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Dinitrosalicylic acid as a reagent for blood sugar.

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The reagent[1], in use at Ithaca since 1921 for the estimation of sugar in normal and diabetic urine, has been applied to blood.

The blood proteins are perfectly precipitated by the addition to 1 c.c. of blood, laked with 2 c.c. of water, of 4 c.c. of the neutral sodium salt of dinitrosalicylic acid (2.94 per cent.), followed by 2 c.c. of dilute sulphuric acid (0.40 N). Filtration is rapid. Excess of oxalate does not interfere. Three c.c. of the filtrate are heated in a Folin sugar tube in boiling water for three minutes to remove the dissolved oxygen. One c.c. of 3 per cent. sodium hydroxide is then added. This last reagent is made up saturated with sodium chloride to prevent oxygen from dissolving in it.

The test tube is heated for 10 minutes more, cooled and diluted to 25, 50, or 100 c.c. volume. The standard is prepared by heating 2 c.c. of a 0.015 per cent. glucose solution with 1 c.c. of neutral 1.78 per cent. sodium dinitrosalicylate for 3 minutes, adding 1 c.c. of the alkali and heating for 10 minutes.

The method is convenient; one standard will keep all day and can be used with bloods containing from 50 to 300 mg. of sugar per 100 c.c.

[1] Sumner, J. B., *Jour. Biol. Chem.*, 1921, xlvii, 5.