

(Bakelite) May 1956
File

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Mellon Institute

Dr. H. F. Robertson
Bakelite - NYO

August 1, 1956

Mr. V. J. Houska
Dr. T. W. Hale

Extraction Tests on
Rigid Vinyl Compounds

Dear Dr. Robertson:

The idea of an overlay to reduce extraction of stabilizer by foods is interesting. However, I agree with Dr. Hale that Mr. Houska's June 12 letter does no more than present the idea because his analytical methods were not sufficiently interesting.

The F.D.A. can have no valid objection to a packaging material if none of the ingredients reach the food. However, in the case of cadmium and barium ingredients they will have to be shown that extraction is nil (about 0.01 p.p.m. in simulated foods) before they will accept a formulation.

Very truly yours,

Henry F. Smyth, Jr.

Henry F. Smyth, Jr.

mek

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RECEIVED

AUG 2 1956

INDUSTRIAL MEDICAL &
TOXICOLOGY DEPARTMENT

From the Desk of

THOMAS W. NALE, M. D.
PAX 679

7/16/56

Henry - Please
return this to me
for my files

W. Nale

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FOR INTERNAL CORRESPONDENCE

BAKELITE COMPANY

UCC

RIVER ROAD, BOUND BROOK, NEW JERSEY

To (Name) Mr. H. F. Robertson
Company Bakelite Company
Location New York, New York

(2) 9 E. 41

June 12, 1956

Originating Dept.

Answering letter date

Copy to Mr. R. E. Byrne
Mr. L. L. Carpenter
Mr. F. D. Dexter

Subject

Extraction Tests on
Rigid Vinyl Compound

File:

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JUN 14 1956
R. E. BENTON

Mr. L. L. Carpenter, some time ago, suggested that a vinyl film suitable for food packaging could be made by taking a stock compound and laminating to it a thin vinyl film which was approved for food packaging applications. This non-toxic film would serve as a barrier to the migration of potentially injurious substances from the base compound into foodstuffs which were packaged in the laminated stock. The food, of course, would be in contact with the surface consisting of the non-toxic film. You subsequently indicated that extraction tests would be needed to verify the applicability of a laminated stock of this type to food packaging applications.

Accordingly, a laminate of the two compounds shown on the data sheet was prepared. Small cups were vacuum formed from the laminate with the non-toxic film comprising the interior surface. Various cups were then filled with solutions of 1% sodium bicarbonate, 4% acetic acid, and Wesson Oil. These solutions were left in the cups for thirty days at 23°C. The solutions were then analysed for barium and cadmium. Control analysis were run on solutions which were stored under the same conditions in cups made from the base compound only.

Under the conditions of the test, the extracts from both the control and laminated cups showed a barium content of less than 1.0 ppm and a cadmium content of less than 0.5 ppm which represent the limits of sensitivity of the analytical methods.

These extraction tests provide some preliminary data on the maximum contamination to be expected in foods in contact with rigid vinyls stabilized with barium and cadmium soaps. If you believe that additional work along these lines is worthwhile, we shall be pleased to consider any suggestions for additional analysis here at the Carbide and Carbon Chemicals Company Laboratories. If, on the other hand, it is considered advisable to avoid the use of barium and cadmium salts under any circumstances, no further work will be done.

V. J. Houska
V. J. Houska

WE/jm

Att.

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DATA SHEET

Base Stock Compound - VDA-2082 Black 25

QYNA	63.90
Flexol R2H	30.10
Paraplex G-62	3.00
Ba/Cd Laurate	.75
Synpron 450 (triisooctyl phosphite)	.75
Trimagnesium phosphate	.50
Carbon Black	<u>1.00</u>
	100.00

Non-Toxic Overlay - VBAA-9023 Natural 003

VINW	73.50
DOP	24.00
Paraplex G-62	2.00
Acrowax C	.17
Durocer Wax	<u>.33</u>
	100.00

Analytical Methods

Barium analysed turbidimetrically as barium sulfate.

Cadmium analysed polarigraphically as cadmium ion.

Weight of Test Cup - 2.6 grams

Volume of Test Solutions in Contact with Cups - 100 ml.

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