

Johnson & Johnson
BABY PRODUCTS COMPANY

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RARITAN, N.J. 08869

June 20, 1977

SUBJECT: Demicronized Talc - #2006.01
Carbowax 400 - Aging Study

TO: Mr. G. Lee

JBP exhibits a measurable reduction in airborne respirable particles (ARP) when treated with 0.25% carbowax 400. A further reduction in ARP is achieved by formulating the JBP with a demicronized talc (fines removed) and then treating with 0.25% carbowax.

In order to determine if the respirable particle reduction effect of carbowax 400 is permanent, the following samples have been in 70°F aging and tested over the past seven (7) months.

Sample #

1. V-66 Talc Base - Lot 65374-H
Talc used to formulate samples 2 & 3 below
2. (A&B) JBP Form. 499 Control - Batch 4681-31-A
(A&B) are duplicate samples
3. (A&B) JBP Form. 3553-112-02 0.25% carbowax 400
Batch 4681-31B (A&B) are duplicate samples
4. JBP Formulated with demicronized talc 4365-48
and 0.25% carbowax 400

Results:

The respirable particle reduction effect of the Carbowax 400 is still effective, and essentially unchanged, after seven (7) months aging at 70°F.

Procedure:

250 grams of each sample was placed in 9 oz. JBP containers and initially tested for airborne respirable dust levels as follows:

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The container was placed in a mechanical device and shaken vertically at a fixed rate to deliver about 1 gram of powder. The shaker is located within a closed chamber so that any airborne dust is contained within the chamber and is rapidly dispersed and uniformized by means of a small circulating fan. The airborne dust is sampled with a 10mm nylon cyclone at a 1.7 l/min. flow rate. The cyclone separates out the respirable sized particles and delivers them to a TSI 3210A quartz crystal mass monitor for weighing. The concentration of respirable particles, as mg/m^3 , in the chamber is monitored and printed out every 10 sec.

Under these conditions, the peak concentration of ARP in the chamber is reached in the first 10 sec. after shaking. This peak reading was used as the criteria to measure the effect of the carbowax 400 on JBP. The samples were run initially and at one month intervals for three (3) months and then at the end of seven (7) months.

The average result of three (3) trials was recorded for each test. A test consisted of measuring peak concentration in mg/M^3 , the grams of powder delivered and the number of shakes.

An additional measurement was made at the end of seven (7) months aging only, e.g., the average concentration of ARP in the chamber in the first two (2) minutes after shaking the can of powder.

Discussion of Data: (attached)

1. The addition of perfume to talc results in a reduction of ARP, sample 1 vs. sample 2 (A&B).
2. The addition of 0.25% Carbowax 400 results in a marked reduction of ARP when compared to the regular JBP. Sample 2 (A&B) vs. sample 4.
3. A further reduction in ARP results when the JBP is made using a demicronized (fines removed) talc. Sample 3 (A&B) vs. sample 4.

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4. It requires more shaking to deliver the same amount of Carbowax 400 treated product from the container.

Comments:

This aging study will be continued to conclusion at one year.


R. S. Russell

/by

cc: W. H. Ashton
M. Goodman to R. Gordon
B. Semple
R. N. Miller to V. Zeitz - Windsor Minerals, Inc.

attachment