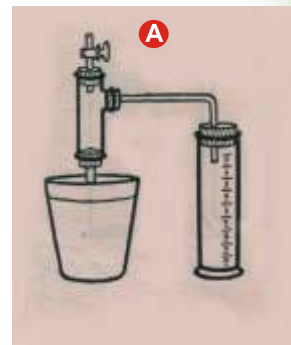


PLANT PHYSIOLOGY

APPARATUS FOR EXPERIMENTS ON ROOT PRESSURE **A**

T-Tube with stopcock and graduated jar, without flowerpot
B13301



ROOT PRESSURE MANOMETER **B**

For determining the pressure exerted by the sap flowing from a stem stump. Manometer graduated 0 to 200 x 1 mm, for attachment by means of rubber tube or tape to the cut stem of a plant growing vigorously in wet soil
B13311



APPARATUS FOR DEMONSTRATION OF OSMOTIC PRESSURE **C**

Pfeiffer's, complete, as illustrated
B13315



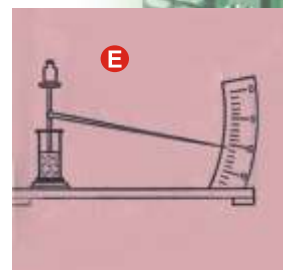
APPARATUS FOR INVESTIGATING PRESSURE EFFECTS DUE TO OSMOTIC PRESSURE **D**

B13320



APPARATUS FOR MEASURING WORK PERFORMED BY SWELLING SEEDS **E**

On base, with jar for seeds, pointer and scale
B13325



POTOMETER, SIMPLE **F**

A glass tube with stopper at both ends. The bottom stopper has a mm graduated capillary tube while the top has two holes one for a glass tube to accommodate plant shoot through a rubber tube and the other for a 2 ml. syringe to adjust air bubble during the setting up.
B13330





POTOMETER AND ATMOMETER **A**

For investigating transpiration. Measures the uptake of water by a cut plant shoot. The cut shoot may be replaced by a porous pot filled with water which enables measurement of the rate of evaporation from a moist surface, thus giving indication of relative humidity. Comprises a capillary tube with mm scale connected to a syringe and an outlet via a three way stopcock. The syringe enables adjustment of air bubble during set-up, the outlet is connected to the cut shoot or porous pot, mounted on strong vertical plate.

B13335



POTOMETER, GANONG'S

To demonstrate rates of transpiration and of water absorption by a cut shoot, with a graduated capillary tube bent down at right angle at one end with a small orifice and having water reservoir with glass stopcock and the end tube with rubber stopper for the plant shoot at the other end, on base.

B13337 **B** On wooden stand

B13339 **C** On plastic stand



POTOMETER, STUDENT'S **D**

Glass tube 160x20 mm with side arm 8 mm dia to take plant. A solid rubber stopper at top and a rubber stopper with hole at bottom, with capillary tube of 140 mm length.

B13340



POTOMETER, FARMER'S **E**

A reservoir with 3 hole stopper for holding a graduated capillary tube 390 mm long, a short length of 10 mm dia glass tube to hold plant shoot and a funnel of 25 ml with a stopcock.

B13345



POTOMETER, THODAY **F**

A glass tube 15 mm dia with a side arm leading to a thistle funnel in rubber tubing has both its ends tapered and bent at right angles. One end would accept plant stem and the other is connected to a capillary tube with mm scale, mounted on an L shaped stand.

B13347

POTOMETER DARWIN **A**

Apparatus to measure absorption of water by transpiring plants, Comprising a glass tube with upper end of straight limb closed with rubber stopper, lower end of the limb is fitted with a bored rubber stopper to take length of capillary tubing

B13349



MICROBURETTE **B**

For measuring and sampling gas given off by aquatic plants e.g Elodea. Comprises a bulb tube graduated 0 to 150 mm into which the cut end of the shoot is inserted. A 5 ml syringe is provided at top to draw gas collected in the burette for analysis. Overall height 300 mm.

B13355



TRANSPIRATION APPARATUS **C**

To measure the quantity of water absorbed and given off by a transpiring plant. Consists of a glass vessel 250x50 mm with rubber stopper at top & a side tube graduated 0-15 cmx1cm

B13358



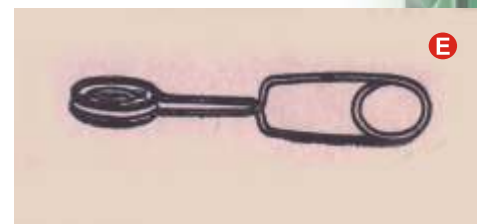
APPARATUS FOR INVESTIGATING TRANSPIRATION **D**

With thermometer

B13360

LEAF CLASP, SIMPLE FORM **E**

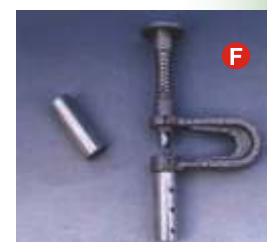
B13365



LEAF AREA CUTTER **F**

Made from steel, capable of cutting very thin material, fitted with brass pipe having holes.

B13367





RESPIROMETER, GANONG'S (A)

To measure gas evolved or absorbed by living materials or tissue extracts. A respirometer bulb with a small water reservoir at the bottom and hollow ground glass stopper at top in the neck with a hole which can be closed or opened by turning the stopper, a graduated burette opening out of the bulb which connects to a leveling tube via a rubber tubing. Respirometer chamber 50 mm dia., burette 180x20 mm graduated 0 to 25 ml. and 100 to 75 ml., with special clamp for fixing to a 12 mm dia. rod.

B13368



RESPIROSCOPE, SIMPLE (B)

Compact unit to compare rates of absorption or evolution of gases by small organisms during respiration. Two stoppered boiling tubes are connected by three way taps at either end of a manometer. One tube holds the organisms and has a syringe for altering level of liquid in the manometer during setting up. The other tube acts as a control thermo-barometer

B13370



GLASS MANOMETER TUBE (C)

Mounted on clear acrylic sheet.

B13378



J-TUBE, SCREW FITTING (D)

Glass J-tube made out of thick-walled capillary tubing, with a brass screw & collar at end of longer limb. Used for sampling small quantities of gas in respiration or photosynthesis experiments

B13382



PHOTOSYNTHESIS APPARATUS (E)

For measuring and analysing gas given off by plants. Comprises a 1 mm bore capillary tube graduated 0-10 cm in mms and connected to two 2 ml syringes. The gas can be drawn along the capillary by one syringe and collected into the other for analysis, mounted on board.

B13385

PHOTOSYNTHOMETER **A**

For demonstrating absorption of carbon dioxide by green plants in light, with equi-volumetric release of oxygen. Complete with stand

B13387



NORMAL LIGHT SCREEN **B**

Simple, Ganong's

B13392



DARK CHAMBER **C**

For experiments in phototropism. A stout cardboard black lined box with aperture tube and end cap. Overall size 200x160x130 mm, side tube 110 x 50 mm dia.

B13395



COMBINATION DARK CHAMBER **D**

For experiments in phototropism with seedlings. Three chambered case with channels to accept variety of shutters. One chamber has a window at top and back. Provided with clear, opaque and slot shutters and one orange and one blue filter. With three glass containers for seedlings. Overall size 180 x 530 x 180 mm.

B13397



GERMINATOR **E**

An aluminium case with glass sides to observe root development at different depths, with aluminium shutters to exclude light so that roots will grow down the inside of glass. Bottom panel has holes for drainage, Overall size 380 x 70 x 270 mm.

B13398

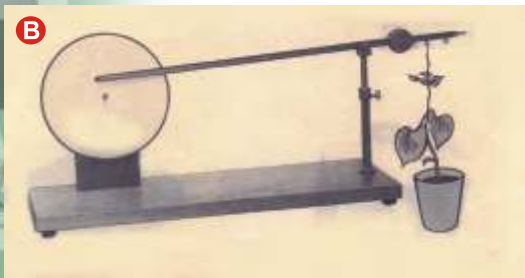




SIMPLE AUXANOMETER **A**

To show growth of plants and the effects of environment on the rate of growth. Comprises a light weight metal pointer counterbalanced by a mass hanger & masses, with a large easily readable scale. Complete with stands, mass hanger and masses.

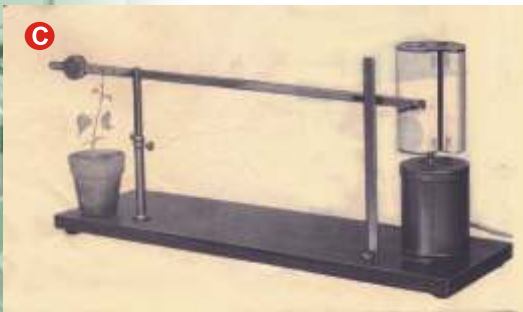
B13405



ROTATING DISC AUXANOMETER **B**

To measure plant growth rate. The recording arm 600 mm with a bristle tip at one end is mounted on an adjustable pillar enabling alteration of height and pressure of the bristle on a disc of 200 mm dia. The other end of the arm has three eyes to give x3, x4, x5 magnifications. A smoked disc is mounted on a circular plate which is clamped to a motor spindle, & has a central pin to prevent the lever passing the centre. The disc rotates at a speed of one revolution per hour.

B13408



ROTATING DRUM AUXANOMETER **C**

Records growth of a plant as a series of horizontal traces, the gap between which represents one hour's growth. The recording lever has 3 notches giving x5, x7 and x10 magnifications and is mounted on an adjustable pillar to adjust its height and pressure on the pencil tip. The recording drum has a pull-through vertical slot which enables the lever to take up the slack in its thread and then draw a new trace at a lower level, on base. Lever is 680 mm and drum is 300x150 mm, circumference x height. With paper strips, pencil, motor for drum, working on 220/240 V a.c.

B13410



CLINOSTAT, CLOCKWORK **D**

Metal body with heavy base, fitted with a 30 hour clock drive which rotates the plant holder at one revolution per hour. Can be set at any angle between horizontal and vertical positions, complete with plant holder.

B13412

CLINOSTAT, ELECTRIC **A**

An electric motor rotates a drum in 15 minutes. The drum consists of a cork table to which germinating seedlings are pinned and has a perspex cover 105 x 100 mm htxdia. A stand enables the angle of the cork table to be set at any desired inclination. Works on 240 V.

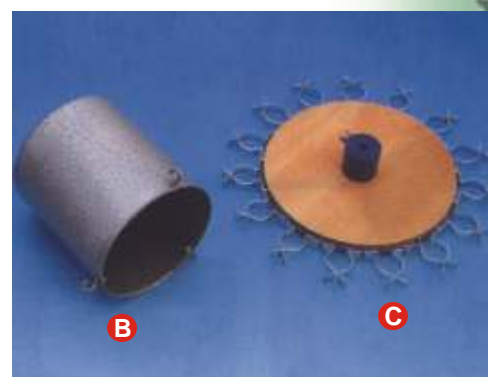
B13415



PLANT FLOWER HOLDER **B**

To fit clinostat in place of cork disc, accommodates pots upto 75 mm dia, with three hooks near upper edge to secure pots

B13418



TUBE CARRIER **C**

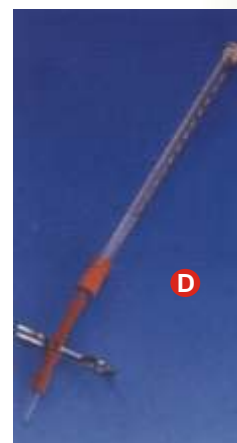
For attaching to clinostat, takes upto 15 tubes for experiments in geotropism with germinating seedlings

B13420

GAS BURETTE **D**

For analysis of air and expired gases. A graduated burette tube with rubber stopper at one end and a glass tube connected to rubber tubing fitted into a mohr clip. The other end is closed by a suba-seal stopper.

B13425



MICROBIOLOGY

PETRI DISH **E**

Polypropylene, clear & unbreakable. Ridges on inside prevent the base from sticking up to the cap.

- B13705** Cap 50 mm
- B13706** Cap 75 mm
- B13707** Cap 100 mm
- B13708** Cap 125 mm
- B13709** Cap 150 mm





PETRI DISH **A**

Glass with beaded edges

	Diax Depth		Diax Depth
B13715	50 x 17 mm	B13716	80 x 17 mm
B13718	100 x 17 mm	B13720	150 x 20 mm



PETRI DISH **B**

Borosilicate glass to withstand repeated dry and wet sterilisation.

	Size
B13724	50 x 17 mm
B13726	80 x 17 mm
B13728	100 x 17 mm
B13730	150 x 20 mm



PETRI DISH **C**

Disposable, clear polystyrene, 90 mm dia, packed individually in polyethylene bag and sterilised.

B13734



RACK FOR PETRI DISHES **D**

Of clear acrylic construction, with polycarbonate posts. To hold upto 60 petri dishes of 90 mm size, visibility from all sides enables the culture to be seen & checked during incubation

B13738



PETRI DISH STERILISING BOX **E**

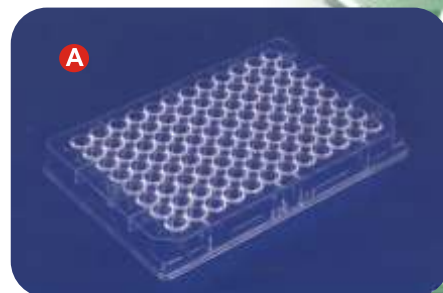
For autoclaving petri dishes. Stainless steel cylindrical can with stainless steel lid with internal removable carrier for petri dishes upto 100 mm dia., size 260x115 mm htxdia.

B13740

IMMUNOLOGY PLATES **A**

Elisa/Assay plates made of optically clear non-toxic polystyrene for a wide range of applications from single cell isolation to cell culture scale up, with 96 wells

B13742/1	Flat bottom Elisa plate
B13742/2	U bottom Elisa plate
B13742/3	Flat bottom Assay plate
B13742/4	U bottom Assay plate



McCARTNEY BOTTLE **B**

Clear glass, thick aluminium metal screw cap with rubber liner, cap 28 ml., autoclavable

B13745



CULTURE BOTTLE **C**

Round bottom borosilicate glass, autoclavable, with screw cap and rubber liner.

	Capacity	Size
B13750	5 ml	15 x 75 mm
B13752	10 ml	15 x 125 mm
B13754	30 ml	25 x 100 mm
B13756	60 ml	25 x 200 mm



CULTURE BOTTLE **D**

Flat bottom, glass, autoclavable, with screw cap and rubber liner.

	Capacity	Size
B13760	5 ml	15 x 75 mm
B13762	15 ml	25 x 57 mm
B13763	50 ml	25 x 95 mm

MICRO CENTRIFUGE TUBE **E**

With built-in snap fit plug, can withstand high force of an ultra centrifuge.

	Capacity
B13766	0.5 ml
B13768	1.5 ml





RACK FOR MICRO CENTRIFUGE TUBES **(A)**

For holding twentyfour 1.5 ml tubes. Prevents movement in any direction. Holes are numbered.& lettered.

B13770



FLOAT RACK **(B)**

Polypropylene, autoclavable, can hold 16 micro centrifuge tubes for incubation in water bath, with alpha-numerical marking.

B13775



SAMPLE CONTAINER **(C)**

Thin walled. graduated disposable polypropylene with easily screwable leakproof cap. Capacity 100 ml.

B13780



SCINTILLATION VIAL **(D)**

Unbreakable polyethylene vial with leakproof screw cap, for use with standard counting equipment for liquid scintillation system

B13785 Cap 8 ml
B13787 Cap 20 ml



RACK FOR SCINTILLATION VIAL **(E)**

Autoclavable,

B13790 For 90 vials of 8 ml each
B13792 For 50 vials of 20 ml each



STORAGE VIALS **(F)**

To store biological material upto -190° C, with leakproof cap. Base has longitudinal grooves which make it non-twisting when placed in a vial rack

B13795 Cap 1 ml
B13796 Cap 2 ml
B13798 Cap 5 ml