

the circulation of the finger—so as to avoid independent movement. By means of certain adjustments on the stand, the finger can be moved to any desired position.

(4) The camera was devised for us especially for this purpose. The film is driven by a motor, and the number of exposures a second is indicated by a special speedometer recorded on the film.

With the apparatus in its present form satisfactory cinematographic photographs can, as has been said, be taken. A film taken by our method which showed the corpuscles in motion was demonstrated to the meeting. The detailed description will be published later.

48 (2571)

Twelve per cent dextrose media for prolonged anerobe growth.

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The following easily prepared media permits the vigorous growth of several strains of a typical anerobe, the bacillus of symptomatic anthrax (*B. gangraenae emphysematosae*, or *B. chauwei*) for 30 or more days.

Composition of media :

water	7000 cc.
liver, hog	2500 gm.
peptone	80 gm.
Ringer salt	40 gm.
chalk	350 gm.
dextrose	1000 gm.

The above quantities are for one 12 liter flask. It is essential that the liver be not more than 24 hours old, and should be obtained at the abattoir. The media is sterilized by placing the flasks or jars in the autoclave, bringing the steam pressure up to 15 lbs., and maintaining it at 15 lbs. for 45 minutes. The media is not injured by this severe heat treatment. Several lots

were autoclaved three times without interfering with the ability of the media to start and maintain the growth of the bacillus of symptomatic anthrax.

After autoclaving let the media cool, incubate for 24 to 48 hours, and the media is ready for inoculation. No titration or pH adjustment is necessary. The media keeps well; small jars containing a deep layer of it were good after having been kept at room temperature for several months.

Just why this media permits so much longer growth than others can not be stated with certainty. It is probably due in part to the high concentration of dextrose, and the presence of the calcium carbonate which neutralizes the butyric acid formed by the bacillus. That this neutralization is not complete is shown by the acid reaction of the culture filtrate, which has a pH of 5.2 to 5.8.

49 (2572)

Studies on the action of insulin neutralized with alkaline solutions.

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It was observed that the result of insulin injections varied with the route of administration. Using normal rabbits for our experiments, it was determined that if the injection was given intradermally the effect was more lasting than if an equal amount had been injected subcutaneously. These findings, the subject of an earlier paper, led to the question as to whether or not similar results can be obtained in the human body. Before proceeding with our studies it was found necessary to conduct comprehensive preliminary tests in animals, the results of which were important biologically and clinically. The following problems presented themselves:

(1) What pathologic changes does the intradermal injection of insulin cause in the skin?