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A New Agent for Objective Measurement of Circulation Time.

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The arm-to-head circulation time may be objectively measured by the injection of 1 cc of aminophylline (0.24 mg) into the antecubital veins. The end-point of the reaction is signalled most frequently by a marked increase in the depth of inspiration, which in many cases amounts to a gasp. While this occurs in every case, in some instances it may be preceded by swallowing movements, a change in facial expression resulting from subjective sensations, or a sharp catch during expiration. The first observable change is taken as the end-point.

The test was tried in 92 patients at various stages in the postoperative state whose ages ranged from 12 to 82 years. Only once in 92 trials was any difficulty experienced in recognizing the end-point. The circulation times ranged from 7.1 to 20.4 seconds averaging 12.4 seconds.

The test is safe, the end-point is sharp, the method is objective, the amount injected is small, the agent is readily accessible. All of these factors combine to commend it.

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Studies on the Microcataphoresis of Animal Parasites.

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Extensive studies have been made on the electric charge of bacteria and suspensions of most of viruses which have been found to carry a negative charge. The amount of the current as measured in milliamperes is primarily responsible for the accumulation and destruction of these microorganisms at the positive pole. With viruses it has been found that the nature of the charge influences passage through a filter, so that this characteristic has been utilized to free these filter passers from contaminating material. Moreover, the knowledge of the charge of the organism is important in devising methods for its destruction *in vivo* and *in vitro*.

Description of Apparatus. In principle and in many structural respects the cataphoresis cell constructed was essentially like the original one devised by Brown and Broom.[1] We merely superimposed a bored-glass section communicating with the channel and a brass plate with appropriate apertures into which the chamber holding the zinc sulphate solution and microorganism suspension could be cemented.

Materials employed. Trypanosoma cruzi, Leishmania brasiliensis and *Leishmania tropica* were grown on Senekjie's medium.[2] The cysts and eggs of intestinal parasites were concentrated by the zinc sulphate technic of Faust *et al.*[3] The filariform larvae of

[1] Brown, H. C., and Broom, J. C., *Brit. J. Exp. Path.*, 1929, **10**, 61.

[2] Senekjie, H. A., *Trans. Roy. Soc. Trop. Med. and Hyg.*, 1939, **33**, 267.

[3] Faust, E. C., Sawitz, W., Tobie, J., Odom, V., Peres, C., and Lincicome, D. R., *Parasitol.*, 1939, **25**, 241.