(4) Absolute alcohol, 2 changes—3 to 5 hours.
(5) Xylol until clear—1 to 2 hours.
(6) Mount in damar, placing small drop of damar on slide beneath sections as well as to cover them.

III. *Hematoxylin-eosin-azure II:*
(Eosin-azure II may be used alone when it is not necessary to stain nuclei well).
(1) Delafield's hematoxylin as for hematoxylin-eosin.
(2) Tap water—3 hours.
(3) Distilled water—30 minutes.
(4) Eosin, 3 cc 0.1 per cent. aqueous solution, add 50 cc distilled water and 5 cc 0.1 per cent. solution azure II—5 to 12 hours.
(5) Differentiate in absolute alcohol 4 to 12 hours or until desired contrast is obtained between epithelial and connective tissues.
(6) Fresh absolute alcohol—10 minutes. Clear and mount as in II.

IV. *Iron hematoxylin:*
(1) Iron alum solution 2.5 per cent.—3 hours.
(2) Tap water several changes—3 hours.
(3) Regaud's iron hematoxylin diluted to pale amber color—until sections are black.
(4) 95 per cent. alcohol—30 minutes.
(5) Differentiate in saturated solution picric acid in 95 per cent. alcohol until only nuclei remain black.
(6) Tap water frequent changes until all picric acid is removed—8 to 12 hours.
(7) Absolute alcohol 2 changes—5 hours. Clear and mount as in II.

V. *Sections containing nitrocellulose:*
Stain as in II or IV. Following staining:
(1) 75 per cent. alcohol—1 hour.
(2) 95 per cent. alcohol—3 to 5 hours.
(3) Creosote solution (1 part creosote, 1 part toluene, 2 parts xylene) until completely clear. Mount as in II.

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A CONVENIENT RESISTANCE FOR DETERMINATION OF REDOX POTENTIALS IN BIOLOGICAL FLUIDS

A DISCOURAGING source of error in the measurement of redox potentials in many biological fluids is the rapid polarization of the cell. The obvious remedy, high resistance in the galvanometer circuit, has been adopted in most laboratories. Many of these devices are inconvenient to manipulate or to assemble. The writer has found that a series of radio grid leaks (or resistors) connected to a multiple point switch allowed a rapid adjustment of the potentiometer with a minimum flow of current from the cell. The device, Fig. 1, was made for $4.00.

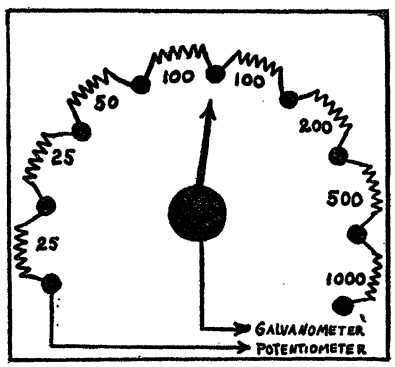

FIG. 1. Variable resistance for measurement of redox potentials of biological fluids. Unit resistance values above are in terms of 10^3 ohms.

The variable resistance is placed in series in the galvanometer circuit. About 500,000 ohms are switched into the circuit. This resistance is cut down step by step until a galvanometer deflection can just be detected. The potentiometer is balanced and the process repeated step by step until the system is balanced with all the resistance cut out. Thus the minimum current necessary to deflect a galvanometer (sens. .018 microamperes) is drawn from the cell and polarization minimized. The values of the unit resistors need not be accurately known, since they are not concerned in the final measurement.

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