plasma, previously freed from CO_2 gas in a vacuum, gives a practically neutral solution ($P_H = 7.0$). Plasma from patients in acidosis has been observed to give a $P_H = 4.8$ under the same conditions. The results by this method run parallel to those by the CO_2 capacity method, and both blood analyses give figures from which the alveolar CO_2 tension can be predicted within about 5 mm.

The above results indicate that while in acidosis the H^+ concentration of the blood is not altered, its *reserve alkalinity* (ability to retain normal reaction despite addition of acid) is decreased, and that the decrease can be measured by any of the above three methods.

100 (1032)

The Abderhalden reaction II.

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The technique described in the PROCEEDINGS for May 20, 1914, has been modified to the following, which permits more accurate determination of small differences in proteolysis as measured by the amino acid nitrogen: 0.1 gram of dried placenta substrate, or an approximate equivalent of wet substrate, prepared according to Abderhalden, is incubated with 2 c.c. of serum. The mixture is then diluted with about 20 c.c. of water, heated to boiling, and Merck's dialyzed ferric hydrate (Rona-Michaelis method) is added, 1 c.c. for serum alone, 2 c.c. for serum and substrate. The excess iron is precipitated by adding 0.5 c.c. of 1 : 1 solution of crystalline $MgSO_4$, and the solution is filtered and washed into a small evaporating dish. The solution is concentrated on the water bath to dryness; the residue is redissolved in a few drops of water, and washed completely into the micro-amino-nitrogen apparatus. Serum alone gives 0.18 to 0.28 c.c. of nitrogen gas, duplicates on the same serum agreeing within 0.01 c.c. or closer. The increase due to placenta may be as high as 0.25 c.c. Normal male sera give results varying over about the same range as pregnant sera, although a somewhat greater proportion of pregnant than of male sera give results near the upper limit of the range.