

first obtained, but in a few minutes, it gelatinizes to a green translucent mass. This substance settles very slowly. On filtering off the precipitates and carefully drying, all assume a greenish color. Examination of this precipitate indicates that it is a decomposition product which contains nickel carbonyl and nickel hydroxide.

Analyses of the substance obtained from toluene gave the following results :

	Calculated for $\text{Ni}(\text{CO})_4 \cdot 2\text{Ni}(\text{OH})_2 \cdot 4\text{H}_2\text{O}$.	Found.	
		I.	II.
Carbon	11.19	11.66	11.38
Hydrogen	2.80	2.95	2.97
Nickel	41.26	42.82	42.68

As different samples gave results which differed slightly, it appears that the composition of the substance varies slightly as is apt to be the case in an oxidation product. A precipitate from benzene was found to contain 42.09 per cent. of nickel, while one from chloroform contained 42.81 per cent.

The precipitate carbonizes with sulphuric acid while with dilute acids carbon dioxide is evolved. Sodium or potassium hydroxide attacks the precipitate and apparently removes a portion, since after treatment with one of these alkalis and thoroughly washing, acids will no longer produce effervescence. Potassium iodide is without action ; potassium cyanide dissolves it to a brown solution. It is insoluble in chloroform, benzene, toluene, petroleum ether, alcohol, acetone, methyl alcohol, or ether. Ammonium sulphide converts it to the black sulphide of nickel. Although the formula calculated for comparison with the analyses does not account for the evolution of carbon dioxide with an acid, yet this can be explained by the fact that carbon dioxide is invariably a result of the decomposition of nickel carbonyl in solution.

ERRATUM.

In the December issue (1899), on page 1145, in the fourth line of table, for "calcium chloride" read "chloride of lime (bleaching powder)."