crons, was also made. Rats on a rickets-producing diet were then exposed to sunlight from 11 a. m. to 1 p. m. daily, the rays in one case passing through vitaglass and in the other through ordinary glass. The rats were then killed and examined. The results which are recorded in Table I indicate that the rays passing through the ordinary glass have no antirachitic effect, while the rays passing through vitaglass have roughly one-quarter the value of the direct rays.

The cold air is apparently not a factor in producing any of the changes which we have attributed to the ultraviolet rays, as the cold air circulated freely into the cage enclosed with ordinary glass with no resultant prevention of rickets.

Conclusions: (1) December skylight in the latitude of the City of Toronto produces a definite antirachitic effect on rats fed on a rickets producing diet.

(2) The rays from December -sunlight which have passed through vitaglass had an antirachitic effect which is roughly one-fourth the value of the direct rays. Rays which have passed through ordinary glass had no antirachitic effect.

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A Chemical Study of the Normal Aqueous Humor.*

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The preliminary study of the composition of the normal aqueous humor in the dog was undertaken to serve as a basis for further

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investigation of the changes which occur as a result of chemical and physical alterations in the eye. The determination of total nitrogen,[1] non-protein nitrogen,[2] protein nitrogen, amino-acid nitrogen,[3] urea nitrogen,[3] uric acid,[4] creatinine,[2] glucose,[5] and refractive index was made. Because of the small quantity of eye fluid, the ordinary methods for the estimation of these substances were modified by the employment of smaller quantities of reagents, and by the use of a microcolorimeter. The refractive index was obtained by the means of a Pulfrich-Zeiss dipping refractometer. The fluid was removed by paracentesis of the anterior chamber, with a fine bore needle, under ether, amytal or cocaine anesthesia as indicated in the table. About 0.6 to 0.8 cc. of aqueous humor was obtained each time. It was found that 0.2 cc. was sufficient for any one of the analyses except that for amino-acid nitrogen, for which 0.5 cc. was required.

The following table shows the refractive index and the average results in milligrams per 100 cc. of eye fluid. This is a preliminary report.

TABLE I.

	Anasthesia: Cocaine locally. No. of dogs used.	Average mg. per 100 cc. of aqueous humor.	Anesthesia: Ether. No. of dogs used.	Average mg. per 100 cc. of aqueous humor.	Anesthesia: Amytal. No. of dogs used.	Average mg. per 100 cc. of aqueous humor.
Total nitrogen	18	40	3	35	6	41
Non-protein nitrogen	23	25	3	21	6	32
Protein nitrogen	14	14	3	13	6	9
Amino-acid nitrogen	14	9	—	—	—	—
Urea nitrogen	15	12	—	—	—	—
Uric acid	23	1.8	9	2.0	9	1.9
Creatinine	23	1.3	5	1.4	6	1.2
Glucose	36	77	17	137	6	83
Refractive index	39	1.33505	17	1.33528	6	1.33506

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