

Auxiliaries Research Department

December 18, 1951

4027 - LITHOPONE

Item 1. Texture

(Pillsbury Milling Trials)

Purpose: To determine if the Pillsbury Mill will produce a Lithopone of superior texture.

Summary:

The Pillsbury Mill produced a Lithopone of only slightly better texture than the regular production; and at an uneconomically low production rate. Further trials on the milling of lithopone in the Pillsbury unit do not appear to be indicated at this time.

Discussion: The favorable results on the experimental milling of dry colors in the Pillsbury Mill, prompted the Dispersion Laboratory to suggest that the trials be extended to include lithopone. In co-operation with this laboratory, arrangements were, therefore, made to have Coffeyville ship several hundred pounds of unmilled Permolith 40M to the Pillsbury Co.

The milling trials were conducted in an 18 inch, 20 H.P. mill. (A larger industrial 30 inch mill driven by a 60 H. P. motor is said to deliver about four times the production rate of the 18 inch mill.) Two samples were returned, representing two trials at different production rates. The samples involved in the series of tests were:

1. Calciner Discharge, Permolith 40M,
Lot C 3501, AURL-1997A
2. Raymond Milled (regular production),
identical lot C 3501, AURL-1997B
3. Pillsbury Milled, Run P 14-2, AURL-
2018A
4. Pillsbury Milled, Run P 15-1, AURL-
2018B

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Results of Evaluation:

<u>Sample</u>	<u>Production Rate</u>	<u>Oil Absorption</u>
Raymond Milled	--	13.6
Pillsbury Run P 14-2	430 lbs./hr.	15.8
Pillsbury Run P 15-1	240 lbs./hr.	15.8

Texture results are shown on the attached graph.

Conclusions:

1. The Pillsbury Mill does not appear to be capable of producing a lithopone of unusually good texture. There is some reason to question whether the Pillsbury Mill is as efficient as the Raymond Mill in this respect.
2. In line of experience with other types of mills, the Pillsbury Mill produces a lithopone of slightly (15%) higher oil absorption than does the Raymond Mill.

F. C. Verduin

C. H. Adams
Mineral Products Laboratory

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