

glove already referred to. They can be worn for an indefinite length of time. When properly taken care of they will wear a month, operating every day; and when worn they can be repaired. They are very easily sterilized in boiling water in two minutes. Dr. Brinsmade experimented with these gloves and found that they could be easily and satisfactorily sterilized after being dipped in the pus of an abscess. He has received the following pathological report based upon bacteriological tests made by Dr. Archibald Murray:

The following experiments were made in order to determine the length of time necessary to sterilize rubber operating-gloves by means of Shering's Formalin Sterilizer:

Two kinds of culture media were used:

1. Löffler's medium: Blood-serum and sugar beef-tea.

2. Agar.

In experiment No. 1 a rubber finger, previously sterilized by boiling, was smeared with pus and blood from an infected wound of the hand. Two pieces were immediately cut out with sterilized scissors and forceps and one piece placed in a tube containing Löffler's medium, and one in a tube containing agar. The rubber was then placed in the sterilizer. Two five-grain paraform pastilles were placed in the cup and the lamp lighted.

In six and one-half minutes the light went out and the rubber was allowed to remain in the sterilizer three and one-half minutes longer, making the total length of time in the sterilizer ten minutes.

With sterilized instruments pieces were now cut out of this sterilized rubber and one piece placed in a tube containing Löffler's medium, and one in a tube containing agar. These four tubes were placed in a incubator at 37.5° C. for twenty-four hours and then examined. The tube containing Löffler's medium with the non-sterilized rubber showed a well-marked growth, consisting of light-orange colored colonies.

The agar tube with the non-sterilized rubber showed a well-marked growth consisting of small white colonies which at the end of forty-eight hours had turned to a light

orange color.

Mounts from the growths in these two tubes showed a staphylococcus probably *staphylococcus phogenes aureus*. The tube of Löffler's medium and the tube of agar in which was placed the sterilized rubber, showed no growth at the end of twenty-four and seventy-two hours.

Experiment No. 2 was conducted in the same manner as No. 1. Pus from a small abscess over the eye was used.

Two five-grain paraform pastilles were used as in the first experiment. The lamp burned for six minutes and the rubber was allowed to remain in the sterilizer one minute longer, making the total length of time in the sterilizer seven minutes. As in the first experiment, portions of the non-sterilized and sterilized rubber were placed in tubes containing Löffler's medium and agar and these were placed in the incubator at 37.5° C. for twenty-four hours.

Colonies and mounts from the two tubes containing the non-sterilized rubber were identical with those in experiment No. 1.

In the tube containing Löffler's medium and the sterilized rubber there was no surface growth but the culture medium showed a large number of pittings, but no liquid. A mount made from the centre of one of these pits showed a few cocci evidently those which were put in on the rubber and killed by the sterilization.

This pitting of the culture medium was probably due to evaporation. To determine whether there was any growth in this tube, scrapings from a number of these pits were put into a tube of beef-tea and this was put in the incubator at 37.5° C. for twenty-four hours. No growth appeared. In the agar tube with the sterilized rubber no growth appeared. Both of these tubes, after being examined at the end of twenty-four hours, were put back in the incubator for forty-eight hours more, making a total of seventy-two hours, as in experiment No. 1. The results of these two experiments show that while rubber gloves covered with ordinary pus-organisms can be sterilized in seven minutes, a stay of ten minutes in the sterilizer would be safer.