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varnished with vaseline; they were all good, as were those preserved in lime water, or in a solution of water glass. Of the last three methods, preservation in a solution of water glass is especially recommended, since varnishing the eggs with vaseline is time-consuming, and treatment with lime water sometimes communicates to the eggs a disagreeable odour and taste."

Dr. Shutt of the Experimental Farms, Ottawa, (Exhibition Circular No. 42, January, 1916) has experimented with more than twenty-five different preparations as egg-preserved, and he gives preference to lime water, giving water glass the second place. There can be little doubt that much of the complaint heard as to the unsatisfactory character of eggs which have been subjected to one or another variety of preservative treatment, is due to the fact that the eggs have not been strictly fresh in the first instance. A stale egg is a witness to the efficacy of its preservative treatment when it turns out a stale egg. Only strictly new laid eggs should be subjected to any preservative process.

I beg to recommend publication of Mr. Rowat's letter and the accompanying table of analytical results as Bulletin No. 419, both for the information of the public, and as a basis for the standardization of Water Glass.

I have the honour to be, Sir,

Your obedient servant,

Dr. A. McGILL,
Chief Analyst,
Ottawa, Ont.

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Chief Analyst.

DEAR SIR,—I beg to submit the following report, dealing with the analysis of 71 samples of Water Glass, collected on the order of July last. Of those samples, 8 were analysed at Halifax, 22 at Winnipeg, 3 at Vancouver and the remainder at Ottawa.

This is the first occasion that this material has been subjected to examination in these laboratories, hence a brief review will be made of the nature of water glass.

Water glass is not a pure chemical compound; it is not a chemical individual. The product marketed under this name is usually a concentrated solution of mixed silicates of soda, and in pre-war days, it also frequently contained silicate of potassium.

It is usually prepared by fusing 2 parts of sand with 1 part of carbonate of soda and 0.1 part of charcoal. Sodium hydroxide or sulphate sometimes replace the carbonate. After fusion, the glass like mass which has been formed is broken up, leached with hot water, and the resulting solution evaporated to a viscous syrup. This syrup is the article commonly sold as water-glass. The solution contains an indefinite mixture of the ortho and meta-silicates of sodium, and the constitution of the dry material varies between the limits $\text{Na}_2\text{O} \cdot 2\text{SiO}_2$ and $\text{Na}_2\text{O} \cdot 4\text{SiO}_2$. The chief impurities found in commercial water-glass are chlorides, sulphates, and small amounts of iron. These are frequently present to the extent of 2 per cent. or more.

Sodium silicates have long been used for imparting a fireproof character to wood and other materials, and more recently for producing artificial stone for building purposes, and for a peculiar kind of permanent fresco-painting (stereochromy) the results of which are intended to withstand exposure to the weather. Its more common use in rural communities, however, is as an Egg-Preserver. For this purpose, this substance has been shown to be, all things considered, decidedly the best known at the present