

Why did this archer score zero?

Precision? No one could compare. He hit the bull's-eye every time—his arrows precisely grouped within inches of each other. The trouble? He consistently hit the wrong target? He achieved precision but not accuracy.

In Clinical Chemistry Procedures, too, precision is sometimes mistaken for accuracy. You can achieve precise values, and still miss the true value. To assure both precision and accuracy—quickly and easily—use LAB-TROL and PATHO-TROL, the 'stabilised liquid controls' for Blood Chemistry Control.

LAB-TROL & PATHO-TROL
now available in
more economic **25** ml. bottles



AUTHORISED DISTRIBUTORS IN THE UNITED KINGDOM

ARMOUR PHARMACEUTICAL COMPANY LTD / Hampden Park / EASTBOURNE / Sussex / Eastbourne 51111

ELECTRICALS (LABORATORY) LTD / 'Hedgefield House' / Blaydon-on-Tyne / Co DURHAM / Ryton 2381

ELECTRICALS (LABORATORY) LTD / 3A St Vincent Street / EDINBURGH 3 / CAL 2188

GEORGE T. GURR LTD / 136-140 New Kings Road / LONDON SW6 / REN 5482

ARNOLD R. HORWELL LTD / 17 Cricklewood Broadway / LONDON NW2 / GLA 8777 & 8631

KERNICK & SON LTD / Monthermer Road / CARDIFF / South Wales / Cardiff 26128

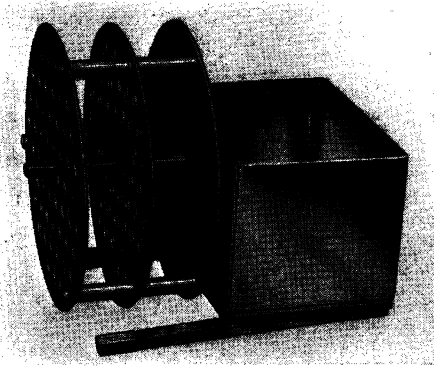
ORME SCIENTIFIC LTD / Bentley Avenue / Middleton / MANCHESTER / Middleton 2648

E. J. BROWNE, M.P.S.I.
6 The Crescent / Sallynoggin
Dunloaghair / DUBLIN / EIRE / Dublin 87020

Compact and . . . outstanding in performance

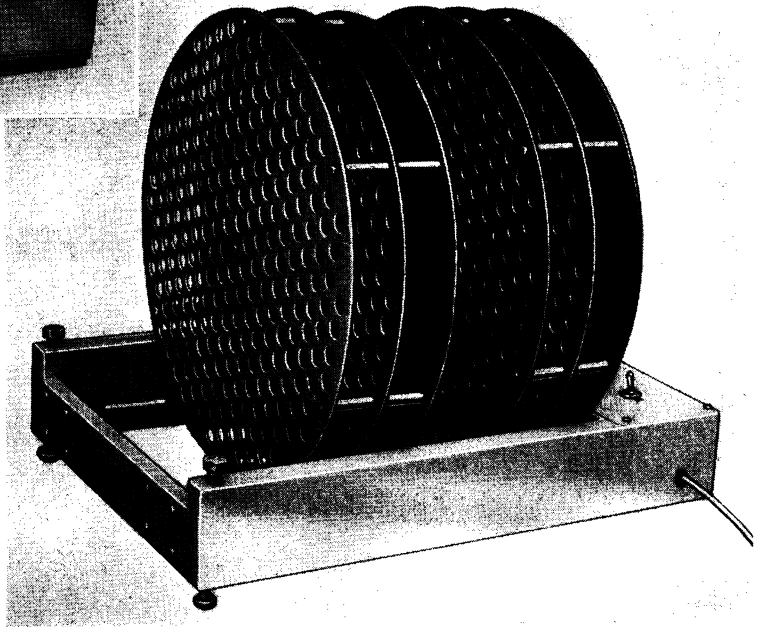
LEEC

TISSUE CULTURE ROLL DRUM APPARATUS



▲
THE SMALL MODEL
 with overall measurements of $8\frac{3}{4}'' \times 7'' \times 7''$ (with drum), accommodates $54 \times \frac{1}{2}''$ test tubes, or $30 \times \frac{3}{8}''$ (or $\frac{3}{4}''$).

▶
THE LARGE MODEL
 with overall measurements of $18'' \times 15'' \times 15''$ (with drums), will carry $240 \times \frac{1}{2}''$ test tubes per drum. Accommodating a total of $480 \times \frac{1}{2}''$ test tubes, or $300 \times \frac{3}{8}''$.



These LEEC Roll Drum machines are neat in design and simple to use. They can be used with confidence in standard incubators operating at only a few degrees above ambient, as the rise in temperature of either machine is negligible. Write to the makers for full specifications.

LEEC are also makers of Precision Incubators, High-speed Drying Cabinets, Stainless-Steel Steam Sterilisers, Animal Cage Sterilisers, Brushing Machines, etc.

Write to the makers

LABORATORY AND ELECTRICAL ENGINEERING COMPANY
 71-73 Goldsmith Street, Nottingham

Introducing

FOR

TISSUE CULTURE



“ESCOPLASTIC”

STERILE DISPOSABLE

PETRI DISHES

In cartons each containing 300 × 2" dishes packed in bundles of 10:

<i>Number of cartons per order</i>	<i>Price per carton of 300 Petri Dishes</i>
40	70/-
4	95/-
1	145/-

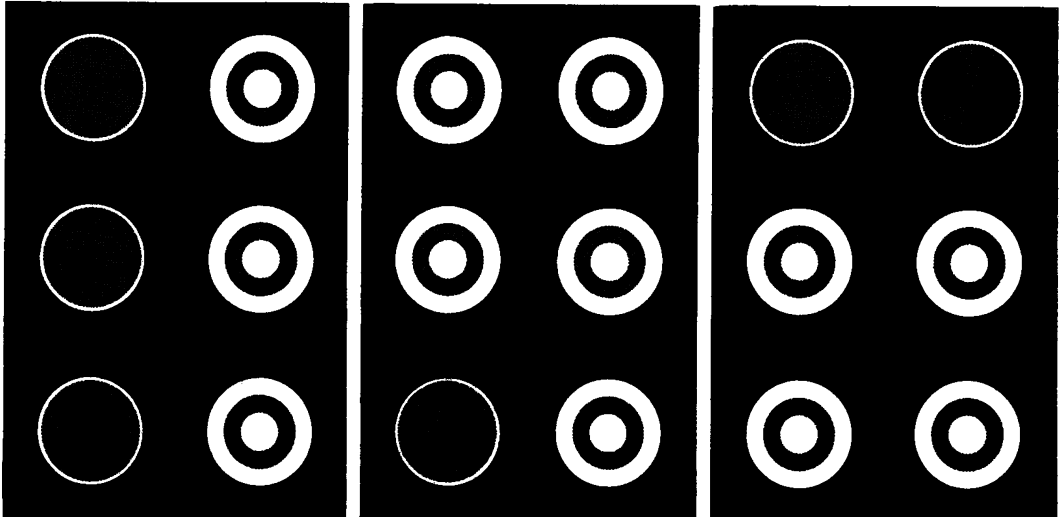
Minimum order: one carton of 300 Petri Dishes

Carriage paid in U.K. for orders value £10 and over.
All prices subject to alteration without notice.

ESCO (RUBBER) LTD.

Manufacturers of Rubber, Silicone Rubber and Plastic Products
SEAL WORKS · SEAL STREET · LONDON, E.8

**new... 'Prepuerin'
pregnancy diagnostic reagent
combines accuracy with
test-tube simplicity**



**'Prepuerin'^{brand}
pregnancy diagnostic reagent**

simple A one-stage urine test involving a straightforward comparison of haemagglutination patterns. No animals are required, and only the simplest of apparatus is used.

accurate The use of parallel controls throughout ensures unsurpassed accuracy. The test is not subject to the same limitations affecting animal tests.

specific The test is highly specific, therefore most unlikely to give false results.



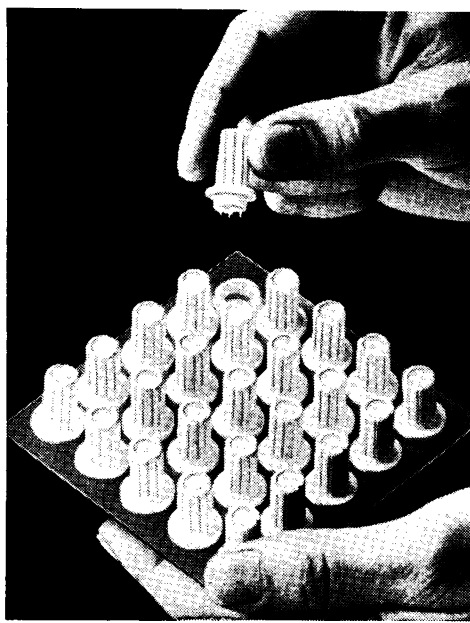
**WELLCOME
SERVICE** in Laboratory Technology

Further information on request to:
BURROUGHS WELLCOME & CO.
(The Wellcome Foundation Ltd.)

The Wellcome Building, Euston Road, London N.W.1.

TUBERCULIN TINE TEST

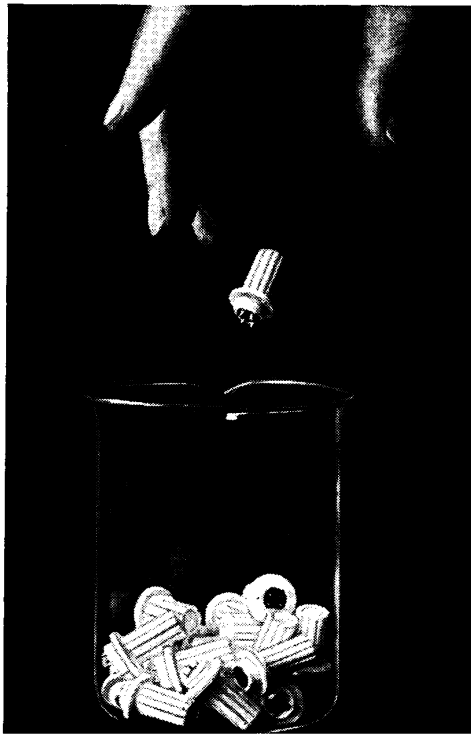
(Rosenthal) Lederle



A PRACTICAL ADVANCE IN TUBERCULIN TESTING



- **Simple** - requires no additional equipment
- **Accurate** - standardised against intradermal Mantoux test (5 T.U.)
- **Convenient** - small, portable and ready for immediate use.
- **Time-Saving** - each test takes only seconds.



- **Disposable** - no soiled apparatus no clearing up.

box of 25 tests

LEDERLE LABORATORIES

a division of
Cyanamid of Great Britain Limited

Lederle

CYANAMID

WHAT'S NEW FROM B.D.H.?

NUCLEIC ACIDS

Highly polymerised DNA and RNA

These nucleic acids, prepared at Poole by methods which minimise chemical and enzymic degradation, are isolated in highly polymerised forms, suitable for structural studies and as enzyme substrates.

DNA extracted from calf thymus gland¹ is isolated as a white freeze-dried solid, soluble in water to give viscous solutions. RNA extracted from yeast by the method of Crestfield *et al.*² is substantially free from protein.

(1) *Biochemical Preparations* (New York, John Wiley & Sons Inc.), 1958, Vol. 6, p. 8.

(2) *J. Biol. Chem.*, 1955, **216**, 185.

Deoxyribonucleic acid (highly polymerised) from calf thymus. 0.1 g **25s. 0d.**

Ribonucleic acid (highly polymerised) from yeast. 0.1 g **37s. 6d.**, 1 g **300s. 0d.**

COENZYMES

ATP, DPN (NAD), DPNH (NADH₂), TPN (NADP) and TPNH (NADPH)

These coenzymes are supplied in a high state of purity. In addition to assays of N and P, to ensure consistently high quality and to satisfy the need for correct data derived from up-to-date analytical methods the materials are tested by methods involving chromatography, electrophoresis, the determination of ϵ_{max} , and the ratio of optical densities at appropriate wavelengths.

Adenosine-5'-triphosphoric acid disodium dihydrogen salt crystalline.

0.1 g **4s. 9d.**, 1 g **27s. 6d.**

Diphosphopyridine nucleotide about 90%.

0.1 g **25s. 0d.**, 0.5 g **92s. 6d.**

Diphosphopyridine nucleotide (reduced) disodium salt about 90%.

0.1 g **50s. 0d.**, 0.5 g **220s. 0d.**

Triphosphopyridine nucleotide sodium salt about 90%. 25 mg **45s. 0d.**, 0.1 g **135s. 0d.**

Triphosphopyridine nucleotide (reduced) sodium salt.

10 mg **60s. 0d.**, 25 mg **125s. 0d.**, 50 mg **200s. 0d.**

PEPTIDE SYNTHESIS

p-Nitro-phenyl esters

Protected amino acids can be activated by forming the *p*-nitro-phenyl esters, which will couple directly with a second amino acid under mild conditions, affording a convenient method of synthesising peptides in which racemisation is kept to a minimum.

Two such esters now available from Poole are **benzyloxy-carbonyl-L-leucine *p*-nitro-phenyl ester** and **benzyloxy-carbonyl-L-phenyl-alanine *p*-nitro phenyl ester**.

Benzyloxy-carbonyl-L-leucine *p*-nitro-phenyl ester. 1 g **10s. 6d.**

Benzyloxy-carbonyl-L-phenyl-alanine *p*-nitro-phenyl ester. 1 g **25s. 0d.**

N-Benzyloxy-carbonyl-s-benzyl-L-cysteine

A useful intermediate for building up peptides in which both the -NH₂ and the -SH groups of cysteine are protected. After coupling with a second amino acid the protecting groups may be removed by treatment with sodium in liquid ammonia.

(1) *J. Biol. Chem.*, 1935, **111**, 385-92. 1g **12s. 6d.**

Glycyl-L-β-phenyl-alanine

A useful intermediate for peptide synthesis and as a reference substance. The material as supplied is chromatographically homogeneous; typical rotation: $[\alpha]_{\text{D}}^{20} = +41.7^\circ$

1 g **60s. 0d.**

B.D.H. NINHYDRIN SPRAY

in aerosol containers for developing paper chromatograms

Ninhydrin (indane-trione hydrate), the most widely used reagent for detecting amino acids on paper chromatograms, is now available from B.D.H. as a 0.5% solution in *n*-butanol packed in an aerosol container. The reagent may thus be quickly and uniformly applied, so that relatively unskilled workers can easily obtain satisfactory chromatogram development. The containers provide sufficient reagent for developing 25 to 30 10" x 10" paper chromatograms, and are supplied at the price of **12s. 6d.** each—less in quantities.

