

ACTIVATED SLUDGE RESPIRATION INHIBITION TEST

TEST SUBSTANCE

Identity: Perfluorooctanesulfonyl fluoride; may also be referred to as POSF, or FX-8. (1-Octanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-, CAS # 307-35-7).

Remarks: The test substance is a clear liquid of uncharacterized purity. It is described as FX-8 (cc842-2) washed sample.

METHOD

Method: Protocol Reference EAR/WAS 5/9/84

Test type: Not noted.

GLP: No

Year completed: 1984

Analytical monitoring: Dissolved oxygen concentrations.

Stock and test solution preparation: Test substance (0.309 g) weighed directly into BOD bottle, 50 mL deionized water was added, and the bottle mixed on a magnetic mixer for ~ 30-minutes. Bottle was capped during mixing.

Inoculum source: Activated sludge mixed liquor from the Metro wastewater treatment plant – St. Paul/Minneapolis, MN.

Inoculum holding: None – used the day it was obtained.

Element basis: Respiration inhibition as determined by oxygen consumption.

Method remarks: After mixing in the BOD bottle, it was noted that the sample settled to the bottom, forming small droplets or beads. Some of the sample appeared to emulsify.

RESULTS

Nominal concentrations: 1000 mg/L test material solution.

Element value: 6.75-min $IC_{50} = > 1000$ mg/L

Control response: Adequate – 6.5% difference in respiration rate of the two controls.

CONCLUSIONS

The test material exhibited no inhibitory effect at 1000 mg/L over a 6.75-minute exposure.

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

DATA QUALITY

Reliability: Klimisch ranking 3. The method used was not agency approved. This study lacks sufficient documentation, characterization of the test substance purity, and analytical measurement of test concentrations.

REFERENCES

This study was conducted by the 3M Company, Environmental Laboratory, St. Paul, MN, Lab Request number B1229.

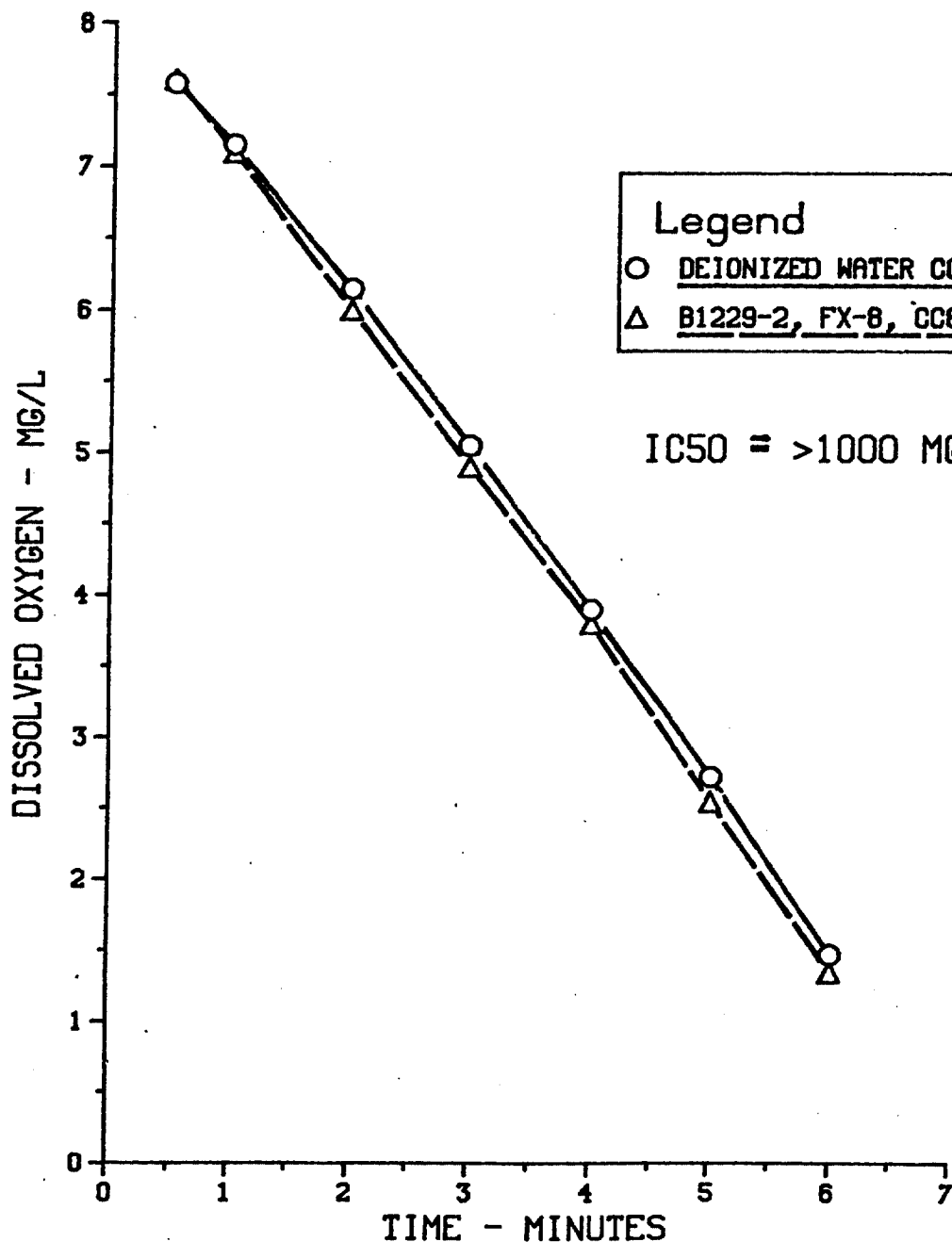
OTHER

Last changed: 5/18/00

3M Environmental Laboratory

Acute Toxicity of a Substance to
Activated Sludge Mixed Liquor (SLUDGE-TOX)

Protocol Reference: EAR/WAS 5/09/84, Lab Request No. B1229



Legend
○ DEIONIZED WATER CONTROLS - AVERAGE
△ B1229-2, FX-8, CC842-2, WASHED, (1000 MG/L)

IC50 = >1000 MG/L

W.A. Schell
5-17-84

Lab request no.: B7292 B1227 Date: 5/10/84 Analyst: W.A. Schell

Sample description: ~~(B1242-2)~~ (B1229-2) FX-8, CC 842-2, WASHED

→ See comment below.

BEST COPY AVAILABLE

% Difference between controls = 6.9 %

Preparation of test solution: 0.30 g of sample was placed in a 300-ml BOD bottle with 50 ml of deionized water and mixed on a magnetic stirrer for 30 minutes to disperse sample (the bottle was kept stopper while stirring). After mixing the sample settled to the bottom of the bottle, forming small droplets or beads. Some of the sample appeared to emulsify.

006620

3-27-84

ENVIRONMENTAL LABORATORY STATUS REPORT
ALL RESULTS TENTATIVE

LAB REQUEST NO. B1229

REQUESTER NAME: ANW/EAR
DEPT: 0535
PROJECT NO: 9970012600
DATE RECEIVED: 2-21-84
DESC: FX-8 (CC 842-2)

CONTRACT LAB:
CONTRACT LAB COST: 0
3M E-L HOURS: 62
EST CMPLT DATE: 5-01-84
DATE COMPLETED:

SAMPLE NUMBER TWO WILL BE GENERATED FROM TWO EQUAL VOLUME WASHES OF SAMPLE
NUMBER ONE.

SAMPLE	DATE	CODE	DESCRIPTION	TEST	RESULT
1		FX-8		SMPL-PREP	COMPLETE
2		WASHED	SAMPLE	96-HR-LC50 C-BOD-05 C-BOD-10 C-BOD-20 SOLUBILITY BIOSORP JEG-SPEC SLUDGE-TOX	#SEE REPORT #

= UPDATED DATA
* = CONTRACT LAB

006621

4-11-84

ENVIRONMENTAL LABORATORY STATUS REPORT
ALL RESULTS TENTATIVE

LAB REQUEST NO. B1229

REQUESTER NAME: ANW/EAR
DEPT: 0535
PROJECT NO: 9970012600
DATE RECEIVED: 2-21-84
DESC: FX-8 (CC 842-2)

CONTRACT LAB:
CONTRACT LAB COST: 0
3M E-L HOURS: 47
EST CMPLT DATE: 5-01-84
DATE COMPLETED:

SAMPLE NUMBER TWO WILL BE GENERATED FROM TWO EQUAL VOLUME WASHES OF SAMPLE NUMBER ONE.

SAMPLE	DATE	CODE	DESCRIPTION	TEST	RESULT
1		FX-8		SMPL-PREP	COMPLETE
2		WASHED	SAMPLE	96-HR-LC50	
				C-BOD-05	SEE REPORT
				C-BOD-10	SEE REPORT
				C-BOD-20	#SEE REPORT
				SOLUBILITY	
				BIOSORP	
				SLUDGE-TOX	

= UPDATED DATA
* = CONTRACT LAB

006622