The latter developed a decided, although very small amount of oxidizing substance after 10 weeks' standing. With bromoform the development of oxidizing substance and acid was rapid at first but it soon reached a maximum which was not large.

Summary

Chloroform undergoes auto-oxidation in diffused light with the formation of a peroxide, which is very probably dichloro-carbon-peroxide. This substance is formed at a gradually increasing rate and its accumulation proceeds up to a certain point, where rapid decomposition sets in. Beyond this point the oxidation of the chloroform continues, although very little peroxide is found in the solution.

The phosgene, carbon dioxide, chlorine and hydrochloric acid present in the oxidized product result from decomposition and hydrolysis of the peroxide.

The preservative plays the role of an anticatalyst.

DETROIT, MICHIGAN

NOTES

The Molecular Conductivity of Potassium Iodide in Epichlorohydrin.—Epichlorohydrin[1] was treated with anhydrous copper sulfate for a few days and the product distilled. It had a constant boiling point of 115°. After a second distillation the distillate was colorless and had a constant conductance of 0.2×10^{-7}. This could not be changed after repeated treatment and distillation. The potassium iodide used was known to have been of very high purity.

The solubility of potassium iodide in this solvent was first found by a preliminary experiment. It was found that a gram molecule in 60 liters would give just the convenient solution. Therefore, 0.0277 g. of potassium iodide was dissolved in 10 cc. of epichlorohydrin and the conductance was found by the well-known Kohlrausch method. Every necessary precaution was taken and the conductivity cell was kept in a thermostat at a constant temperature of 18.00°. The value of the cell constant at that temperature was found to be 0.260.

Mol. vol. Liters	Spec. cond. $\times 10^4$ mhos	Mol. cond. Mhos
60	2.3	13.8
120	1.3	15.6
240	0.8	19.2
480	0.53	25.4

[1] A commercial product.

When the molecular conductivity is plotted against volume, a nearly straight line is obtained.

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The Points of Minimum Swelling of Ash-Free Gelatin.[1]—In an earlier paper[2] we described experiments indicating two points of minimum in the curve showing the degree of swelling of gelatin as a function of Sörensen (P_H) value, one at 4.7 and the other at 7.7. This finding was criticized

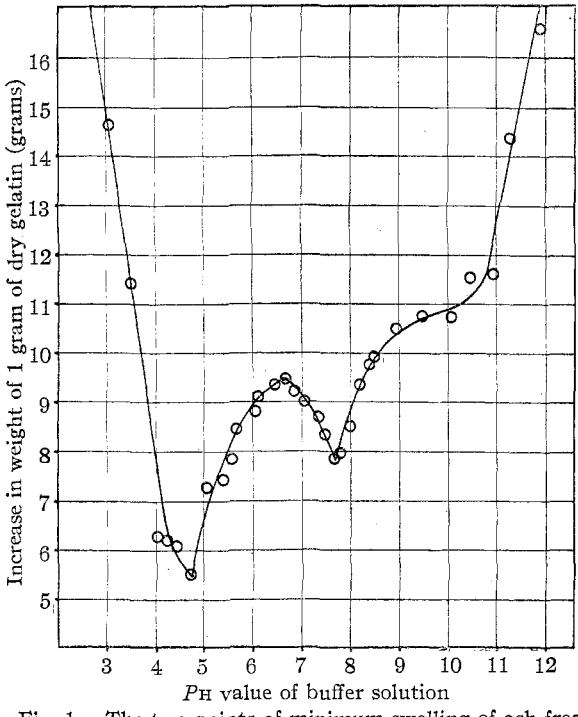

Fig. 1.—The two points of minimum swelling of ash-free gelatin.

by Sheppard and Elliott[3] on the ground that the gelatin used was not ash-free. It was intimated that the point of minimum found at 7.7 was probably due to mineral impurities in the gelatin used.

[1] Presented before the Leather and Gelatin Division at the 66th meeting of the American Chemical Society, Milwaukee, Wis., September 12, 1923.

[2] Wilson and Kern, THIS JOURNAL, **44**, 2633 (1922).

[3] Paper presented before the 65th meeting of the American Chemical Society, New Haven, Conn., April 6, 1923.