I find that in the case of acetonoxalic ester the same result is produced by the use of ethyl acetate.

The colour produced by ferric chloride in solutions of acetacetic ester resembles the "double" colour from acetonoxalic ester and the "treble" colour from oxalacetic ester, in being partially bleached by the addition of alcohol or water. It is therefore natural to suppose that the acetacetic ester from Kahlbaum's factory is in the same state as my acetonoxalic ester after treatment with sodium ethylate.

Before leaving this subject, I propose to compare the depth of the colour produced by ferric chloride in the solutions of the different esters, and see whether from this point of view also the acetacetic ester colour is comparable with the "double" colour from acetonoxalic ester. Of course, as the red compounds are not identical in the different cases, no very sharp results can be expected; they are, however, analogous, and preliminary experiments have shown me that the colour produced by ferric chloride in solutions of resorcin is closely twice that given by an equimolar solution of phenol.

The sharp doubling of the colour produced by ferric chloride with my specimen of acetonoxalic ester after previous treatment with sodium ethylate, would seem best accounted for by my compound having mono-hydroxyl constitution,

$$CH_3.CO.CH:C(OH).COOC_2H_5 \quad \text{or} \quad CH_3.C(OH):CH.CO.COOC_2H_5;$$

Perkin[1] and Gladstone, however, have concluded both from the magnetic rotation of the plane of polarization and the refractive power of a specimen of acetonoxalic ester supplied by Claisen that the constitution of the compound is represented by the dihydroxyl formula,

$$CH_3.C(OH):C:C(OH).COOC_2H_5.$$

Since this representation does not agree so well with my experiments, I determined the index of refraction of my compound to see if the two were identical.

[1] Jour. Chem. Soc., 61, 821 (1892).