SP
AROCLOR

Monsanto

FROM (NAME & LOCATION) E. S. Tucker - Technology Department - South Second Street

DATE : October 7, 1971

cc: W. B. Papageorge - GO
E. P. Wheeler - GO
R. E. Keller - Res. 1

SUBJECT : DISTRIBUTION OF PCB RESIDUES IN MILK

REFERENCE :

TO : Phocion C. Park
General Offices

We recently received a copy of an excellent article from Elmer Wheeler on the distribution of PCB's in milk and milk products. I believe that it provides the information that J. Hess requested.

If you extract the following numbers from Table I (page 1306) and make the following calculations,

	Cow 1 (10 mg Exp.)	Cow 2 (100 mg Exp.)
	PCB Levels (mg/kg = ppm)	
Whole Milk	3.9	36.1
Skim Milk	0.5	1.5
Heated Skim Milk	0.2	0.4

$$\%\ \text{PCB Retained in Skim Milk/Heated Skimmils} = \frac{\text{PCB Skim (Heated Skim)}}{\text{PCB Whole}} \times 100$$

Skim Milk	12.8%	4.2%
Heated Skim Milk	5.1%	1.1%

you find that the level of PCB's retained when whole milk is converted to skim and heated skim fall in the range of 4 - 13% and 1 - 5%, respectively. Now for the sake of argument, employing the maximum % retention, it could be proposed that whole milk containing up to 0.7 ppm PCB could be salvaged by conversion to skim and that whole milk containing up to 2.0 ppm PCB could be salvaged by conversion to heated skim. This calculation assumes that the final skim product should contain no more than 0.1 ppm PCB, 50% below the action level of 0.2 ppm.

If this is not clear and you need more details, please call me.

E. S. Tucker

db
Encl.

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