

(*Annales Pasteur*, July 1890), I employed sterilized serum, obtained either from ox-blood or from hydrocele or pleuritic exudation. I can quite confirm the statements of these observers as to the advantage of this medium over agar-agar jelly, since by employing serum the colonies of the diphtheria bacilli are readily recognizable at the end of twenty hours, or even earlier if the serum be "improved" in the manner recommended by Loeffler, through the addition of one-fourth its bulk of a broth containing peptone, beef-tea and sugar. On the other hand, if agar-agar be employed, the colonies are never recognizable before the end of forty-eight hours, and show nothing strikingly characteristic before the fourth day. As the essential object of the examinations is to make an early and positive diagnosis, the saving of twenty-four hours would seem to be of vital importance in itself, but the serum method has also the advantage of permitting the diphtheria bacilli to bring their colonies to maturity before the other bacilli which are present have even commenced to form visible colonies. With agar, on the other hand, the two days needed for the appearance of the diphtheria colonies affords ample time for the development of the putrefactive forms, if these are present in any large number. The only advantage of the agar method is that the pyogenic staphylococci and streptococci which are usually present have more characteristic growth than on serum—a matter of secondary importance.

There is a current impression that the serum is difficult and troublesome to prepare, and this has led to its use being avoided in many laboratories when any other medium can be substituted. This idea is quite erroneous, as serum is as easily made as any of the other nutrient media—in fact, far easier than gelatine, if prepared according to the method given by Hueppe (*Centralb. f. Bact.*, July, 1887), which consists in coagulating and sterilizing the serum at once simultaneously. After the tubes are filled to a depth of one to two inches they are laid obliquely in rows in a thermostat, which is then heated till the inner temperature reaches 68° to 75°C. After half an hour or more at this temperature the tubes will be found to have coagulated, leaving the serum nearly transparent. The temperature can now be raised

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