

AR 226-1467



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*To: Parkersburg / Fayetteville
for info & disc*

February 25, 1980

RECEIVED

FEB 28 1980

YANN A. BREWSTER, M.D.

PERSONAL & CONFIDENTIAL

TO: G. L. WATTS

FROM: E. R. PURCHASE *ERP*

FC-143 FLUOROSURFACTANT

(Ref.: Letter, A. A. Wright to M. R. Warden, same subject, 10/29/79)

The reference letter reviews information on FC-143, a 3M Company product, used at Parkersburg in Teflon® dispersion which in turn is used in Teflon® operations at Spruance. Blood tests on employees who work with FC-143 showed up to 70 ppm of organic fluorine in 3M employees and up to 22 ppm in Parkersburg employees compared to a general background level of less than 1 ppm. No adverse health effect has been detected in any of the exposed people. Tests at Haskell Laboratory revealed that FC-143 readily penetrates the skin of animals and causes liver damage and in heavy doses may cause death. In view of this information, a decision was made to analyze blood samples from a small group of Spruance employees with potential FC-143 exposure in Spinning and Finishing and a control group.

The analyses of blood samples were carried out at Jackson Laboratory by the same group that analyzed samples from Parkersburg. The results are shown below:

<u>Employee</u>	<u>Age</u>	<u>Area</u>	<u>Fluorine, ppm</u>		
			<u>Total (1)</u>	<u>Inorganic</u>	<u>Organic (2)</u>
	37	Spin.	0.34	0.21	0.13
	58	Spin.	0.41	0.12	0.29
	25	Spin.	0.18	0.11	0.07
	28	Spin.	0.23	0.15	0.08
	37	Fin.	0.35	0.15	0.20
	32	Fin.	0.18	0.18	0.00
	31	Control	0.21	0.20	0.01
	24	Control	0.18	0.14	0.04
	35	Control	0.18	0.15	0.03

- (1) Non-volatile
(2) By difference

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These results indicate that there is no significant exposure to FC-143. This view is supported by personnel from Haskell Laboratory, Jackson Laboratory and the Parkersburg plant, who consider that blood levels of organic fluorine below 1 ppm are not significant. Therefore, we plan no further analysis of blood samples from Spruance employees.

To ensure continued protection of personnel against exposure to FC-143, operating procedures will continue to be based on no skin contact with Teflon® dispersion. No special precautions are required for yarn handling. In routine periodic audits of operating area conditions and practices, special attention will be given to those factors which protect employees against exposure to FC-143.

ERP:fsg

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