CHICLE DEVELOPMENT CO., INC.

500 FIFTH AVENUE

NEW YORK

PLEASE ADDRESS ALL COMMUNICATIONS TO THE COMPANY

January 29th 1936

Messrs. Nelson L. Buck
J.C. Cox
W.C. Arkell
J.S. Ellithorp
C.W. Dunn
S.C. Prescott
G.R. Cowgill
F. Thamann (only one report enclosed) ✓

Gentlemen:-

I enclose herewith copy of a report dated January 27th by Mr. Gordon of the Ameridan Chicle Company covering a test on centrifuging chicle.

I also enclose copy of Mr. Gordon's letter of January 24th to Mr. Thamann covering samples of filter-press base.

Very truly yours,

CHICLE DEVELOPMENT COMPANY

S.S. Yates,
President

SSY-W
cc: PLB
Encl. (2)

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N 7624

January 27, 1936 From: M.A. Gordon To: Mr. Becker

On Wednesday January 22nd I made a test to determine if centrifuging would remove solder particles from melted Chicle. The details of the experiment were as follows:-

Equipment - International Instrument Co. Centrifuge - Type "Soil", Size #2, Speed about 2200 r.p.m.

Brass Centrifuge Tube Shields, 6" long by 1¼" diam.

Procedure -

Merida Chicle from the 1935/36 Season was heated until it was melted and boiling gently.

A paper cup made of one piece of a kraft paper bag was fitted into a brass centrifuge tube shield.

The centrifuge and the tube in which the Chicle was to be placed were heated.

The melted Chicle was poured into the heated tube and centrifuted for 5 minutes. At the end of this time it was noted that the top surface of the Chicle had become quite viscous due to cooling.

The Chicle was cooled and 10 gram samples taken from:-

a. Top - about ¼" of the very top was removed first.
b. Middle
c. Bottom - the bottom 1/16" was cut off to be sure to eliminate all the paper and the sample taken just above this.

When the Chicle was removed from the brass tube it was noted that the paper at the bottom was quite damp. Apparently some of the moisture in the Chicle had been centrifuged out.

Results

The samples referred to above were tested with the following results:-

Top	x - 3.8 p.p.m.
Middle	x - 2.8 "
Bottom	x - 9.0 "

The fact that the top portion was higher than the middle was likely due to the fairly rapid cooling of the former during centrifuging.

The very bottom layer which was shaved off to be sure there was no paper in the sample analyzed for "x" was

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extracted with chloroform and the residue examined under a microscope. There was a considerable amount of dirt which appeared to consist principally of sand. Eleven pieces of solder were also detected. In ten of the cases the pieces were in the form of spheres while in the remaining one the piece was irregular in shape.

The size of the solder particles was also determined and found to range from a diameter of .0017" to .0073". All of these could pass thru our 55 mesh screens and about 90% thru the 60 mesh screens we are experimenting with. This does not mean that filtering thru a 55 mesh screen would not remove any of the pieces as undoubtedly a number would be held back when a cake formed as the sawdust and dirt would tend to reduce the size of the openings. However, it does indicate that filtering is a rather uncertain method of removing the solder particles.

The Chicle which remained after the samples had been taken was soft and sticky and showed no sign of setting up two days after the test. A little water was worked into some of this and it then set up well. Centrifuging seems to remove the water and if the process is used it seems likely water will have to be added afterwards.

Comments

In view of the fact that the centrifuge used was a slow speed one and could not be properly heated I consider the results of the above test very promising and believe that with a heated high speed centrifuge of the proper type it will be possible to remove a very large amount of the solder particles which may be in Chicle.

I am arranging to have a representative of the Sharples Co. call to discuss tests to be made at their laboratory and also the possible purchase or loan of a small experimental centrifuge.

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