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Preparation of collodion sacs for use in bacteriology.

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A standardized method was described by which collodion sacs suitable for intraperitoneal incubation and for other bacteriological experiments may be produced in large numbers, sterilized, and handled with convenience and the minimum danger of contamination.

Following the procedure of Prudden and McCrae, 1900, as modified by Harris, 1902, the collodion sacs are made on a gelatin capsule foundation which is then dissolved out with hot water. The essentials of the method are the alcohol treatment of the collodion membranes, as recommended by Brown, 1915, and the protection of the sacs in individual glass containers before and after use. Various factors influencing permeability have been subjected to experiment.

Quantitative experiments on the dialysis of sodium chloride indicate a uniformly high degree of permeability but the permeability conferred by the alcohol treatment is lost during heat sterilization if the membrane was previously allowed to dry. Simple tests with other substances show that the sacs are permeable to gases in solution, to inorganic salts, to dextrose, to certain protein-split products which are nutritive to bacteria, and to certain toxic products of bacterial metabolism, but they hold back antibodies, unsplit proteins, and formed elements such as bacteria and body cells.

The preparation of the sacs is described in detail in the forthcoming (January, 1921) number of the *Journal of Experimental Medicine.*