Summary. The inhibitory effect on melanin formation of aqueous extracts of isolated human epidermis and of homogenates of rabbit skin was found to be due to heat-stable, dialyzable, non-protein-like sulfhydryl compounds which were counteracted by cupric ions and p-chloromercuribenzoic acid. A direct relationship was found between the -SH concentration and the inhibitory power of extracts of human epidermis. Ultraviolet irradiation caused an immediate decrease in the amount of water-extractable -SH compounds of the skin of colored rabbits. No such decrease could be observed in albino animals. These findings support the previously advanced theory that pigment forming stimuli cause pigmentation by oxidizing or destroying the sulfhydryl compounds of the epidermis, whereupon the enzyme can freely act on the melanin precursor.

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Method for Determination of Sucrose and Sorbose in Blood and Urine.

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In this note is described a modification of the method of Hubbard and Loomis[1] for the determination of inulin which has proved satisfactory for the determination of sucrose and sorbose.

The method deviates from that described by these authors in the following ways.

The hydrochloric acid reagent is made by adding 5 volumes of concentrated HCl (sp. gr. 1.19) to one volume of distilled water. The resorcinol reagent is the same.

Plasma or serum filtrates are usually made in 1:20 dilution by precipitation with $Ba(OH)_2$ and $ZnSO_4$ according to the method of Somogyi.[2] Urine dilutions should be 1:100 or more. The one ml sample should contain between 30 and 160 μg of sucrose or between 20 and 150 μg of sorbose.

The procedure of Hubbard and Loomis is followed except for the following details. The test tubes are calibrated at 7.0 ml. After heating the mixture for 45 minutes in a water bath maintained at 70°C, 95% alcohol is added to the 7.0 ml mark, the solutions are mixed and are read in the Coleman spectrophotometer at a wave length of 530 mμ. In the case of sorbose, the density diminishes on standing; hence readings are made exactly 20 minutes after the end of heating.

Over the concentration ranges specified, the density was proportional to concentration for both sucrose and sorbose, sorbose being approximately 8% more chromogenic. Instead of running a blank we prefer to calculate a blank value by extrapolating the density of standards to zero content. In our experience the calculated blank density was usually less than 0.010.

Summary. The method of Hubbard and Loomis for the determination of inulin has been modified and adapted for the determination of sucrose and sorbose.

1 Hubbard, R. S., and Loomis, T. A., *J. Biol. Chem.*, 1942, **145**, 641.

2 Somogyi, M., *J. Biol. Chem.*, 1945, **160**, 69.