

BIODEGRADATION

TEST SUBSTANCE

Identity: Perfluorooctanesulfonate, Lithium salt; may also be referred to as PFOS Li salt, FC-94, or FC-94-X. (1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-, lithium salt, CAS # 29457-72-5)

Remarks: The test sample is a mixture of the test substance in water (approximately 24.5% test substance and 75.5% water). No calculations were made to adjust for the actual concentration of the test substance in the test sample.

METHOD

Method: Carbonaceous BOD.

Type: Aerobic

GLP: No

Year completed: 1994

Contact time (units): See Remarks

Inoculum: Activated Sludge

Remarks: The laboratory was not able to generate useable data for CBOD. The study was attempted 6 times using different techniques, but no values could be produced.

RESULTS

Difficulties that were not explained in any detail were encountered when attempting to generate carbonaceous BOD biodegradation data. The Pace analyst states "The sample has been set 6 different ways each time with insufficient depletion. The sample either exhibits a toxicity to the BOD seed material or does not exhibit a CBOD type of demand."

No data is available.

DATA QUALITY

Reliability: Klimisch ranking = NA

REFERENCES

This study was attempted by Pace Laboratories of Minneapolis, MN on the request of 3M Company.

OTHER

Submitter: 3M Company, Environmental Laboratory, P.O. Box 33331,
St. Paul, Minnesota, 55133

Last changed: 5/2/00

03/30/1994

ENVIRONMENTAL LABORATORY FINAL REPORT

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LAB REQUEST NO. M1018
REQUESTOR NAME: RD HOWELL
DEPARTMENT: 3058
PROJECT NO: BISURENVIR
DATE RECEIVED: 01/04/1994
DESC: ECOTOX TESTING OF FC-94-X FOR PED

CONTRACT LAB(S): PACE
EXP COMP DATE: 02/21/1994
DATE COMPLETED: 03/30/1994
PROJECT LEAD: SA BEACH
PHONE NO: 612-778-7452
3M FAX NO: 612-778-6176

SLUDG-RESP: After 30-minutes of exposure, rep 1 had 31% and rep 2 had 41% inhibition in respiration rate relative to the controls.
After 3-hours of exposure, rep 1 had 35% and rep 2 had 33 % inhibition in respiration rate relative to the controls.

For M1018-1, PACE was not able to acquire any useable data for CBOD-05,10, or 20 even though numerous tries were made. The sample was set 6 different times in 6 different ways in order to produce a CBOD number. The sample did not exhibit any depletion as the method requires on any of the sets. A detail of what dilutions were tried will be FAXed to Sue Beach in the form of a memo submitted by the Wet Chemistry Supervisor. Copies of the raw data will be sent.

The laboratory feels it has exhausted all possibilities to obtain useable data and would welcome input from 3M personnel regarding a solution to this matter. Should 3M want to resubmit another sample, we certainly would be willing to try the analyses again.

mjc PACE 3/2/94

A CBOD-05 value is not able to be determined on M1018-1. The sample has been set 6 different ways each time with insufficient depletion. The sample either exhibits a toxicity to the BOD seed material or does not exhibit a CBOD type of demand.

mjc PACE 3/7/94

*More detailed
information about
this study is no
longer available
at PACE.
EJR 7/16/98*

SAMPLE	DATE	CODE	DESCRIPTION	RESULT	MDL or (95% C.I.)
1	01/04/94	FC-94-X	F-11367 LOT1		
			*BOD-05 (CARBONACEOUS)	SEE COMMENT ABOVE	6
			*BOD-10 (CARBONACEOUS)	SEE COMMENT ABOVE	
			*BOD-20 (CARBONACEOUS)	SEE COMMENT ABOVE	
			*COD	54000 MG/L	50
			DAPHNIA ACUTE TEST	210 MG/L	((190-230))
			FISH ACUTE TEST - 96 HOUR	19 MG/L	(16-24)
			MICROTOX - EC50	>1000 MG/L	

* = CONTRACT LAB DATA

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03/30/1994

ENVIRONMENTAL LABORATORY FINAL REPORT

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LAB REQUEST NO. M1018

CONTINUED

SAMPLE	DATE	CODE	DESCRIPTION	RESULT	MDL or (95% C.I.)
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1	01/04/94	FC-94-X	F-11367 LOT1		
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SLUDGE RESPIRATION - EC50 >1000 MG/L (-)

Project Lead Review: Arsen A. Beach Date: 3/31/94

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