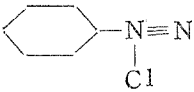
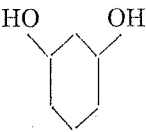


The mixture of 50 g. of ethyl stearate and 12 g. of ethyl formate was added in dry ether under ice-cooling in which 3.8 g. of metallic sodium was suspended and was stood for several days. The obtained Na-salt was dissolved in water, neutralized with HCl and extracted with ether. Twenty seven grams of ethyl α -formyl stearate was obtained. Yield 49.6%, m.p. 64°C.

II. Reactions of Ethyl α -Formylstearate.

Ethyl α -formylstearate was reacted with various passive components, the results are summarized in the following:

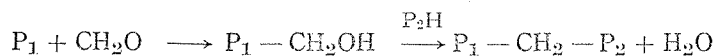
Passive component	Product	Yield(%) m.p. (°C)	N% found (calcd.)
1. NH_2NH_2	$\begin{array}{c} \text{R}-\text{CH}-\text{CH} \\ \quad \quad \quad \parallel \\ \text{O}=\text{C} \quad \quad \text{N} \\ \quad \quad \quad \diagup \\ \quad \quad \quad \text{NH} \end{array}$	46.8 108	8.65 (9.02)
2. NH_2OH	$\begin{array}{c} \text{R}-\text{CH}-\text{COOC}_2\text{H}_5 \\ \\ \text{CH}=\text{NOH} \end{array}$	67.0 55	3.65 (3.94)
3. $\text{NH}_2\text{NHCONH}_2$	$\begin{array}{c} \text{R}-\text{CH}-\text{COOC}_2\text{H}_5 \\ \\ \text{CH}=\text{NNHCONH}_2 \end{array}$	35.9 73	10.10 (10.57)
4. NH_2CSNH_2	$\begin{array}{c} \text{NH}-\text{CH} \\ \diagup \quad \diagdown \\ \text{S}=\text{C} \quad \quad \text{C}-\text{R} \\ \diagdown \quad \diagup \\ \text{NH}-\text{CO} \end{array}$	42.5 97	7.37 (7.96)
5. 	$\begin{array}{c} \text{R}-\text{C}-\text{COOC}_2\text{H}_5 \\ \parallel \\ \text{NNH}-\text{C}_6\text{H}_{11} \end{array}$	30.7 56	6.33 (6.70)
6. 	$\begin{array}{c} \text{HO} \quad \quad \text{OH} \\ \diagdown \quad \diagup \\ \text{C}_6\text{H}_4 \\ \diagup \quad \diagdown \\ \text{O} \quad \quad \text{C}=\text{O} \\ \quad \quad \quad \diagdown \\ \quad \quad \quad \text{C}-\text{R} \\ \quad \quad \quad \diagup \\ \quad \quad \quad \text{CH} \end{array}$	61.8 75	401 found } mol. 386 calcd. } wt.

17. Joint Reaction by Formaldehyde

Ryozo MAKI, Yoshio ISHIDA, Kunio SATAKE and Ryohei ODA

(Oda Laboratory)

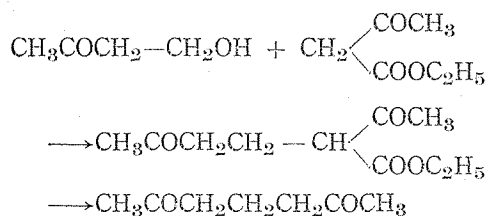
Formaldehyde is a distinguished active component and joints any two passive components (P_1H and P_2H) in the manner as follows:



By this joint reaction a great many jointed compounds should be produced, combining any pair of passive components. But till now, relatively few cases have been investigated and there remains yet a wide unresearched field. The authors have undertaken some research in this field and want to report here a part of the experimental results.

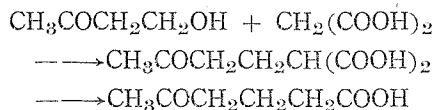
As P_1H acetone was chosen mainly, *i. e.* reactions between γ -ketobutanol (I) and another passive component were investigated.

1. Reaction between (I) and acetoacetic ester.



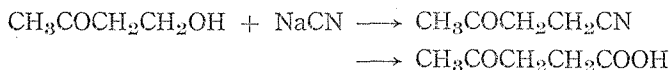
The mixture of γ -ketobutanol and acetoacetic ester was refluxed for 3 hrs., the intermediate β -acetylethylacetoacetate was identified by the quantitative carbonyl-group analysis and ketonic decomposition, producing diacetylpropane (m. p. of di-semi carbazone: 210~3°).

2. Reaction between (I) and malonic acid.



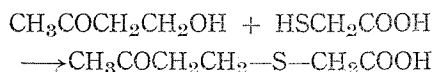
The reaction mixture was refluxed for many hours in a steam bath and as product the γ -acetyl butyric acid was detected.

3. Reaction between (I) and NaCN.



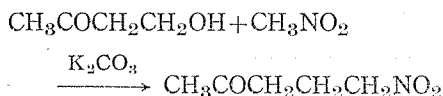
The γ -ketobutanol was added gradually to the hot solution of NaCN, evolution of ammonia was recognized and as the product laevulinic acid was detected.

4. Reaction between (I) and thioglycolic acid.



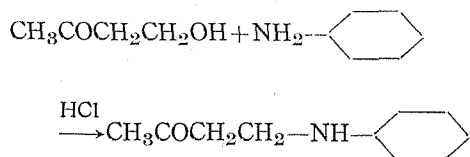
The reaction mixture was refluxed and as the product acetylethyl-thioglycolic acid was detected (neutralization value; found, 335, calculated, 346).

5. Reaction between (I) and nitromethane.



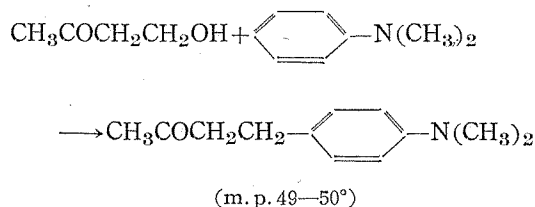
As the product nitropentanone-2 was detected (m. p. of semicarbazone: 138-40°)

6. Reaction between (I) and aniline.

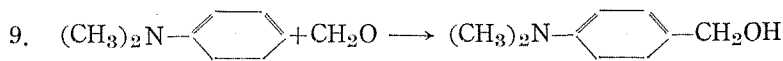
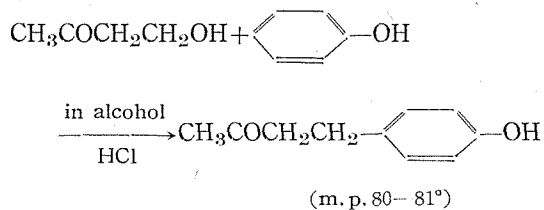


As the product acetylethylaniline was detected (m.p. of semicarbazone: 160°)
Similar results were obtained with *o*-toluidine.

7. Reaction between (I) and N-dimethylaniline.



8. Reaction between (I) and phenol.



Na, in benzene
refluxed

