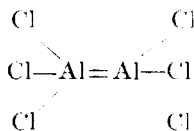


mula Al_2Cl_6 as established by Deville and Troost's determination of the vapor density, may be represented as :



This view seems to reconcile the otherwise conflicting evidence as to atomicity derived from the observed vapor densities of aluminum chloride on the one hand and aluminum methid and ethid on the other. The determinations of Buckton and Odling for the vapor densities of the latter of these compounds are quite inconsistent with the common assumption that aluminum is tetrad.

UNIV. OF VIRGINIA, *Sept.* 20, 1882.

ON NITROSACCHAROSE : A CORRECTION.

BY ARTHUR H. ELLIOTT, Ph. B., F. C. S.

In Vol. IV, p. 147 of this Journal, will be found a paper by me on nitrosaccharose, and at the end of said paper some theoretical conclusions are given which I desire to withdraw.

When the paper was written I was about starting on my summer vacation, and I did not see it again until after it was printed, and a second reading of it showed me I had made a mistake in my figures.

Prof. C. F. Chandler also kindly called my attention to the improbability of the formula given by me to nitrosaccharose. But in assigning the formula given, I was led into error by a corresponding formula found in the English edition of Wislicenus Strecker's handbook, where the octacetate of saccharose is given as $C_{12}H_{14}(C_2H_3O_2)_8O_{11}$ the correct formula being $C_{12}H_{14}(O.C_2H_3O)_8O_8$ eight molecules of the group C_2H_3O replacing the hydrogen in eight molecules of hydroxyl ; thus giving saccharose the formula $C_6H_7(OH)_4O-O-O(OH)_4C_6H_7$.

In regard to the error in my figures, I took the percentage of cane sugar found and added it to the percentage of NO_3 . Correctly, I should have taken the percentage of cane sugar minus the hydroxyl, and added this residue ($C_{12}H_{14}O_8$) to the NO_3 found. By

doing this 28.55, the percentage of cane sugar found is equal to 17.19 per cent. of $C_{12}H_{14}O_3$; which added to the NO_3 found (41.45) gives a total percentage of 58.64; and the ratio of cane sugar to NO_3 becomes 1 to 8.028 instead of 1 to 8.009, as given before. Practically the ratio of the molecules of cane sugar and NO_3 remain the same, 1 to 8.

From a consideration of this relation and of the formula for saccharose quoted above, the true formula for nitrosaccharose becomes $C_{12}H_{14}(O.NO_2)_8O_3$ or an octonitrate; thus coming into the same class of organic nitrates as nitrocellulose and nitroglycerine.

SCHOOL OF MINES, *Sept.* 1882.