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October 29, 1942

CONFIDENTIAL

Dr. W. K. Wilmarth
Department of Chemistry
University of California
Berkeley, California

BEST COPY AVAILABLE

Dear Wilmarth:

The samples arrived some time ago. In view of the fact that they are alleged to be inactive I have not so far opened them. But some of the crystals look pretty nice and may be useful if further pictures of the inactive form are needed. Please note that the alcohol crystals differ not only in the intensity of dichroism but also in the direction.

I have written to Fankuchen asking him to send either to me or directly to Calvin a detailed description of his apparatus and technique.

I have been having trouble with the oxygenation samples of low oxygen content. Upon storing for a day at O_2 pressures indicated by your curve for the composition at hand, the samples pick up O_2, and not just a little. For instance, at about 3 cm. O_2 a sample went from about 12% to about 20% in fifteen hours. I had previously tried it at 6 cm. and the gain was much greater. The temperature was down to nearly 23°C. but it seems unlikely that could make such a difference. Or am I wrong about that? I have spent most of the time lately fiddling about trying to get them to stay constant. These samples happen to have been pumped down to low oxygen content rather than adding it on to a fresh oxygen-free sample. But since you have found no indications of hysteresis this should make no difference.

Best regards to all.

Sincerely,

Edward W. Hughes

Edward W. Hughes

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