lowing experiments dealing with the estimation of the pH of the Rous chicken sarcoma No. 1 are given.

pH OF ROUS CHICKEN SARCOMA

Subcutaneous tumor No. 1		Subcutaneous tumor No. 2		Large intramuscular tumor No. 1	
Minutes	pH	Minutes	pH	Minutes	pH
1	6.76	3	6.89	2	6.42
3	6.76	5	6.87	4	6.49
5	6.73	7	6.85	5	6.47
8	6.76	10	6.84	9	6.42
11	6.76	16	6.82	13	6.32
13	6.78	30	6.79	16	6.32
		61	6.79	18	6.32
		95	6.80		
		125	6.82		

These results indicate that the Rous chicken sarcoma in the living animal is characterized by an extremely low pH, as compared with that of blood. Work with the Jensen rat sarcoma and the Walker rat carcinoma 256 has also revealed pH values considerably on the acid side of 7. These very significant observations have led us to a systematic investigation of the pH of a great variety of normal and malignant tissues in the living animal.

Since October, 1931, Dr. R. H. Fitch has joined us in this work and we are indebted to him for assistance in the final development of this new method.

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A CULTURE MEDIUM FOR PARAMECIUM

THE medium set forth in this article has proven itself to be very satisfactory in the culturing of various species of Paramecium in pure line cultures. The main result of the use of the medium is that the organisms do not exhibit a lowering of their normal metabolism after continuous culturing.

The basic part of the medium is the usual hay infusion of ten grams of chopped timothy hay boiled for fifteen minutes in a liter of well water. This infusion is filtered and sterilized in the Arnold sterilizer at 100° C. one hour a day for three days. It is diluted with nine volumes of sterile well water just before using. Two portions of this infusion are placed in sterile liter flasks with sterile cotton stoppers. One liter is inoculated with *Bacillus subtilis* and the second with *B. coli communis*. A third portion of the medium is made up as follows: Approximately thirty grains of wheat are boiled in a small amount of water for ten minutes. The wheat grains only are then placed in a third liter flask of sterile well water. The three portions are incubated at 37° C. for twenty-four hours, and then combined in one large sterile flask. The medium is now ready for use. The cultures may be used in almost any size of container, but that used has been the three hundred cc Erlenmeyer flask. These flasks are fitted with cotton stoppers and sterilized. Each flask is filled about two thirds full of the medium, and different species of Paramecium are transferred to the cultures with sterile pipettes.

The original basic infusion may be made up, sterilized and stored in a refrigerator until ready for use. Likewise, the medium, made of the three portions, may be stored in a refrigerator for later use.

Sterile precautions are maintained throughout the procedure, but after Paramecium has been transplanted, such strict precautions are no longer necessary. The essential part of the process is to provide a medium rich with a suitable food in which Paramecium will continue to grow normally. With these sterile precautions, other ciliates and flagellates are eliminated. A single organism placed in such a medium will produce a flourishing culture in seven to ten days. One should transplant every two to three weeks. *Paramecium multimicronucleatum, P. bursaria* and *P. aurelia* have been thriving for eight months in this medium.

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SPECIAL ARTICLES

SIZE OF INFECTION AS AN INFLUENCE ON THE PERSISTENCE OF ADULT TRICHINAE IN RATS[1]

THE statements that can be found in text-books and published work on trichiniasis regarding the length of life of adult *Trichinella spiralis* are usually quite vague and indicate that wide variations may occur. The usual statement is that the adult worms live for several weeks or longer. Ransom[2] says that adult trichinae of both sexes have been found in the intestine as late as 12 weeks after infection, and that they may commonly be found in large numbers for as long

[1] From the laboratory of parasitology, department of bacteriology, University of Rochester, School of Medicine and Dentistry, Rochester, N. Y. This investigation was aided by a grant from the Rockefeller Foundation.

[2] B. H. Ransom, "Trichinosis," Rep. U. S. Live Stock San. Assoc., pp. 147–165, 1915.