

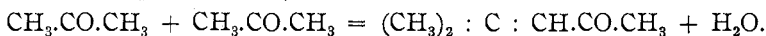
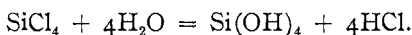
Summary.

1. This paper describes a comparatively short and simple method for the determination of carbon in organic substances.
2. The principle of the method is the fusion of the material with sodium peroxide in an ordinary crucible whereby all of the carbon is converted into sodium carbonate.
3. The method gives accurate results and is especially suitable for routine carbon determinations in soils and also where it is desired to follow this element in certain phases of animal nutrition, as in urin analysis.

NOTE.

The Action of Silicon Tetrachloride on Aldehydes and Ketones.—A few years ago while trying to synthesize certain organo-silicon compounds, some silicon tetrachloride was added to pure, dry acetone. When examined a few hours later, the mixture had set to a jelly-like mass. The mass was broken up with water and a brown oil separated. This proved to consist chiefly of mesityl oxide, with probably small amounts of other condensation products of acetone.

As silicon tetrachloride is very unstable in the presence of water we concluded that water had been extracted from the acetone, resulting in the decomposition of silicon tetrachloride into silicic and hydrochloric acids, and the condensation of acetone into mesityl oxide. The reaction would be represented by the following equations:



This reaction was tried out in a qualitative manner on several aldehydes and ketones and in all cases results analogous to the above were observed.

The silicon tetrachloride used in these experiments was prepared by passing hydrochloric acid gas over amorphous silicon, and fractionating the resulting mixture of silicon tetrachloride, silico-chloroform and probably other silicon chlorides.¹ Silico-chloroform also has a condensing action on aldehydes and ketones.

To our knowledge, attention has never been called to this reaction. Circumstances have prevented a further study of its possibilities. As some of the condensation products of aldehydes and ketones are of considerable importance, it was thought that this reaction might be of sufficient interest to warrant this note.

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¹ Besson and Fournier, *Compt. rend.*, 148, 555 (1909).
