

a wad of cotton, and then heated one hour daily to a temperature of 68°C . By this means it is possible—not always, it is true, but still in most cases—to completely sterilize the serum. It is hastily heated to 65°C . for several hours, until it becomes stiff and firm. After this treatment the serum is of a yellowish or amber colour, is completely transparent, or only slightly opalescent, of a jelly-like consistence, and shows, even when kept for days, not the slightest development of colonies of bacteria. However, should the temperature rise over 75° , or last too long, it becomes opaque. In order to obtain a large surface for cultivation purposes, the serum should be allowed to stiffen when the flask is held in an inclined position. For a culture which would be accessible to direct microscopical examination, a little serum may be allowed to stiffen in a watch-glass or concave slide. To this jelly-like substance the tubercular material is to be transferred in the following manner.

The simplest way, and the way which is successful, almost without exception, when the animal has just died of tuberculosis or has immediately previously been killed while suffering from that disease, will be first described. The skin over the breast and belly is cut with instruments which have shortly before been heated to redness. The ribs are then divided with scissors or forceps which have been similarly treated. The anterior wall of the thorax is then removed without opening the abdominal cavity, the lungs being thus to a great extent laid bare. These instruments are exchanged for others also previously heated, and single tubercular nodules are dissected out and transferred to the jelly surfaces as quickly as possible by means of a platinum-wire fixed into a glass handle, and which has been quite recently heated to redness. Of course the stopper of cotton is to be raised only momentarily. In this manner a number of flasks, from 6 to 20, should be provided with tubercular material, because even with the greatest care not all the flasks will escape accidental contamination. Caseated lymph-glands are quite as suitable as lung tissue, but pus from broken down lymph glands is not so good, because it contains few or no bacilli.

The cultivation of the bacilli from material taken from human