Dairy and Food Industries Supply Association:
5530 Wisconsin Avenue,
Washington, D.C. 20015

TECHNICAL BULLETIN

NO. 15 MARCH 1972

Food and Drug

PCB Alert. . .

Polychlorinated biphenyls, substances of widespread recent concern in the Public Press, continue to occupy the investigative attention of FDA. Not previously associated with milk contamination, PCB's are known toxicants, first discovered in the poultry industry where they were used in heat exchange applications.

The agency has ordered a state by state survey to determine what, if any, is the extent of contamination of fluid milk with PCB. Other categories of foods were surveyed earlier to determine migration of PCB from grayboard food packaging.

In the instructions to the field on the milk survey, FDA related an earlier milk problem to the misuse of an electrical transformer fluid containing PCB as a vehicle for defoliant spraying operations adjacent to dairy pasturage. PCBs have also been found to be a component of sealants used to treat silos on dairy farms, FDA noted, attributing contamination to this use.

Samples of fluid milk are to be picked up from route collection trucks (bulk farm milk pick-up) on completion of pickup or from collection station points prior to further distribution of the milk at the processing plant. If milk is received in cans, FDA said, samples should be collected from the holding tanks prior to processing.

FDA is considering a prohibition on the use of PCBs in heat transformers and capacitors in food, feed, and food packaging plants as a precaution against leaks.

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Food Additive Regulations. . .

(a) Regulation 121.2526 for components of paper and paperboard in contact with aqueous and fatty foods has been amended to provide for the safe use of styrene-butadiene copolymers containing not more than 10 weight percent of polymer units derived by copolymerization with 2-hydroxyethyl acrylate to be used as components of the food contact surface of paper and paperboard in contact with all foods instead of being limited for use in coatings for paper and paperboard in contact with bakery products and dry solids only.

(b) Under a proposed rule making by FDA, dioctyl sodium sulfosuccinate under 121.1137 is to be authorized for use if the additive meets the specifications of the Food Chemicals Codex. This is a substitute reference replacing "National Formulary."

Anyone adversely affected by this proposal has until March 12 to file objections with FDA.

(c) 121.1139 amended to include polyvinylpyrrolidone as a clarifying agent in wine at a residual level not to exceed 60 parts per million.

(d) Several new silicones were cleared on February 25 for inclusion in 121.2514 for resinous and polymeric coatings. New curing agents provided for in this order are: Dibutyltin dilaurate, stannous oleate, and tetrabutyl titanate.

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Sweetener. . .

T.B. #14 made reference to "serendipity berries" from Africa as a new sweetener source. Chemical & Engineering News for February 28 carries a report of recent research on the chemistry of this fruit carried out at the University of Pennsylvania.

A natural sweetener of soluble protein nature, up to 3000 times sweeter than an equal weight of sugar, has been isolated from these berries. Named "Monellin," the substance is the first reported protein to elicit a sweet taste in man and is the sweetest natural product known, according to the investigators. Less than 50 mg. of the isolated sweetener is currently available.

One of the first published articles on the fruit is cited as follows:

Inglett G. E., and May, J. F.--"Serendipity Berries--Source of a New Intense Sweetener," Journal of Food Science 34(5): 408-411. Sept-Oct, 1969.

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"Recycling" in the Machine Shop. . .

Machine tool chips and turnings are now being used as recycle scrap to make a coarse powder for further fabrication of specialty items. Pole shoes for starter motors are one new application of the new powder called by GM "Macro-Mesh". The chips are cleaned, screened, impact milled, and screened again to form the powder. GM anticipates other applications such as powder metal preforms for forging.

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Sterilization of Plastics. . .

A method for sterilization of plastic materials for medical purposes may be of some interest for sanitary applications. Ontario Research Foundation has developed a system which combines a chemical, with heat and ultrasonic vibrations. A typical combination is 2% aqueous acid glutaraldehyde plus a nonionic organic additive at 65° to 70° C., with 20 to 40 kHz. ultrasound for 5 to 20 minutes.

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