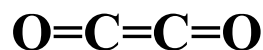


A LETTER FROM J. SHERIDAN, DOW CHEMICAL COMPANY

GLYOXYLIDE

Glyoxylide is alleged to be a polymer of the structure



Dr. Koch has testified concerning his process of making Glyoxylide. He has described $\text{O}=\text{C}=\text{C}=\text{O}$ as a gas which he has never isolated per se for the reason that it is so reactive that it immediately polymerizes. The basis of his assumption that $\text{O}=\text{C}=\text{O}=\text{O}$ exists is the fact that it is the only substance which can explain the formation of the particular polymers made. The opposition experts state categorically that there is no such compound, that there are no polymers of $\text{O}=\text{C}=\text{C}=\text{O}$.

The (opposition) experts say that even if these compounds existed they would immediately form glyoxylic acid in contact with water for the reason that $\text{O}=\text{C}=\text{C}=\text{O}$ is structurally the anhydride of glyoxylic acid.

We submitted some of the Koch Glyoxylide in concentrated form to analysis. The material submitted was in water solution and, therefore, according to (opposition) expert opinion, should have been a solution of glyoxylic acid. We found, however, that the material was, in fact, a polymer consisting of a chain of carbonyl (i.e. $\text{C}=\text{O}$) groups and that the solution contained no glyoxylic acid. In fact, the solution contained no acid of any kind. We failed to detect acid groups even with spectrum analysis.

The Dow chemists who took part in this program testified at the Koch trial held in the Spring of 1946 in Detroit. It is significant that no rebuttal testimony was offered by the Government.

The above information is, of course, a sketchy account of our investigation. The complete evidence is available to anyone interested. As a general conclusion, I can say that in every single case where an experiment was possible the results were consistent with the views expounded by Dr. Koch. We have not as yet secured any results inconsistent with those views.

Sincerely,
J. Sheridan.

JVS/VW

The Dow Chemical Co., Midland, Mich.