days after the period of treatment, the pig receiving the tincture of iodine died, and autopsy revealed a generalized extreme tuberculous condition. Forty-five days after treatment was discontinued, the animals receiving the potassium iodide died and were autopsied. A generalized tuberculosis of extreme character was found. Sixty days after the last treated pig had died, the control pig died. Autopsy revealed a generalized tuberculosis, but much less marked than in the treated pigs.

The first pig treated with potassium iodide lived 76 days. The pig treated with the tincture of iodine lived 52 days. Another pig treated with potassium iodide lived 75 days, and the other, 76 days. The untreated tuberculized control pig lived 135 days.

2900

Eliminating confusion in colorimetric calculations.

A. R. ROSE.

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

The clinical analyst is sometimes confused in his calculations from comparison colorimetric (or turbidimetric) readings, especially if circumstances force him to deviate slightly from the definite directions of any given method. To avoid irritation and loss of time the author keeps on his desk the following equation:

$$\frac{F}{R} \times S \times \frac{V_u}{V_s} \times \frac{D_2}{D_1} \times \frac{1}{V} = X$$

F, scale reading of the standard in millimeters, usually fixed at some definite point; R, scale reading of the sample analyzed; S, concentration of the standard, usually milligrams per 100 cc.; V_u, volume of the colored (or turbid) solution as matched against the standard; V_s, volume of the standard solution; D_1, volume of the sample (or the aliquot extract) taken for analysis; D_2, volume to which D_1 is diluted before developing color (or precipitating); V, the volume of D_2 used in developing the color; X, the concentration of the unknown in terms comparable to S.

i. e., milligrams per cc. if S is given as milligrams; multiply X by 100 if mg. per 100 cc. is required. In most routine clinical work all but the first two and last terms $\left(\frac{F}{E}S = X\right)$ are unity and out of mind. When not in unity it is more often a simple two times, a five times or a ten times dilution, but odd dilutions may occur, as, for instance, when the sample available becomes limited through accident or otherwise. The mathematics involved should not deter the technician from saving his case.