

MONSANTO CHEMICAL COMPANY

MERRIMAC DIVISION

BOSTON, MASS.
EVERETT STATION

PLAINTIFF'S
EXHIBIT
MON-351

August 14, 1939

Leroy U. Gardner, M.D.
Director
Saranac Laboratory
7 Church Street
Saranac Lake, N. Y.

51627

Dear Dr. Gardner:

I am sorry that I have not been able to answer your letter of July 28th on the subject of the possible physical structure of Santocel sooner.

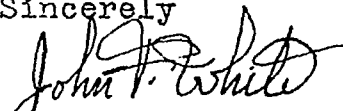
We have had only one X-ray diffraction pattern taken. This was done by Prof. G.L. Clark of the University of Illinois on a sample of finished aerogel. This pattern showed only two interferences. Prof. Clark analyzed these interferences both graphically and by use of particle size equations with the following result

Outer ring	$5 \text{ to } 6 \times 10^{-7}$
Inner Ring	8.5×10^{-6}

He concludes from this that the primary particle size is in the colloidal range, is crystalline, and that its shape is an elongated one.

I would like to caution you about accepting my ideas on the formation of cristobalite in the aerogel process. This picture of the possible aerogel structure is a result of many incidental observations made while working out the manufacturing problem and at best may only be considered as a nebulous working hypothesis.

Sincerely


John F. White

JFW:REC