluorescent light.

	A	B	C	D
Sizes	18" x 18" x 18"	24" x 24" x 24"	36" x 24" x 24"	36" x 36" x 36"





# HEATING & COOLING EQUIPMENTS

## OR-660 HOT AIR OVEN (S.S. & M.S.)

- Temperature upto 250°C Accuracy  $\pm 1^{\circ}\text{C}$ .
- Double walled inner chamber made of Anodized Aluminium/ Stainless Steel Sheets.
- Elements on three sides.

	Chamber Size mm	(HxWxD) Inches	No.of Shelves	Cap.Approx. Liters
A	300 x 300 x 300	12"x 12"x 12"	2	28
B	350 x 350 x 350	14"x 14"x 14"	2	45
C	400 x 400 x 400	16"x 16"x 16"	2	65
D	450x450x450	18"x18"x18"	2	95
E	600 x 450 x 450	24"x18"x18"	2	125
F	600 x 600 x 600	24"x24"x24"	2	224
G	900 x 600 x 450	36"x24"x 18"	2	252
H	900 x 600 x 600	36"x24"x24"	2	336
I	900 x 900 x 900	36"x36"x36"	3	720



## OR-661 INCUBATOR

Temp. range from room temp. to 90°C. Door with glass window. Inner chamber made of anodized aluminum/stainless steel sheet.

	Chamber Size mm	(HxWxD) Inches	No.of Shelves	Cap.Approx. Liters
A	300 x 300 x 300	12"x 12"x 12"	2	28
B	350 x 350 x 350	14"x 14"x 14"	2	45
C	400 x 400 x 400	16"x 16"x 16"	2	65
D	450x450x450	18"x18"x18"	2	95
E	600 x 450 x 450	24"x18"x18"	2	125
F	600 x 600 x 600	24"x24"x24"	2	224
G	900 x 600 x 450	36"x24"x 18"	2	252
H	900 x 600 x 600	36"x24"x24"	2	336
I	900 x 900 x 900	36"x36"x36"	3	720



# HEATING & COOLING EQUIPMENTS



## OR-662 BOD INCUBATOR

Double wall construction. Inner chamber made of anodized aluminum or highly polished stainless steel sheet. Supplied with two/three removable perforated shelves. Exterior made out of thick mild steel duly finished in white stoving enamel /powder coated paint with mat finished color combinations. Outer double wall, door is provided with magnetic gasket and lock & key arrangement. Inner door unbreakable acrylic transparent sheet for inspection of material in the chamber without disturbing the chamber temperature which is controlled by Deluxe Digital Controller from 5°C to 50°C  $\pm$  1°C. Standard cooling unit with a sealed compressor with protective devices has been provided below the chamber for safe & efficient working. Heating arrangement has been made with in the chamber for higher temperature working. Inner air circulating system is provided to achieve uniform temperature. A control panel is provided with various indicators, on-off switch . Supplied with cord and plug etc. To work on 220VAC. 50Hz single phase.

Inner Chamber Size (HxWxD)mm	Capacity in cu.ft.	Capacity
455x410x610	4 cu.ft.	112 Ltrs.
505 x 415 x 830	6.1 cu.ft.	171 Ltrs.
565 x 565 x 865	10 cu.ft.	280 Ltrs.
650 x 580 x 900	12 cu.ft.	336 Ltrs.
700 x 650 x 900	15 cu.ft.	420 Ltrs.



## OR-663 ORBITAL SHAKING INCUBATOR CUM BOD INCUBATOR WITH DIGITAL CONTROLLER AND DIGITAL RPM & TIMER.

- Capacity 16 x 500 ml. Flask temp. 5°C above ambient to 60°C.

# HEATING & COOLING EQUIPMENTS

## OR-665 MUFFLE FURNACE (LABORATORY MODEL)

Outer shell made out of thick mild steel sheet duly finished in stoving enamel paint. Fitted with Muffle Block for supporting heating elements working temperature 900°C controlled by superior energy regulator or digital temperature controller cum indicator. Maximum temperature 1000°C. Complete with CI/ AL thermocouple with pyrometer, thermal fuse etc.



Internal Dimension in Inches	Internal Dimension in mm	Working Temperature
9x4x4	225x100x100	900°C/1200°C
10x5x5	250x125x125	900°C/1200°C
12x5x5	300x125x125	900°C/1200°C
12x6x6	300x150x150	900°C/1200°C
12x8x8	300x200x200	900°C/1200°C
18x9x9	450x225x225	900°C/1200°C

## OR-666 WATER BATH SEROLOGICAL

### FEATURES

1. Double wall construction.
2. Outer body made of mild steel duly finished in powder coating.
3. Inner chamber made out of stainless steel sheet of 304 grade .
4. Temp. 30 to 100°C  $\pm 0.5^\circ\text{C}$  controlled by thermostat.
5. To work on 220 VAC

Size in MM	Size in Inches	Capacity in Liters
300x300x175mm	12x12x7"	9 Liters
300x250x175mm	12x10x7"	14 Liters
375x300x175mm	15x12x7"	20 Liters
455x300x175mm	18x12x7"	24 Liters
600x300x175mm	24x12x7"	32 Liters



## OR-667 ROTARY SHAKER PLATFORM TYPE

This is a compact bench top model with platform fitted with stainless steel clamps for continues shaking of solution in flasks of various sizes, mounted on a heavy angle iron frame speed is controlled by electronic speed controller.

Holding Capacity	Motor HP
9 x 250ml/100ml	0.25
16 x 250ml/100ml	0.25
24 x 250ml/100ml	0.25
36 x 250ml/100ml	0.25
81 x 250ml	0.25

### OPTIONAL ACCESSORIES:

1. 0-60 minutes timer
2. Digital RPM
3. Digital Timer



## OR-668 BLOOD ROLLER MIXER

Blood Roller Mixer which we provide is made up of high quality raw materials. It is shake-less and gentle mixing process that makes blood homogeneous. It is essential pre-process for perfect result of RBC, WBC and Platelets counting on Hematology Analyzer. It is a highly reliable product suitable for laboratories, blood banks, and biological institutions etc. Having high tensile strength and strong features, Our Blood Roller Mixer is highly in demand all over India and global markets as well.





# HEATING & COOLING EQUIPMENTS

## OR-669TRAY DRYER

Double walled and double door. Exterior of M.S. duly finished in powder coated shade/SS matt finished. Temperature controlled by thermostat with dial type thermometer. Forced air blower.



Chamber Size H x W x D mm	Tray	Tray Capacity Inches
430 x 840 x 650	8 Tray	16"x32"x1¼
430 x 840 x 910	12 Tray	16"x32"x1¼
910 x 840 x 910	24 Tray	16"x32"x1¼
960 x 1270 x 1450	48 Tray	16"x32"x1¼
960 x 1270 x 1700	96 Tray	16"x32"x1¼

### OPTIONAL FOR TRAY DRYER

Please add extra for the following options:

- Digital temp. indicator cum controller.
- Timer 0-24 Hours.
- Tray 16"x32"x1¼ size. AL
- Tray 16"x32"x1¼ size. SS
- PID Digital Temp. Controller with timer.

## OR-670 VACUUM OVEN (ROUND)

- Temp controlled by digital temp controller cum indicator
- Vacuum chamber is wrapped with set of high quality heater for quick & uniform heating
- Door has a thick tempered toughen glass window perfectly sealed with silicon rubber gasket for observation without disturbing thermal condition
- Proper door alignment to ensure excellent vacuum performance & operate safety
- Positive screw to tighten the lid to obtain preface seal
- Fitted with vacuum valves & vacuum gauge
- Switches & indicating lamps are provided on front panel

Size	Capacity (Approx.)
10"x12"	12 ltrs.
12"x12"	24 ltrs.
12"x24"	40 ltrs.

### OPTIONAL FOR VACUUM OVEN (ROUND)

Please add extra for the following options:

- PID Controller with printer option
- Programmable controller with 8 steps



# HEATING & COOLING EQUIPMENTS

## OR-671 WATER BATH (Paraffin Dispenser)

### Capacity

Cap. 1 Liter

Cap. 2 Liter

### OPTIONAL FOR PARAFFIN DISPENSER

▲With Lid & tap.

▲Digital Temp. Controller.



## OR-672 OIL BATH (HIGH TEMP.) WITH STIRRER

Double wall construction. Inner chamber made of highly polished stainless steel or copper sheet and outer made of mild steel duly finished in staving enamel. Temperature range 50oC to 250oC +2oC is controlled by a thermostat. Supplied complete with stirrer, diffuser shelves, cover etc. panel provided with on-off switch, pilot lamps thermostatic control knob etc.

### Chamber Size

250 x 250 x 250 mm (10" x 10" x 10")

300 x 300 x 250 mm (12" x 12" x 10")

350 x 350 x 250 mm (14" x 14" x 10")

### OPTIONAL FOR OIL BATH (HIGH TEMP.) WITH STIRRER

▲Mercury contact thermometer and relay with accuracy better than 1°C.

▲Digital temp. Indicator-cum-Controller.

▲Microprocessor PID digital temp. Indicator-cum-Controller with timer.

▲Digital temp. Indicator.



## OR-673 WATER BATH INCUBATOR SHAKER (Metabolic Shaking Incubator)

Water Bath Incubator Shaker (Metabolic shaking incubator) It is a double walled unit with inside made of thick S.S. sheet and outer made of M.S. Steel duly powder coated prevents falling of condensed water droplets on the specimens. Heating is achieved through a immersion type heater and the temperature is controlled by digital temp. control with an accuracy of 0.5c. The bath has an oscillating tray riding on ball rollers oscillated through a geared variable speed motor. Shaking speed range is between 40 to 140 cycles per minute. The shaking tray can either hold test tubes or erlenmeyer flasks of 25 ml or 50 ml or 100ml or 250 ml or 1000 ml. as ordered by the users. (Kindly mentioned the capacity of the flasks while ordering). Supplied complete with one shaking tray, cover, cord and plug, to work on 220/230 volts. AC. supply. Available with heating arrangement only (having temperature range from ambient to 100c) or with both heating and cooling arrangement (having temperature range from 5c to 60c). Optional: Digital RPM Meter.

### Shaking tray Size (Stainless Steel)

### Capacity (Approx.) ltrs.

275 x 275 x 150 mm

12

405 x 300 x 150 mm

18



## HEATING & COOLING EQUIPMENTS



### OR-674 WATER STILL (Barnstead Type) Table Model

Water Steel (Barnstead Type Table Model) Double wall construction having both made out of highly polished stainless steel sheet. The gap between the two is filled with glass wool for heat insulation. It is easy to handle table model working on 220 V AC 50 Hz single phase.

#### Output Capacity (Approx.)

Output approx 8 to 9 litres per hour.

Output approx 15 to 16 litres per hour.

Output approx 25 to 26 litres per hour.



### OR-675 WATER STILL (MANASTY TYPE)

Water Still Manasty Type wall hanging is made of stainless-steel sheet and well insulated.

#### Output Capacity (Approx.)

Output approx 2 liters per hour.

Output approx 3/4 liters per hour.

Output approx 5/6 liters per hour.



### OR-676 MAGNETIC STIRRER (WITH HOT PLATE)

Magnetic Stirrer with Hot Plate. Electronically controlled, motorized magnetic stirrer with corrosion and chemical resistant stainless-steel top. Designed for easy use and maintenance. Fitted with speed control switch. Supplied with rotor. With hot plate. Energy regulator adjusts the heating of hot plate. Operates on 220-240V, 50/60Hz

#### Capacity

1 Liter

2 Liters

5 Liters



# HEATING & COOLING EQUIPMENTS

## OR-677 HEATING MANTLES

Body of Heating Mantle is made of one piece aluminium sheet and is logged with special glass wool. The panel is provided with on-off switch, energy control knob and pilot lamp. Provided with joint less hand knitted heating nets of glass yarn capable of withstanding high temperature up to 400°C. Supplied complete with cord and plug, to work on 220V AC 50Hz single phase.

Capacity	Wattage
50 ml.	60
100 ml.	60
250 ml.	150
500 ml.	200
1 liter.	300
2 liters.	450
3 liters.	450
5 liters.	600
10 liters.	2 x 500
20 liters.	4 x 500



## OR-678 LABORATORY HOT PLATE (Round)

Combining outstanding quality and value, our organization is offering excellent quality Round Laboratory Hot Plate. Our experienced professionals manufacture these round laboratory hot plates in accordance with the international quality standards. Below mentioned are the technical specifications of these round laboratory hot plates:

- Mild steel body, Cast iron hot plate, Temperature Range 350°C, Works on 220VAC.
- Temperature is controlled by a three-heat rotary switch and one energy regulator.
- Hot plate diameter 8".

### OPTIONAL ACCESSORIES:

1. Digital Controller



## OR-679 LABORATORY HOT PLATE (with Cast Iron Top)

Specification as above but hot plate rectangular in shape.



# HEATING & COOLING EQUIPMENTS

## OR-680 SLIDEWARMINGTABLE



This device will help you heat slides with microtome sections and allow you to get maximum flatness before getting stained. Its temperature is thermostatically controlled and body is made of thick steel finished with staving enamel. The top of the device is made of polished copper/stainless steel. It comes with a thermostatic knob along with an indicator lamp. It works on 220V. Temperature range is from ambient to room temperature to 80 degrees C. Top plate sizes

### Top plate size (Length x Width)

30 x 25 cm (12" x 10")

40 x 25 cm (16" x 10")

45 x 30 cm (18" x 12")

60 x 15 cm (24" x 6")

### OPTIONAL FOR SLIDE WARMING TABLE

Digital Temp. Controller.



## OR-681 V.D.R.L SHAKER

- Compact shaker for mixing blood samples.
- Wide speed range.
- Timer options for accurate mixing time.
- Digital RPM controller and digital timer available for exact results.
- Stable at high speeds
- Separate platform attachment available for mixing more than one samples.

## OR-682 SHAKING MACHINE (WRIST ACTION)

It has a heavy cast iron with rugged construction and two side arms for holding flasks, fitted with a F.H.P. heavy duty motor with variable speed. Can hold flasks from 100 to 1000 ml capacity. Supplied with cord and plug to work on 220/230 volts.A.C. supply



### Capacity of Holding

4 flasks

8 flasks

12 flasks



## OR-683 VORTEX SHAKERS

Fitted with neoprene rubber cup mounted eccentrically on the shaft. Speed control arrangement provided. To work on 220V AC.

# HEATING & COOLING EQUIPMENTS

## OR-684 SHAKING MACHINE RECIPROCATING (Kahn RackType)

Light duty carrier size 13 x 20" Reciprocating type, speed 250 to 280 strokes per minute with fixed speed for bottles, flasks, test tube racks covered body.

Size of Carrier	Strokes/min.	Motor	Body Type
20"x 13"x 4"	150 to 250	0.25 HP	Covered
31"x 17"x 4"	150 to 250	0.25 HP	Covered
36"x 18"x 4"	150 to 250	0.25 HP	Covered

### OPTIONAL ACCESSORIES:

1. Digital RPM
2. Digital Timer



## OR-685 ROTARY VACUUM EVAPORATOR (Buchi Apparatus)

It is used vacuum distillation at high and low temp having non-sparking motor reduces risk of fire at variable speed for variety of use (90RPM to 200RPM). It permits continuous feed of solvent into evaporating pear shape flask also distillation under control atmosphere. All glass parts are easily replaceable. It is supplied with 1 Lt. Evaporator and receiving flask. Steam duct a condenser, inlet feed 2 clamps a dry unit wire cord and plug to work on 220 volts AC. Comes with water Bath for 1 Ltrs. Capacity with Digital Controller.



## OR-686 SIEVE SHAKER (GyratoryType)

Driven by a 0.25 H.P. Motor, volt AC. Through a reduction gear and is suitable to carry up to 7 sieves of 6" or 8" dia. When clamped the sieve table does not rotate but is inclined from the vertical axis and the direction of inclination changes progressively in the clockwise direction. In addition to the gyratory motion of the shaker there is upward and downward movement at a frequency of 270 r.p.m.



## OR-687 MELTING POINT APPARATUS

- Useful in the determination of the melting point of any substance upto 300° C.
- Casted Al. housing with power coated finish.
- Radial holes admit a thermometer capillary.
- Energy regulator is provided as heat controller.

### I OPTIONAL FOR MELTING POINT APPARATUS

- With cooling plug





# HEATING & COOLING EQUIPMENTS



## OR-688 ABBE'S REFRACTOMETER

The body of the instrument is fixed, with a leaning of 60°. Correct Refracted Index and Sugar Percentage can be read directly in the field. It consists of Abbe's Double prisms with the Thermostat, Compensator, Telescope Mirror, Limb, Graduated Sector, Reading Magnifier and Radical Arm which space (about 0.1 mm ) between the adjoining faces of the prisms. Compensator consists of the Amici Prisms which serve for reading the line of Ach. Separation.

### TECHNICAL DATA

Measuring	ND. 1.3000 to 1.7000 (Reflecting index)
Measuring Accuracy	+0.001 by direct reading +0.0001 by estimation
Sugar% in solution	0 to 95% (+ 0.5 %)
Dispersion	N.D. 0.0005%

## OR-689 MELTING POINT APPARATUS DIGITAL (ECONOMICAL)

Suitable for Melting/ Boiling Point, Readability in 1 °C, Resolution 1 °C, Programmable, Visual provision by Optical Magnifier, Automatic Ramp Rate Proceeding, Auto Gradient Rate of Heating Control.

Magnifying display of melting operation with the help of magnifying glass, Melting point reading hold on by activating the "MELT" key & reading is protected from power failure till "RESET" is not activated.

Suitable for Dark Colored/ all kind or any colored Samples,

• Temp. Range	Ambient to 350°C
• Display	3 Digits
• Resolution	1°C
• Temp. Sensor	Grade "A" PT-100, Platinum Sensor
• Sample Capacity	Microprocessor controlled closed loop PID
• Power Supply	230V ± 10% C/minute (Selectable Auto-Low-High)
• Power Supply	230V ± 10% AC, 50 Hz.

## OR-690 VACUUM PUMP

Motor driven oil sealed pump, mounted on heavy base. V - belt, driven, air cooled speed upto 400rpm complete with V- belt Guard, single stage to work on 220V AC.

### Capacity

32 Liter/ Minute
50 Liter/ Minute
75 Liter/ Minute
100 Liter/ Minute
150 Liter/ Minute

### Motor

0.25 HP
0.25 HP
0.25 HP
½HP
½HP

### OPTIONAL ACCESSORIES:

1. Vacuum Gauge with regulator
2. Moisture Trap
3. Non returnable Valve ½"
4. Non returnable Valve 1"
5. Air Blast



# HEATING & COOLING EQUIPMENTS

## OR-691 VACUUM PUMP (Oil Free)

Motor driven oil sealed pump, mounted on heavy base. V - belt, driven, air cooled speed up to 400rpm complete with V- belt Guard, single stage to work on 220V AC.

	Capacity		Motor
A	15 Liter	_____	1 /16 HP
B	25 Liter	_____	1/8HP
C	45 Liter	_____	1 /6 HP
D	75 Liter	_____	1/4HP



## OR-692 SOXHLET EXTRACTIONS UNITS (HEATER TYPE)

\_\_\_\_\_

A unit of 3 heaters. \_\_\_\_\_

A unit of 6 heaters. \_\_\_\_\_

## OR-693 SOXHLET EXTRACTIONS UNITS (HOT PLATE TYPE)

Capacity	No. of Flasks
250ml	3
500ml	3
250ml	6
500ml	6



## OR-694 KJELDHAL DIGESTION UNIT (Without Glass Parts)

Made out of mild steel duty painted, other metallic parts are chrome plate useful for 300 and 500 ml flasks. To work on 220VAC. With individual ON/OFF switches.

### Types

- ☐ 3 Tests Unit Heater Type
- ☐ 3 Tests Mantle Type
- ☐ 6 Tests Unit Heater Type
- ☐ 6 Tests Mantle Type



## OR-695 KJELDAHL DISTILLATION (Without Glass Parts)

One single Mild Steel Tublar Stand is provided with condenser clamps and water manifold, without individual on-off switches.

### Types

- ☐ 3 Tests Unit Heater Type \_\_\_\_\_
- ☐ 3 Tests Mantle Type \_\_\_\_\_
- ☐ 6 Tests Unit Heater Type \_\_\_\_\_
- ☐ 6 Tests Mantle Type \_\_\_\_\_



# HEATING & COOLING EQUIPMENTS

## OR-696 HUMIDITY CHAMBER



Standard double wall construction inner chamber made out of highly polished stainless steel sheet outer made of mild steel duly painted in powder coated paint or stoving paint. Temperature range 5°C to 55°C  $\pm 2^\circ\text{C}$  and humidity from 55% to 95%  $\pm 3\%$  Rh. Stainless steel water reservoirs heated by immersion heaters provide humidity complete with all accessories.

### Inner Chamber Size (In mm)

455 x 455 x 455 mm
455x455x710mm
605 x 605 x 605 mm
605x605x 910 mm

### Capacity

95 Liters
147 Liters
225 Liters
335 Liters

### OPTIONAL ACCESSORIES:

1. Digital Temperature Controller Cum Indicator.
2. Automatic electronic controller with digital display for temp. & humidity combined.
3. Lowwatercut-off

## OR-697 ENVIRONMENTAL CHAMBER (Humidity Cabinet Delux)



- Suitable for carrying out different quality control tests under controlled conditions of temperature and humidity.
- The excellent quality of door packing for the external door.
- User oriented design of shelves makes you adjust each space of shelves without difficulty.
- Inner chamber and trays are made of stainless steel (S.S.-304 Grade)
- Outer wall of mild steel sheet duly powder coated.
- Mounted on caster wheels for easy portability.
- High grade glass wool insulation between outer and inner chamber for minimal thermal loss.
- Front double walled door is provided with lock and key arrangement.
- A self-cooled air circulation fan is fitted to maintain uniform temperature and humidity conditions throughout the chamber.

### Size

455 x 455 x 455 mm
455 x 455 x 710 mm
605 x 605 x 605 mm
605 x 605 x 910 mm

### Capacity

95 Ltrs.
147 Ltrs.
225 Ltrs.
335 Ltrs.

## OR-698 PLANT GROWTH CHAMBER

Temp. 5°C to 50°C humidity 20-95% & light arrangement system.

### Size

570 x 875 x 550 mm
775 x 900 x 775 mm
835 x 1200 x 825 mm
900 x 1720 x 800 mm

### Capacity in cu. Ft

10
20
30
45.8

### Capacity

280 Ltrs.
560 Ltrs.
840 Ltrs.
1282 Ltrs.

### OPTIONAL FOR PLANT GROWTH CHAMBER

- ✓ Electronics Digital Indicator cum humidity controller and temperature controller.
- ✓ Microprocessor PID digital temp. Indicator-cum-controller.
- ✓ Automatic voltage stabilizer (Recommended).





# HEATING & COOLING EQUIPMENTS

## OR-699 DEEP FREEZER HORIZONTAL

Temp. upto -40°C

Capacity	
4 cu. ft.	375 x 500 x 605 mm
6 cu. ft.	505 x 410 x 830 mm
10 cu. ft.	570 x 550 x 875 mm
12 cu. ft.	650 x 580 x 900 mm



## OR-700 LYPHOLIZER (FREEZE DRYER)

The unit has hermetically sealed compressor to maintain temp. Upto -40°C. Temp. Control by electronic digital controller cum indicator with electronic vacuum indicator. It will have secondary chamber for 6 test & 12 test.

Capacity
3.25 ltrs. 6 Test
5.25 ltrs. 12 Test



## OR-701 GLASS BEAD STERILIZER

Capacity
Crucible Size : 2" Dia x 2" Depth
Crucible Size : 2" Dia x 6 1/2" Depth



## OR-702 AIR CURTAINS

Size Feet	Door Width
3'	900 mm
4'	1200 mm
5'	1500 mm



# HEATING & COOLING EQUIPMENTS

## OR-703 MORTUARY CHAMBER



Double wall construction inner stainless steel and outer mild steel duly painted with rust proof paint. Trays travel on rollers fitted with ball bearing, trays made of stainless sheet to carry bodies are provided with handles. Temperature Range 2°C to 5°C controlled by digital temperature controller cum indicator to work on 220 Volts AC Supply.

Capacity	Temp.	Voltage Stabilizer
Single Body	2° to 5°C	3KVA
Two Bodies	2° to 5°C	4KVA
Three Bodies	2° to 5°C	5KVA
Four Bodies	2° to 5°C	8KVA
Six Bodies	2° to 5°C	8KVA

### OPTIONAL ACCESSORIES:

- I. Automatic voltage stabilizer.



## OR-704 BLOOD BANK REFRIGERATOR

### Available in following capacities

- 85 liters (SO Blood Bags)
- 165 liters (110 Blood Bags)
- 200 liters (200 Blood Bags)
- 280 liters (250 Blood Bags)
- 400 liters (360 Blood Bags)

### OPTIONAL FOR BLOOD BANK REFRIGERATOR

- Chart type temperature recorder.
- Voltage Stabilizer (Recommended).



## OR-705 DEEP FREEZER VERTICAL

Double wall construction with PUF insulation between inner and outer wall. Refrigeration system through hermitically sealed compressor inner high grade stainless steel outer made of mild steel sheet duly painted in powder coated paint. Temperature range upto -40°C controlled by microprocessor based digital temperature controlled cum indicator.

Capacity	Size in Inches
4 Cubic Feet	15"x20"x24"
6 Cubic Feet	20"x16"x34"
10 Cubic Feet	22"x22"x36"
12 Cubic Feet	26"x23"x36"
15 Cubic Feet	48"x26"x26"

### OPTIONAL ACCESSORIES:

- I. Automatic voltage stabilizer.

# PHARMACY

## OR-706 INFRARED MOISTURE BALANCE

A basic method for determination of moisture content, measure percent by weighing and drying simultaneously. Infra Red radiation is reflected by a bulb and its temperature is controlled by a regulator. The balance scale is divided in terms of moisture content on wet weight basis.

### Range

5 gms

10 gms

25 gms



## OR-707 LAB WILLEY GRINDER (Arthur H. Thomas Type) Disintegrator

The Chamber is fitted with a hopper provided with a cover. Three delivery S.S. Sieves, Brush, L-N key & Plastic receiver are supplied. A removable plexi-glass plate permits observation during operation. Fitted with AUE/GE/CROMPTON/ EQUIVALENT MOTOR.

Material  
Shape  
Capacity  
Automation Type

Stainless Steel  
Round  
0.35-6 t/h  
Automatic



## OR-708 BALL MILL (Laboratory Type)

Electrically operated having a capacity from a few grams, To 1 kg. Or 2 Kg or 5 kg. Fitted with a F.H.P motor for cap. Up to 2 kg. Jar and with 1/4 H.P. 5 Heavy-duty motor for 5 kg. Jar. Maximum speed 80 R.P.M. supplied with steel balls for mixing and grinding particularly soft powder. Operates on 220volts AC. Mains.



## OR-709 AUTOPSY TABLE

Autopsy table with wheels the tabletop and lower section are made completely of premium grade stainless steel. The tabletop has a thickened outer rim and is sloped in the direction of drainage.







## OR-710 HUMIDIFIER

The unit is capable of atomizing up to 3 liters of water in an hour at full evaporation in the driest possible ambient conditions.

The unit has body made up of S.S. A single unit is effective for an enclosed space of volume up to 40 cubic meters.

The unit is provided with high speed 2800 RPM motor to run longer period, and the blades are aerodynamically balanced to ensure drop less fumigation.

To work on 220/230volts AC. supply



## OR-711 DEHUMIDIFIER

Largest capacity range in compacts-from 170cmh to 2000cmh (100cfm to 177cfm). The new series Bry - air FFB, 170cmh through 2000cmh (100cfm to 177cfm) desiccant dehumidifier line is designed to integrate "small footprint and finish" of a commercial unit with "the ruggedness" of an industrial dehumidifier.



## OR-712 U.V. CHROMATOGRAPHY INSPECTION CABINET

For viewing and detecting prepared substances on T.L.C. layers fitted with two U.V tubes of different wave lengths, without filter, for use on 220volts AC. Separate lamp for visible light.



## OR-713 OVERHEAD PROJECTOR

Uni-focal single element 90mm objective.

Clear Fresnel-lens.

Projection Platform 250 X 250mm.

Sheet metal chassis un-matched durability.

Twin halogen lamps with a lamp quick-changer.

Fine focusing with rack & pinion mechanism.

Double Halogen Lamp 24V/250W.

Economy switch DIM/ BRIGHT.

Cooling throw cross-flow fan-maintains.

Ready for operation within seconds.

Foldable projector arm.

Rotating projection head 360 Degree.

# PHARMACY

## OR-714 ROTA ROD

- Two Compartment
- Three Compartment
- Four Compartment
- Six Compartment



### FEATURES:

- Sturdy M.S. frame covered with powder coating gives a fine look to apparatus.
- Digital timer control panel.
- Driven by a D.C. drive in variable speed to the apparatus.
- The compartment is divided by a transparent acrylic sheet.

## OR-715 RESPIRATION PUMP

500cc Single cylinder pump with mechanically operated valve. All metal construction. The driving cone has 3 slots of 6"x9"x1 2" dia & balanced A ¼ H.P. geared Crompton motor drives the pump. The stroke is adjustable & graduated in cc. upto 500cc. Motor coupled. On castor wheel base.



## OR-716 SUCTION PUMP

Dual Bottle Suction Machine Each suction method independent of other Comes with separate vacuum gauge support with reading from 0 to-760 mmHg



## OR-717 SWIMMING TEST APPARATUS

- Voltage : 220/230V
- Phase : Single Phase
- Automation Grade : Semi-Automatic
- Frequency : 50Hz
- Power Source : Electric





## OR-718 TABLET DISINTEGRATION

The test equipment work on up and down movement of tablet in medium of water kept at 37°C. Built on a M.S. Cabinet, which housed a geared motor for the vertical shaft drive the shaft moves up and down by 7.5 cms at speed of 30 per minute. On the upper end of the shaft fitted a horizontal strip with clamp on either side. These clamps hold glass vessels open at both ends and with stainless steel wire gauge with rubber rings at the lower end, which dips in water. Two interpedently thermostatically controlled not plate rating 65 watt are fixed on the top of the cabinet upon which beakers of 1 000 ml size are net filled with water. Temperature is maintained at 37°C with and accuracy of 1 C. Independent switches with neon indicators for motor hot plates are fitted on a panel. Mains fuse with two meters mains cord and plug provided. Work on 220 volts AC. mains.



## OR-719 TABLET FRIABILITY

Used for tablets to determine the durability from the time of production to the time of use, a transparent plastic drum rotating has plastic blade which carries the period is determined by a timber tablets are weighed before and after the test and difference in weight for a particular time period indicates the rate of abrasion.



## OR-720 TABLET DISSOLUTION

For Determination of dissolution test of tablets. Complete with water bath which permits the water constantly in motion in holding the temperature at 37° C throughout the test. A cylindrical vessel with flanged side is fitted Motor speed is controlled with speed regulator.

Model available in:

- Single Test
- Double Test
- Three Test



## OR-721 TINCTURE PRESS

- Additional heavy duty for making tinctures
- Decotious infusion etc. cap
- Disc made up of pure stainless steel
- Drive for fixing screws
- Mesh made from stainless steel in the form of an inner drilled container with stop cock



# PHARMACY

## OR-722 STUDENT ORGAN BATH

Thermostat for control of temperature from 20-60deg c with an accuracy of 1 deg c ON/OFF switch, neon indicator thermostat dial, housed in a separate box attached to the bath.

Single Unit
Double Unit
Single unit with digital temp. & stirrer
Double unit with digital temp. & stirrer



## OR-723 TELETHERMOMETER

Provided with 6 probes. Shows the temperature of six different locations, selectable one by one with the help of a switch. With a digital readout and the resolution of temperature is 0.1 degree C.



## OR-724 TABLET HARDNESS TESTER

Tablet Hardness Tester Pfizer Type which helps to test tablet hardness quickly, accurately & conveniently, the instrument is deal for tablet hardness testing, very handy and portable, records quickly and directly on dial indicator.



## OR-725 TISSUE PROCESSOR UNIT

- Feather touch key pad
- Digital display for adjusting time sequence
- Battery backup to retain data
- 12 stage timing sequence can be programmed with each step of 1 minute to 16 hours 39 minutes (999 min.)
- Delay action of 1 hour to 99 hours
- 2 Electronically controlled bath 00 C to 800 C
- 1 or 2 Stainless steel basket
- 24 tissue containers (Cassettes)
- 1 or 2 Stainless steel basket rotors



## OR-726 AUTOMATIC TISSUE PROCESSOR UNIT

- 2 Stainless Steel Wax Bath.
- 2 Stainless Steel Baskets.
- 60 Tissue Containers (Cassettes).
- 1 or 2 Stainless Steel Basket Rotors (asper customer's requirements).
- 10 without lip Glass Beakers ( 1 Ltr. or 2 Ltr.)



## OR-727 AMPOULE CLARITY TEST APPARATUS



The provided apparatus is manufactured under the vigilance of our experienced professionals at our advanced production unit using quality-approved raw material. Offered apparatus is equipped with an adjustable side-arm with clamp for holding a magnifier for easy and magnified viewing during process. Clients can avail the provided Ampoule Clarity Test Apparatus from us at rock-bottom prices.

## OR-728 ASEPTIC CABINET



Size	95x50x50 cm
Germicidal Ultraviolet Tube	3
Fluorescent Tube	2
Power Source	Electric
Voltage	220 V
Frequency	50 Hz
Phase	Single Phase



## OR-729 AMPOULE FILLING & SEALING DEVICE

Ampoule Filling & Sealing Machine (electric operated) for various industrial applications. Fabricated using quality basic raw material, this product is highly appreciated by our clients due to its robust body and trouble free operations. Features like complete motorized capacity adjustments, longer service life and power efficiency make this product a high demand one amongst our clients.



## OR-730 AMPOULE WASHING

Jet needle type, consists of 6 S. Steel needle jets fixed on a brass (chromium plated) pipe of 12.5 mm dia. with side tap and serrations for fixing rubber with tap water.

Spring loaded ampoule holding arrangement for various sizes of ampoule  
With stainless steel bottom tray on stand

## PHARMACY

### OR-731 ANTIBIOTIC ZONE READER (Manually)

The antibiotic zone reader provides a rapid accurate method for determining the strength of antibiotic materials by measuring the diameter of an inhibited zone in petri dish.



### OR-732 ALGOMETER



### OR-733 ACTOPHOTO METER



### OR-734 ALL PURPOSE EQUIPMENT

All-purpose system is based on a powerful main drive unit. The various attachments can be easily and quickly connected by means of a universal gear box or directly. Plus is equipped with a single phase AC motor. The sturdy ball bearing worm gear drive is completely maintenance free. The unit features electronic speed control variable between 10rpm to 300rpm, a digital speed controller regulates the speed.



### OR-735 ANALGESIOMETER

Analgesimeter (Tail Flick) that is basically used for analyzing the alternations of animal pain sensitivity induced of specific experimental genetic manipulations and context change. Our offered equipment is made available in numerous models and technical specifications to meet the vast needs of our renowned clients. This equipment is manufactured at our highly advanced production unit using pristine quality components and sophisticated technology following industry defined guidelines. Moreover, provided Analgesimeter (Tail Flick) is extensively admired by the customer for its smooth functioning and long service life.







## OR-736 ANALGESIOMETER (EDDY'S HOT PLATE)

Eddy's Hot Plate for determining analgesic effect of drugs.

## OR-737 ANALGESIOMETER WITH PIO CONTROLLER

## OR-738 BICYCLE ALGOMETER



## OR-739 BOTTLE FILLING MACHINE

Hand operated having filling capacity 50 to 500ml. Complete covered with powder coated MS sheet. Contact parts in Stainless Steel.



## OR-740 BULK DENSITY

- |               |             |
|---------------|-------------|
| • Display     | LCD Display |
| • PowerSource | Electric    |
| • PowerSupply | 230VAC      |
| • Density     | Bulk        |
| • Finish      | Polished    |



## OR-741 BOTTLE CAP SEALING MACHINE

- |                  |                  |
|------------------|------------------|
| • Material       | Mild Steel       |
| • Color          | Blue /White/Gray |
| • Operation Type | Hand Operated    |

### Features:

- Supplied with three dies for the three different cap sizes.
- It can be hand operated or electrically operated
- Smooth design Installable within no time.
- Could be handled with ease

# PHARMACY

## OR-742 BOTTLEWASHING MACHINE

- Single Brush
- Double Brush



## OR-743 BONE CUTTING MACHINE



## OR-744 COOK'S POLE CLIMBING

In compliance with international industry standards, we manufacture offered product using high grade raw material that is procured from reliable vendors of the market. This product is highly appreciated by our clients for its easy use and long lasting nature.



## OR-745 CAPSULE FILLING MACHINE

A versatile lever operated semi-automatic machine for various operations with levers in order of (i) plates for putting of capsules (ii) removal of caps (iii) filling of powder by dispensing brush pressing (iv) ejection of 100 capsules of size 0.2 or 0.5 (any one size on order) contact parts of stainless steel.

Cap. 100 Capsule

Cap. 300 Capsule



## OR-746 CAPSULE COUNTER

Full chrome plated & heavy body.





## OR-747 COLLAPSIBLE TUBE FILLING MACHINE

Stroke type barrel and piston arrangement with stroke setting for various capacity of filling tubes detachable nozzles provided for each separate capacity all contact parts are of stainless-steel including hopper built on cast iron body hand lever operated.

## OR-748 COLLAPSIBLE TUBE FILLING MACHINE MOTORIZED



## OR-749 COLLAPSIBLE TUBE SEALING MACHINE

Head lever sliding movement with toothed jaws spring action release of jaws robust construction.

## OR-750 CUBE CONE MIXER

## OR-751 DALE BATH APPARATUS



## OR-752 DONGLAS BAG



## OR-753 DOUBLE CONE BLENDER

## OR-754 ELECTRO CONVULSO METER

- Simple
- Digital



## OR-755 GADUUMS OUTFLOW RECORDER TO WORK ON 4V DC



## OR-756 HISTAMINE CHAMBER COMPLETE WITH SPHYGOMA



# PHARMACY

## OR-757 HAND GRIP DYNAMETER



## OR-758 HOOK GRIP

## OR-759 JARTESTAPPARATUS

### Capacity

Two Jar Test Apparatus

Three Jar Test Apparatus

Four Jar Test Apparatus

Six Jar Test Apparatus

### OPTIONAL FOR JAR TEST APPARATUS

- ✓ Digital RPM
- ✓ Digital Timer



## OR-760 KYMOGRAPH

Kymograph Recording Drum

Frog Heart Chamber

Smoking Stand

Smoking Burner

Paper Clip

Starling Heart Lever

Adjustable Stand

Mayo Graph Lever

Mayo Graph Board

Simple Electrode

Student Stimulatro

Chamber Electrode

X-Block

Muscle Lever

Hook Weight Set

Kymograph Paper





## OR-761 LEAKTEST APPARATUS

Ideal instrument to check blister packs, strip for leak test. The instrument is equipped with long lasting diaphragm vacuum pump which gives higher level of vacuum in shortest possible time. Dia pressed polycarbonate vacuum dessicator sustains vacuum for long time. A vacuum gauge is provided to indicate vacuum level which is connected to isolation valve to disconnect the source, thus avoiding the need of continuous running of vacuum pump. A 0-5 minutes digital timer helps the operator to do other works. Complete in GMP stainless steel body with phenomenal compactness.

### Particulars

6"

8"



## OR-762 LIPSTICK MOULD

### Particulars

4 Hole

6 Hole

12 Hole



## OR-763 LUCAS MOIST CHAMBER

## OR-764 MARRYTAMBOUR 18mm

## MOSSES ARGOGRAPH

## OR-765 OPERATION TABLE FOR ANIMAL

Complete with steel frame for greater stability. Table top made of stainless steel size 1 27x45cm. In two halves sloping towards their central drain, warming chamber, castors, moving handles with animal holder & stainless steel tray and two moveable uprights.



## OR-766 OPERATION TABLE SMALL

For rabbits, rats guinea pig etc., stainless steel top adjustable head holder, trying cleats, cut back at the head end with warming chambers.

# PHARMACY

## OR-767 PERIMETER

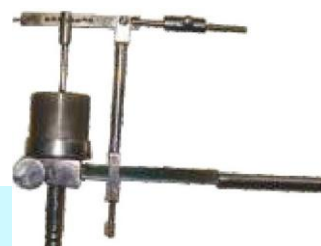
### Particulars

Presley Smith Type

Lister Type



## OR-768 PERMEABILITY CUP



## OR-769 PISTON RECORDER

## OR-770 STUDENT POLARIMETER

Consists of Lurent half shade, polariser analyzer, brass scale graduated from 0 to 360 or 0-1800 with vernier reading 6" and accommodates a 200mm. Glass tube. It is packed in a card board box.



## OR-771 RESEARCH POLARIMETER

Used in medical, pharmaceutical and chemical research laboratories. Consists of a imported half shade Nicol Polariser, analyzer 100mm. Diameter circular scale divided in degrees 0-360 Deg. X1 Deg. And a sugar scale divided 30 Deg. To+ 130 Deg. ISS, a divided micrometer drum is given to read 0.05 Deg. (3 minutes) and 0.1 Deg. ISS, the scale is properly illuminated for taking reading, the body is very sturdy and separate sodium lamp is stand is provided. Complete with polarimeter tube, bubble traps at the center, 200mm.

### Particulars

Sodium lamp with stand and transformer.

Same as above but with 400mm tube.



## OR-772 STERILITY TEST

It is as per our standard design it consists of stainless steel flask with stainless steel clamps and stainless steel support screen made out of stainless steel 316 quality single station without stand.

### Particulars

3 Tests







## OR-773 TABLET COATING PAN

Tablet coating pan 12" dia stainless steel, the machine is worked by oil immersed gear box with F.H.P. Motor drive. Air blower is operated independently and air is thermostatically controlled to give temperature 30 to 100°C. Switches for motor, blower, heated and thermostat are fixed on a panel with neon indicators. Also main lead with 15 amp plug provided.



## OR-774 TABLET POLISHING PAN

Detachable polishing pan for use with coating pan made of mild steel provided with inner lining of superior canvas cloth. Inner dia 12", high 8" with opening of 7" dia. Neck.



## OR-775 TABLET MAKING MACHINE

Single punch for making tablets upto 1000mg and as per size of the die and punch 6,9,12mm automatic compression and ejection device with each revolution of the wheel drive.

### Particulars

Single Punch Hand Operated  
Motorized

## OR-776 VOLUME RECORDER

## OR-777 PERIMETER

Prestley Smith Type  
Lister Type



## OR-778 PLETHYSMOGRAPH

## OR-779 PULVELIZER



# PHARMACY

## OR-780 PHYSIOGRAPH

Single Channel  
Double Channel  
Three Channel

## OR-781 POLYGRAPH

Single Channel  
Double Channel  
Three Channel

## OR-782 STETHOGRAPH

## OR-783 SUPPOSITORY MOULD

2 Hole  
4 Hole  
6 Hole  
12 Hole

## OR-784 STEP DOWN TRANSFORMER

## OR-785 STUDENT SPIROMETER

6 ltr. Capacity With chain compensates counter balance to flat through pulley calibrated to denote volume inlet & outlet tubes stainless steel chamber with corrugated rubber tube and mouth piece.





### **OR-786 VOLUME RECORDER**

### **OR-787 VARNISH TRAY**

### **OR-788 VARIABLE INTERRUPTER**

### **OR-789 HAND REFRACTOMETER**

With accuracy 2%, Built in Amici prism and special light reflection system for colour elimination to obtain sharp critical boundary line and optimum contrast.

Hand Refractometer are available in three ranges.

Range : 0-32%, 0.2% minimum scale

For mid range, including fruit juices, canned goods with sugar content 28-62%

For high range sugar content as honey, Range : 58-92%



### **OR-790 PRECISION ROTARY MICROTOME (ERMA Type)**

Heavy cast iron base with entire mechanism covered with a heavy cast iron protective dust cover. It incorporates a Ball & Flange type object holder for exact centering of specimen. Lateral Movement of Knife holder ensures use of complete knife edge. Microtome has a feed range of 1-25 microns in steps of 1 micron each. Supplied with Razor 120 mm long with back and Handle, Dust cover, Honing Plate, Object Holder set of 3 and oil can. Razor supplied is made out of alloy steel & duly hardened for long lasting knife edge.

Razor-120 mm with back & handle-one

Object holders-set of three

Honing plate-one

Oilcan-one



## PHARMACY

### OR-791 SENIOR PRECISION ROTARY MICROTOME (Latest Spencer 820 Type)

It is universally, approved, most modern and reliable sectioning equipment designed for very precise sectioning of tissue upto 1 micron thickness. The feed indicator, located in front of microtome is operated by the latest 'CAM DRIVE SYSTEM' for accurate feed setting from 1 -50 microns in steps of one micron. The interior mechanism rests on a heavy cast iron base and is covered with a full swing protective cover for easier cleaning & lubrication.

The salient features include independent feed mechanism with automatic safety device, universal knife holder with lateral movements permitting use of the entire knife edge, universal vice type object holder for accurate centering of the specimen.



### OR-792 SYRINGE NEEDLE DESTROYER

Syringe Needle Destroyer is an electrical device, designed to destroy the used disposable needles and cut the disposable syringe nozzle easily. It ensures that the health care workers is not required to touch the needle while disposing off the same at the point of use, thus providing adequate safeguard against accidental pricks which may even result in loss of life. It is quick and portable device which sterilizes the destroyed needles for total safety. Nozzle of the syringe is cut after the needle is destroyed.



### OR-793 ENERGY METER

Single Phase LCD Energy Meter (Rated Current-10-60 Amp.)





## Demonstrating Our Instruments in Schools







**TECHNO SCIENCE  
INSTRUMENTS**

**Email:** [technoscience.instruments@gmail.com](mailto:technoscience.instruments@gmail.com)

[technoscience.india@yahoo.com](mailto:technoscience.india@yahoo.com);

**Website:** [www.technoscience.in](http://www.technoscience.in)

**Mobile:** +91 9845943963 | **Phone:** +91 9743739168