

BIODEGRADATION (BOD/COD)

TEST SUBSTANCE

Identity: A mixture containing perfluorooctanesulfonate, which may also be referred to as PFOS, FC-95, or as a component of FC-203. (1-Octanesulfonic acid) (CAS # 2795-39-3).

Remarks: The 3M production lot number was not noted. The test sample is FC-203. Current information indicates it is a mixture of 1.34% PFOS, 35% diethylene glycol butyl ether, 37.85% water, 20% ethylene glycol, 2.66 % Sultone foamer, 3% sodium octyl sulfate, 0.1% sodium lauryl sulfate, and 0.05% tolyltriazole.

The following summary applies to a mixture with incompletely characterized concentrations of impurities. Data does not accurately reflect the degradation potential of the fluorochemical component of the test sample.

METHOD:

Method: COD by EPA 410.1 and CBOD by EPA 405.1

Type: Aerobic BOD and Dichromate Reflux COD

GLP: No

Year completed: 1991

Contact time: 20 days

Innoculum: Source not given

RESULTS

Chemical Oxygen Demand (COD): 1,100,000 mg/kg

Carbonaceous Biochemical Oxygen Demand (CBOD):

5-Day: 630,000 mg/kg

10-Day: 880,000 mg/kg

20-Day: 1,100,000 mg/L

Remarks: Testing was conducted on the mixture as described in the Test Substance Remarks field. The values reported apply to that mixture and not the fluorochemical proportion alone.

CONCLUSIONS

No reliable conclusions can be derived from these studies. The indication is that the majority of the product components are readily biodegradable.

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

DATA QUALITY

Reliability: Klimisch ranking = 3. The inoculum is not properly characterized. The testing was conducted on a mixture with chemicals having varying degrees of biodegradability, leading to potential misinterpretation of the results. The sample purity was not properly characterized and the study lacks analytical confirmation of the amount of fluorochemical proportion in the solution.

REFERENCES

The studies were conducted by Pace Incorporated, Minneapolis, MN at the request of the 3M Company, 3M Lab Request number J2176, 1991.

OTHER

Last changed: 6/27/00



REPORT OF LABORATORY ANALYSIS
BEST COPY AVAILABLE

August 13, 1991

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

RE: PACE Project No. 910711.501
J2176

RECEIVED
AUG 13 1991
3M ENVIRONMENTAL
LABORATORY

Dear Mr. Schell:

Enclosed is the report of laboratory analyses for samples received
July 10, 1991.

If you have any questions concerning this report, please feel free
to contact us.

Sincerely,


Lisa A. Arndt
Project Manager

Enclosures

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REPORT OF LABORATORY ANALYSIS

Mr. Wade Schell
Page 5

August 13, 1991
PACE Project Number: 910711501

J2176

PACE Sample Number:
Date Collected:
Date Received:
Parameter

10 0245070

07/09/91

07/10/91

Units

MDL

J2176-5 DATE ANALYZED & METHOD

INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Biochemical Oxygen Demand, Carb 05 Day	mg/kg	6000	630000	07/19/91	EPA 405.1
Biochemical Oxygen Demand, Carb 10 Day	mg/kg	6000	880000	07/19/91	EPA 405.1
Biochemical Oxygen Demand, Carb 20 Day	mg/kg	6000	1100000	07/19/91	EPA 405.1
Chemical Oxygen Demand	mg/kg	50000	1100000	07/25/91	EPA 410.1

MDL Method Detection Limit

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REPORT OF LABORATORY ANALYSIS

Mr. Wade Schell
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August 13, 1991
PACE Project Number: 910711501

J2176

PACE Sample Number:
Date Collected:
Date Received:
Parameter

10 0245089

07/09/91

07/10/91

Units

MDL

J2176-6

DATE ANALYZED & METHOD

INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Biochemical Oxygen Demand, Carb 05 Day	mg/kg	6000	390000	07/19/91	EPA 405.1
Biochemical Oxygen Demand, Carb 10 Day	mg/kg	6000	830000	07/19/91	EPA 405.1
Biochemical Oxygen Demand, Carb 20 Day	mg/kg	6000	890000	07/19/91	EPA 405.1
Chemical Oxygen Demand	mg/kg	50000	1000000	07/25/91	EPA 410.1

MDL Method Detection Limit

These data have been reviewed and are approved for release.

Starla Enger
Inorganic Chemistry Manager

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