

BIODEGRADATION (BOD/COD)

TEST SUBSTANCE

Identity: Perfluorooctanoic acid, ammonium salt; may also be referred to as PFOA ammonium salt, Ammonium perfluorooctanoate, FC-116, FC-126, FC-169, or FC-143. (Octanoic acid, pentadecafluoro-, ammonium salt, CAS # 3825-26-1)

Remarks: The 3M production lot number was not noted. The test sample is FC-126 and is referred to by the testing laboratory as E1282-1 and E1282-2. It's purity was not sufficiently characterized, though current information indicates it is a mixture of 78 - 93% test substance and 7 - 22% C₅, C₆, and C₇ perfluoro analogue compounds.

METHOD:

Method: EPA approved standard method numbers 507 and 508A.

Type: Aerobic (BOD) and Dichromate reflux (COD)

GLP: No

Year completed: 1987

Contact time: 20 days

Inoculum: Not noted

RESULTS

Chemical Oxygen Demand (COD): 825 mg/kg*

Biochemical Oxygen Demand (BOD):

5-Day: 140 mg/kg

10-Day: 500 mg/kg

20-Day: 710 mg/kg

*Average of two tests.

CONCLUSIONS

No reliable conclusions can be derived from this study.

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

DATA QUALITY

Reliability: Klimisch ranking 4. Summary was created using only a listing of test values. The original study procedure and raw data were not found. However, there was a discrepancy noted in the data values. Data

was reported as "mg/L" by the testing laboratory, but was entered as "mg/kg" values in the 3M Environmental Laboratory archive system without proper conversion from volume to mass units. Therefore, the data is invalid as stated.

REFERENCES

The COD and BOD studies were conducted by Pace Analytical of Minneapolis, MN at the request of the 3M Company , Lab Request number E1282, 5/29/87.

OTHER

Last changed: 5/24/00

06/02/1987

ENVIRONMENTAL LABORATORY FINAL REPORT

1

LAB REQUEST NO. E1282

REQUESTOR NAME: AN WELTER/MTE
DEPARTMENT: 0535
PROJECT NO: 9970012900
DATE RECEIVED: 02/27/1987
DESC: BASE ECOTOX SET - FC-126

CONTRACT LAB: PACE
CONTRACT LAB COST: 95
3M E-L HOURS: 12
EXP COMP DATE: 05/08/1987
DATE COMPLETED: 05/29/1987

SAMPLE	DATE	CODE	DESCRIPTION	RESULT	MIN DET LIMIT
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1	02/18/87	FC-126	LOT 390		
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DAPHNIA ACUTE TEST	COMPLETE
FISH ACUTE TEST	COMPLETE
*BOD-05 (CARBONACEOUS)	140 MG/KG
*BOD-10 (CARBONACEOUS)	500 MG/KG
*BOD-20 (CARBONACEOUS)	710 MG/KG
*COD (DICHROMATE REFLUX)	820 MG/KG
MICROTOX - EC50	COMPLETE
*INORGANIC TESTS REPORT	SEE ATTACHED REPORT
SLUDGE RESPIRATION - EC50	COMPLETE

* = CONTRACT LAB

SUBMITTED BY:



DATED:

6-2-87

Rec 5/25/87
WAS

May 20, 1987

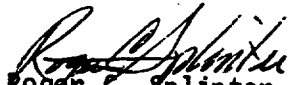
Mr. Wade Scheil
3M Environmental Laboratory
935 Bush Avenue
Bldg. 2-3E
St. Paul, MN 55133

Dear Mr. Scheil:

Enclosed is the report of laboratory analyses for samples received 03/02/87.

If you have any questions concerning this report, please feel free to contact Tom Halverson or myself.

Sincerely,


Roger L. Splinter, Ph.D.
Director, Laboratory Services

Enclosures

REPORT OF LABORATORY ANALYSIS

3M Environmental Laboratory
935 Bush Avenue
Bldg. 2-3E
St. Paul, MN 55133

May 20, 1987
PACE Project Number: 870303508

Attn: Mr. Wade Scheil

E1282

Date Sample(s) Collected: By Client
Date Sample(s) Received: 03/02/87

PACE Sample Number:

Parameter

Carbonaceous Biochemical Oxygen Demand(1)
Carbonaceous Biochemical Oxygen Demand(1)
Carbonaceous Biochemical Oxygen Demand(1)
Chemical Oxygen Demand(2)

Units

MDL

029790

029800

E1282-1

E1282-2

mg/L

60

140

-

mg/L

60

500

-

mg/L

60

710

-

mg/L

50

820

830

MDL Method Detection Limit

- (1) BOD analysis was performed in accordance with standard methods #507
- (2) COD analysis was performed in accordance with standard methods #508A

The data contained in this report was obtained using EPA or other approved methodologies. All analyses were performed by me or under my direct supervision.

Thomas L. Halverson
Thomas L. Halverson
Inorganic Chemistry Manager