

cc. of the thymol solution to be analyzed. (The number of cc. of thymol solution used is diluted so that it will not contain more than 0.5 mg. thymol.) Allow to react 1 minute and then add 2 cc. of a 3.0 per cent NaHCO_3 solution. Set aside in diffused light for 10 minutes and then read in a colorimeter against a standard thymol solution 2 cc. of which contains 0.2 mg. (or 0.5 mg.) thymol. Thymol solutions are best prepared by first dissolving the thymol in a small volume of alcohol and then diluting to volume with distilled water.

In order to obtain the best results by this method the reagents listed above must be prepared and used with an accuracy of at least ± 5.0 per cent.

283 (2515)

An undescribed constituent of semen.

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In the study of spermatozoa with the darkfield microscope in April, 1920, my attention was attracted by the presence of very many minute particles which exhibited the Brownian movement. A number of specimens were examined, always with the same result, except that in perfectly fresh specimens of semen the Brownian movement was not distinctly apparent. In these specimens the particles seemed to be imbedded in a gelatinous matrix, so that the particles moved only when the matrix was moved by the penetrating or lashing movements of the spermatozoa. After some hours the gelatinous condition disappeared and liquefaction supervened. In this latter phase the Brownian movement of the particles became very active. If the cover glass be surrounded with a ring of oil to prevent drying, the particles and their movement may be observed for several days.

Up to date, the particles have been found to be constantly present in the seminal secretion of man, stallion, bull, boar and the testicular fluid of the rooster.

Counts were made of the number of particles by the use of the

ocular micrometer method as devised by S. H. Gage. In man the average ranged from 154 to 190; in the stallion, the number averaged in one instance 156 to 165, in another instance 21 to 35. Samples from five different bulls gave quite variable results. In bull No. 1 the particles averaged from 35 to 53; in bull No. 2, 51 to 127; in bull No. 3, the average was 60; in bull No. 4, 19; and in bull No. 5, the range was from 7 to 20. Some of the specimens showing the lower number of particles were obtained from young bulls which had not been in service long. Whether there is any correlation between the number of particles and the age of the animal; or whether there is possibly some relationship indicating the degree of fertility of the fluid are problems still to be solved.

The term spermatomicrons is suggested as an appropriate name for the designation of these particles.

Similar particles (galactomicrons) have been observed in the milk of a number of different species of animals, but in the examination of the other secretions of the body, saliva, urine and bile, I have not yet been able to find them.

Experiments are in progress to determine the nature of these particles. The indications thus far are that they are not composed of fat, but further work is necessary.

In the examination of available literature no reference has as yet been discovered relative to the presence of these particles in the semen.

284 (2816)

Certain pathological tissue changes in thyroidectomized sheep.

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Of ten lambs that were thyroidectomized early in life, five showed marked lesions. The others were either operated on too late in life or were too young at the time of death. The duration varied from 8 months 4 days to 2 years 5 months after the removal of the thyroids. The lesions were subcutaneous and sub-