greenish fluorescence in transmitted light. The lower layer after a while became white, due to the settling of the insoluble tellurium compound. On the whole it may be stated that no advantage was gained by the addition of the tellurium compound to the concentrated sulphuric used as the reagent to test for cholesterol.

4994

A Test to Differentiate Ergosterol From Cholesterol.

VICTOR E. LEVINE AND EUDICE RICHMAN.

From the Department of Biological Chemistry and Nutrition, School of Medicine, Creighton University, Omaha, Nebraska.

When sulphuric acid or a mixture of selenious and sulphuric acids is used as a reagent for cholesterol dissolved in chloroform, the two layers, that is the chloroform and the acid layer, assume different colorations. With sulphuric acid alone the chloroform layer is cherry red and the acid layer shows green fluorescence. With the selenious-sulphuric acid mixture, the chloroform layer assumes a deep beautiful purple, while the lower layer is red brown but does not display green fluorescence.

When, however, ergosterol is used with either reagent, the acid layer is colored *but the chloroform layer remains free from color.* With concentrated sulphuric acid and an equal volume of chloroform solution, the acid layer ranges in color from a brownish red in a 1%, to cherry red in a 0.5%, to light cherry red in a 0.1%, to orange in a 0.04%, and to yellowish orange in a 0.025% solution of ergosterol. In all these concentrations the typical green fluorescence is also observed in the acid layer.

With concentrated sulphuric acid containing 125 mg. of sodium selenite per 25 cc. of acid, the chloroform layer ranges in color from dark red brown to light red brown in the above concentrations of ergosterol while no green fluorescence is noted. *The chloroform layer remains uncolored.*

From the above results the conclusion may be drawn that cholesterol on treatment with acid forms a decomposition product or products giving rise to colored solutions in chloroform and in sulphuric acid or in both. Ergosterol, on the other hand, seems to give a decomposition product or products dissolving with color formation only in sulphuric acid.

Solutions of cholesterol in chloroform remain colorless, while

solutions of ergosterol rapidly assume a deep yellow-brown tinge. Irradiated ergosterol develops the color more rapidly and more intensely than the non-irradiated sterol.

4995

Observations on the Transmissibility of Lymphoid Leucemia of Mice.*

J. FURTH AND M. STRUMIA.

From the Henry Phipps Institute of the University of Pennsylvania, Philadelphia.

Two spontaneous cases of lymphoid leucemia of mice have been observed in a stock of about 300 mice (over 8 months of age) designated as strain A. The systemic enlargement of all superficial lymph nodes drew attention to this condition. The white blood count was 157,000 in one case and 315,000 in the other; in both, the spleen was very much enlarged and extensive lymphomatous infiltrations were found in the liver. Both cases have been successfully transmitted to normal mice of the same strain and of another strain named R. In about 800 mice of the latter strain, which are still alive, and in about 100 autopsied cases of the same strain (above the age of 8 months) no leucemia or lymphosarcoma has been found. Table I is a summary of the first 7 transmissions including first passages from the spontaneous cases and 2 second, one third and one fourth passage from the first case, and one second passage from the second case.

TABLE I.

	Number of mice inoculated	No. of cases of leucemia	No. of lymphosarcomas
Mice of strain A injected intraperitoneally	70	1	1
Mice of strain A injected subcutaneously	16	0	0
Mice of strain A injected intravenously	99	12	1
Mice of strain R injected intravenously	73	10	2

Lymph nodes or lymph nodes and spleen from leucemic mice were cut up with a small scissors and Locke solution was added drop by drop. After filtration through a small piece of cotton the turbid solution containing about 40,000 to 150,000 lymphocytes per cm. was injected in amounts of 0.1 to 0.2 cc. The blood of a leu-

* This investigation has been supported by a Fund for the Study of Leucemia and Related Diseases.