# PRESERVATION OF ISOHEMAGGLUTINATING SERUM WITH PHENOLIZED GLYCEROL.

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In 1920,[1] I reported on the activity of some year-old isohemagglutinating serums that had been preserved by the addition of phenol to the extent of 0.5 per cent, added directly to the serums. The serums in that case were very cloudy in appearance and had distinct sediments. Since that time I have used a mixture of 10 per cent phenol dissolved in glycerol as a preservative, adding the mixture to the extent of 5 per cent, thus making the total percentage of phenol 0.5 per cent as in the earlier use. The serums preserved with the phenolized glycerol remain essentially clear and are free from the sediment seen when the phenol is added directly.

In the early part of this year, 1927, an ampoule of parasthenic serum (group II, Jansky, Moss; A, Landsteiner) and one of antiparasthenic serum (group III, Jansky, Moss; B, Landsteiner) were found in the ice box, bearing a date four years earlier.

In order to see if the serums in the two ampoules still retained their specific actions on the cells of the four different blood groups, after a lapse of four years, fresh parasthenic and antiparasthenic serums were secured and duplicate agglutinations were made with the cells of 50 different persons. These persons were distributed among the four human blood groups as follows:

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| Sthenic; | group I, Jansky; | group IV, Moss; | O, | Landsteiner; 22 |
| Parasthenic; | group II, Jansky; | group II, Moss; | A, | Landsteiner; 23 |
| Antiparasthenic; | group III, Jansky; | group III, Moss; | B, | Landsteiner; 2 |
| Antisthenic; | group IV, Jansky; | group I, Moss; | AB, | Landsteiner; 3 |

The two old and new sets of serums gave identical agglutinations with the erythrocytes of these 50 persons. Cells of persons of the sthenic group were not agglutinated by the parasthenic and antiparasthenic serums; cells of persons of the parasthenic group, agglutinated by the antiparasthenic serum, only; cells of persons of the antiparasthenic group, agglutinated by the parasthenic serum, only; and cells of persons of the antisthenic group agglutinated by both the parasthenic and antiparasthenic serums. In none of the 50 instances was there any doubt as to whether the four-year-old serums caused agglutination if the new serums caused it. The size of the clumps formed by the use of the old serums was usually smaller than in the case of the new serums. There was no essential difference between the old and the new serums as to the rapidity of agglutination. There was no indication of

[1] Jour. Amer. Med. Ass. 75, 1002, 1920, October 9.

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non-specific agglutination. The old set of serums was perfectly usable in making the determinations of the blood groups to which persons belong by observing how such persons' erythrocytes agglutinated with the parasthenic and antiparasthenic serums.

Isohemagglutinating serums may be preserved with 5 per cent of a 10 per cent solution of phenol in glycerol, and retain their specific properties for a period of four years. The serums remain essentially normal in appearance.