For the estimation, urine is collected in clean Pyrex beakers with as little contact with air as possible. Two 1 cc. samples are diluted to 10 cc. with distilled water in Pyrex test tubes. To one of these tubes 1 cc. of the brom cresol purple indicator is added, and the solution mixed. If the pH of the urine falls within the range of the indicator, readings are at once made in the bicolorimeter. If not, 1 cc. of either brom cresol green or phenol red is added to the second tube, depending upon whether the urine is strongly acid or alkaline, and color comparison made. So far as the matching of colors goes, the method has a probable error of ± pH 0.02 to 0.04.

## 246 (2769)

### Observations on the excretion of an acid urine in alkalosis.

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It has been customary to use the reaction of the urine as a guide to the therapeutic administration of sodium bicarbonate. In their most recent discussion of the subject Palmer, Salvesen and Jackson[1] state that the first significant effect on the pH of the urine, *i. e.*, a rise to pH 7.0, can be taken as a safe and reliable guide for discontinuing alkali administration. This is probably true in the great majority of cases, but we believe that occasionally cases are encountered which do not readily excrete alkali, and that in such instances the reaction of the urine is not a safe criterion. We can record observations on two cases where the reaction of the urine remained strongly acid despite the development of an alkalosis. The data are self explanatory.

[1] Palmer, W. W., Salvesen, H., and Jackson, H., Jr., *J. Biol. Chem.*, 1920-21, xlv, 101.

| Case | Date 1924 | Blood | | Urine pH | Remarks |
|---|---|---|---|---|---|
| | | pH | $CO_2$ content | | |
| M. J. | 2/26 | 7.50 | 63 | | Acute nephritis, receiving small amounts of $NaHCO_3$. |
| | 2/27 | 7.51 | 61 | Less than 5.20 | |
| | 2/28 | 7.48 | 52 | | |
| A. W. | 4/12 | 7.55 | 62 | 5.21 | Laparotomy, receiving $NaHCO_3$. |

## 247 (2770)

### Acid-base balance in pregnancy.

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In recent years considerable discussion has centered around the reaction of the blood during normal pregnancy, since findings in abnormal conditions, notably in the toxemias of pregnancy, must of necessity be compared with the normal. The various observers cited in this abstract all agree that plasma bicarbonate is lowered during pregnancy. Hasselbalch and Gammeltoft[1] confirmed earlier observations of the lowering of carbon dioxide tension of the blood during pregnancy, and Rowe[2] has recently determined the decrease in alveolar tension of carbon dioxide in a large series of cases.

During the past four months we have carried out plasma pH determinations on a series of thirty-three normal pregnant women. The series includes one to three determinations before delivery and one after delivery. Up to the present, 58 of the determinations before delivery, and 23 following delivery have been completed.

Plasma carbon dioxide content was lower during pregnancy

[1] Hasselbalch, K. A., and Gammeltoft, S. A., *Biochem. Ztschr.*, 1915, lxviii, 206.

[2] Rowe, A. W., *J. Biol. Chem.*, 1923, lv, 28.