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Determination of carbon monoxide in blood.By **DONALD D. VAN SLYKE** and **HAROLD A. SALVESEN**.

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The blood is treated as in the determination of oxygen by Van Slyke's method.¹ A mixture of gases consisting of oxygen, carbon monoxide and the slight amount of nitrogen gas held in solution in the blood, is obtained. The extraction of the gases must be continued for a somewhat longer time than the one minute which is sufficient when oxygen alone is bound by the hemoglobin, otherwise the technique is the same. After the gases are measured, the oxygen is absorbed by permitting 1 or 2 c.c. of alkaline pyrogallol solution to flow slowly into the chamber of the apparatus from the cup at the top. The residual gas, corrected for the 0.009 c.c. of nitrogen gas per c.c. of blood known to be present, is the carbon monoxide.

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Titration of organic acids in urine.By **DONALD D. VAN SLYKE** and **WALTER W. PALMER**.

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Carbonates and phosphates are removed by adding 2 grams of calcium hydroxide to 100 c.c. of urine, and filtering after 10 minutes. 25 c.c. of the filtrate is brought to a pH of approximately 8 by adding 0.2 N HCl with phenolphthalein as indicator, till the pink color disappears. Then 5 c.c. of 0.02 per cent. Tropeolin oo solution are added, and the solution is titrated to a pH of 2.7 with 0.2 N HCl, the volume being brought to approximately 50 c.c. by addition of water towards the end of the titration. The color is compared with that of 50 c.c. of a control solution with

¹ *Jour. Biol. Chem.*, 1918, xxxiii., p. 127.