

ondary. The mechanism leading to the kidney damage we are unable to explain satisfactorily at present. Sections of stomach and other organs in our series showed no deposit of calcium such as occurs in metastatic calcification where the amount of circulating calcium is increased.

These observations have served as a basis for further investigation, and are being tested in the experimental studies which we are now undertaking. By tying off the pylorus of cats, it has been possible to reproduce experimentally kidney lesions similar to those described.

91 (2323)

The skopometer: An instrument for measuring color, cloudiness, and other optical phenomena of liquids.

By WILLIAM G. EXTON (by invitation).

[From the Laboratory of The Prudential Insurance Company, Newark, N. J.]

The Skopometer was designed for measuring color, cloudiness, and other optical phenomena of liquids without the necessity of using standards for comparison.

Color is measured in terms of absorption by determining the extinction coefficient of the liquid with the aid of a monochromatic light filter complimentary to its color.

The construction permits measurements of cloudiness by means of several different optical principles. Denser clouds are conveniently measured by determining the height of the column of liquid necessary to extinguish a light image of standardized intensity by means of a target such as a platinized glass disc with a transparent line or design of given dimensions. The target may be used in various ways and illuminated by either incident grazing or transmitted light.

Lighter clouds are measured photometrically by matching the light incident for the target with the light reflected or scattered from the particles in suspension. For very small quantities of

liquid the standard target is modified by the cloudiness of a 10 mm. column of the liquid and matched photometrically with cross illumination through the plunger, the visual effect in all cases being that of disappearance of the target.

By means of a standard solution and a complimentary light filter, illumination is standardized by bringing the light of the special lamp to a distance corresponding with the extinction coefficient.

92 (2324)

The influence of the ingestion of potassium chlorate, sodium chloride and water on the oxygen capacity of the blood.

By VICTOR ROSS (by invitation).

[From the Research Laboratories of Lehn and Fink, Inc., Bloomfield, N. J.]

The experiments reported here were undertaken in order to compare the effects of the ingestion of potassium chlorate, sodium chloride and water on the oxygen binding capacity (hemoglobin) of the blood. Dogs were used. The last meal was given 18 to 24 hours before the experiment was begun but the animals had free access to water at all times except during the course of the experiment when they were kept in metabolism cages. In this manner it was hoped that when the experiments were begun the hemoglobin of the dogs' blood would be at the physiological level and that normal variations would be avoided as far as possible.

A dose of 0.5 gm. of potassium chlorate per kilo of body weight was given by stomach tube in one per cent solution (equivalent to 50 cc. of water per kilo). At the end of two, four and six hours blood was taken from the jugular vein, following which the dog was given 25 cc. of water per kilo. This made a total of 125 cc. per kilo. A final blood sample was taken 24 hours after the beginning of the experiment. Blood oxygen capacity determinations were made by the Van Slyke method.