



## Memorandum

Date: 5/28/2008  
From: Chemist, Method Development Branch, Division of Analytical Chemistry, ORS  
Subject: Identity of Can Coating on Powder Infant Formula cans  
To: Dr. Allan Bailey, OFAS

Executive Summary: An FTIR analysis of two powder infant formula can coatings indicates that they are not epoxy coatings.

### 1. Powder Baby Formula Cans

Can coatings of two powder infant formula investigated are: [REDACTED]



The powder [REDACTED] can is made of two metal lids and paper side wall, while the [REDACTED] can is made of all metal components. FTIR analysis also indicates that plastic coatings on the top lid and wall contact both baby formulas. However, for the bottom lid of both products plastic coating is on the outside. Consequently, some metal is in direct contact with baby formula powder.

One of the reasons for the outside plastic coating may be to help retain printer ink since the bottom lid is often used to print manufacturing codes.

## 2. FTIR analysis of Can Coatings

Dr. Magdi Mossoba collected IR spectra of can coating samples on his Varian FTIR. IR spectra for three sections of each can have been collected: top lid, side wall and bottom lid. Very little variation was observed for coatings of the three components, including the paper sidewall of the [REDACTED] can.

IR spectra were then compared to polymer spectra in Hummel Polymer Sample Library available in the Thermo Nicolet FTIR. Best matches for the can coatings suggest both cans have polyester type coatings.

## 3. FTIR of a known epoxy

To verify that the powder can coatings are not bisphenol A epoxy, a known epoxy resin was analyzed: bisphenol A epoxy resin [REDACTED]. A reference epoxy sample was prepared by spreading a thin film of the epoxy resin on an aluminum foil, the resin was not cured. The same procedure used above was repeated to obtain IR spectra and to identify the epoxy.

## 4. Conclusion

Based on the FTIR library search results and comparison of IR absorption spectra of the can coatings with a known bisphenol A epoxy resin, the plastic coatings used in the examined powder infant formula cans are not a bisphenol A epoxy resin.

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