

potas. oxalate. Shake up, and at once titrate to rose colour with decinormal sodium hydrate with constant shaking. Calculate to 1500 c.c. urine in terms of HCl, or multiply the number of c.c. of alkali used by 4 and call it the "per cent. of acidity."

II. *Phosphates in Urine.* (Sutton's *Vol. Analysis.*)

Solutions required: (a) Standard uranium acetate; (b) standard solution of a tribasic phosphate (microcosmic salt); and (c) solution of cochineal. The uranium solution contains 35 grms. uranium acetate with 50 c.c. pure acetic acid per litre. The phosphate solution contains 5.886 grms. microcosmic salt, powdered and dry, per litre, and hence 50 c.c. contains 0.1 gm. P_2O_5 . (Work out.)

To standardise the uranium solution, add a few drops of cochineal solution to 50 c.c. of the phosphate solution in a small flask, heat to boiling point, and while boiling run in uranium solution from a burette slowly until mixture turns a dirty green colour. Calculate from this how much P_2O_5 1 c.c. of the uranium acetate solution is equivalent to, if exactly correct, 20 c.c. uranium acetate are required for 50 c.c. of microcosmic salt, 1 c.c. = 0.005 P_2O_5 .

Take 50 c.c. clear urine—sample A—and estimate total phosphates. Titrate while boiling with the uranium solution as before, using the cochineal indicator, and the first appearance of the green colour is the end point. Repeat until the results are con-