Monsanto INDUSTRIAL CHEMICALS COMPANY

FROM (NAME & LOCATION): R. R. Raube - Q2D

DATE : July 28, 1977

SUBJECT : ELMER'S GLUE

REFERENCE : *E. C. Wilde/T. G. Iversen, 7-5-77*

TO : J. H. Orem
Galt - 1730

cc: M. W. Farrar - R2E
[redacted] Touchette - 1730
R. W. Bucknell - B3NA
P. Stordeur - LLN - 5045
R. H. Mills - Q2D
R. W. Radue - R2E
C. N. Keeney - 1730
A. W. Morgan - 1730
J. A. Cannon - 1730
J. T. Renshaw - 1730

The commercial sample of Elmer's glue contained 51% solids. A chloroform/hexane extract of the solids amounted to 60% and consisted of 97% polyvinyl acetate resin and 3% of a GC-volatile material that eluted at the same position as Benzoflex 9-88. Unhappily DOP, bis-(2-butoxyethyl) phthalate, and di-n-heptyl phthalate (as in S-711) all elute at precisely the same place, so spiking with any of the four esters would confirm the 3% peak. And 3% is too little to even be detected by IR, let alone to distinguish between the benzoate and the phthalates.

But whatever the plasticizer is, it is so small that it makes Gene Wilde's question "could it be that no plasticizer is used?", just about right on the money.

Incidentally, the PVAc in the extract did not fuse in the drying oven as I told you on the phone. It was still soluble in chloroform after drying, so it had merely precipitated when the solvent was removed. To be chloroform soluble, it must have a fairly low molecular weight, so Borden's must be using a very wide molecular weight range PVAc since 40% was not chloroform soluble in the first extraction.

Dick

R. R. Raube

db

Time Spent: 7 Hours

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