

47 mm. Hg pressure. The average specific gravity of the first sample was 1.059; and of the last 1.056. The average change in freezing point was + 0.016.

Viscosity measurements were made in a few experiments. In this respect also there was insufficient evidence for attributing the clinical condition of the animal to mechanical change in the blood.

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### Laking of blood by hypertonic solutions.

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It is known that hypertonic solutions when added to blood may cause laking.<sup>1</sup> To determine if possible if this phenomenon could be due to a drying action on the scarlet blood discs, as this is known to so affect them that they lose hemoglobin to watery solutions even though such solutions are iso- or hyper-tonic to blood serum, experiments were performed to observe the action of hypertonic solutions of a number of relatively inert inorganic salts and other substances, including the chlorides of Na, K, Mg, Ca and Ba; the sulphates of Na, K, Mg; cane sugar and glycerine. For in drying through evaporation the salt content of the liquid surrounding the cells must become decidedly concentrated before all of the water has evaporated. The results of the observations may be summarized as follows:

1. Laking by hypertonic sodium chloride solutions or by hypertonic solutions of other inert salts is proportional to the concentration of the solution.

2. In hypertonic solutions of inert substances in equimolecular concentrations, laking is not the same in all. And consideration of the isotonic coefficients of such substances does not indicate that laking is altogether due to osmotic strength.

3. In equimolecular hypertonic concentrations, the chlorine salts are more powerful than the corresponding sulphates.

4. Non-electrolytic solutions, as cane sugar and glycerine, in hypertonic concentration produce laking, and it is proportional to the concentration of the solution.

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<sup>1</sup> Bursy, Inaugural-Dissertation, Dorpat, 1863.