ical activity of the more numerous bacteria in the mineral deficient animals. Kjeldahl determinations showed that there was 10.2% protein in the cecal material in the deficiently fed as compared with 6.8% in the adequate controls. The higher protein might favor bacterial growth.

Conclusions. Young rats fed diets low in calcium have a pH of about 6.0 in their large intestines. Controls fed the corresponding adequate diet have a pH of about 7.0.

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Additional Sources of Androgens.

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Stallion Urine. It is rather surprising that the occurrence of androgens in stallion urine has not been reported, or if it has that the record has not found its way into the literature of the subject, since stallion urine has been studied in relation to estrogenic content. For this reason we have made assays upon stallion (Percheron) urine and report them here. The occurrence of an androgenic substance in stallion urine was demonstrated in our laboratories by Mr. Norman Nathenson in 1936, but his assays were erratic due to massive doses. The studies were repeated by us during the fall of 1936, smaller doses being used and fairly concordant assays being obtained. The urine was acidified to Congo red with sulfuric acid and allowed to stand 2-3 days. It was then extracted with benzene, evaporated to dryness, residue taken up in ether, washed with 10% NaOH solution, dissolved in olive oil and assayed by the capon comb method. The assays showed a bird unit in (1) 548 cc., (2) 570 cc., (3) 562 cc.; an average of 560 cc. per bird unit. (A bird unit is taken herein to be the amount of each of 5 daily injections required to produce a total of 5 mm. growth in length plus height as measured on the 6th day.)

Dog Urine. Dog urine was collected from a male German police dog; the same animal serving as a source for 2 experiments with an interval of about a year intervening. The urine was extracted in the same manner as that of the stallion. The first sample was assayed on 4 birds, the latter on 2. The amount of urine necessary for a

bird unit was as follows: (1) 790 cc., (2) 500 cc., (3) 650 cc., (4) 415 cc., (5) 920 cc., (6) 650 cc. Average 652 cc. per bird unit.

Chicken Feces. For these studies rooster and capon feces were used. In each case 630 gm. of fresh feces were shaken with water acidified to 1% with sulfuric acid and allowed to stand several days before filtering. The filtrate was extracted in the same manner as the stallion urine.

The rooster feces extract was assayed on 3 birds and the amount of original feces required to give a bird unit was found to be (1) 84 gm., (2) 78 gm., (3) 70 gm. Average 77 gm. per bird unit.

The capon feces showed no growth effect even when the equivalent of 310 gm. of feces was injected subcutaneously into a single bird. When injected into the base of the comb the equivalent of 250 gm. produced growth of less than 3 mm. Since injection into the base of the comb is about 20 times as effective as intramuscular injection[1] it would appear that there is about one bird unit in 1000 gm. of the capon feces. The small amount of androgens in capon feces is surprising in view of the fact.that it is easily demonstrated in hen feces.[2] This divergence may be explained by the method of extraction, which in one case was specifically for the female hormone and in the other for the male hormone.

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A Vasopressor Phenomenon Following Intra-arterial Administration of Hypertonic Solutions.

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The behavior of hypertonic solutions in the blood stream has been investigated both in normal[1-5] and in shocked animals.[6, 7] In all in-

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