

MICROBIAL RESPIRATION INHIBITION TEST

TEST SUBSTANCE

Identity: Decafluoro(pentafluoroethyl)cyclohexanesulfonate, DEA salt; may be referred to as CS-2070. When dissolved in water may also be referred to or as CS-2151 or FC-90. (DEA salt of perfluoro(ethylcyclohexyl) sulfonate, [C₂F₅-CF(CF₂CF₂)₂CF-SO₃-][H₂N(CH₂CH₂OH)₂+])

Remarks: The 3M production lot number was not noted. The test sample is CS-2151, a mixture of CS-2070 in water (approximately 25% test substance and 75% water). All values reported relate to this mixture. No calculations were made to adjust for the actual concentration of the test substance in the test sample. The sample purity was not characterized.

METHOD

Method: 3M Environmental Laboratory Protocol for Determining Acute Toxicity of a Compound to Activated Sludge Mixed Liquor

Test type: Acute

GLP: No

Year Completed: 1981

Analytical monitoring: Dissolved oxygen.

Statistical methods: Results were determined by graphic interpolation of the change in dissolved oxygen as a function of time.

Test organism source: Activated sludge from an aeration basin at the Metro Wastewater Treatment Plant, St Paul, MN.

Test condition:

Dilution water: Not noted.

Inoculation: Not noted.

Reference and test solution preparation: Not noted.

Test vessels: Not noted.

Number of concentrations: 1 plus blank.

Temperature: Not noted.

Total suspended solids and pH on day of testing: Not noted.

Element Basis: Change in dissolved oxygen compared to the blank.

RESULTS

Nominal concentrations: Blank control, and test substance at 1000 mg/L.

Element value: No acute inhibitory effect at 1000 mg/L compared to the control.

Element value based on nominal concentrations.

Remarks: Testing was conducted on the test substance as described in the test substance remarks field. The values reported are based on nominal concentrations of CS-2151.

CONCLUSIONS

No affect on the respiration rate of microorganisms at 1000 mg/L. This indicates an absence of an acute toxic effect at this concentration.

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

DATA QUALITY

Reliability: Klimisch ranking = 3. A non-standard method used. There is a lack of characterization of the test sample. The inoculum was not properly characterized. Test solutions were not analyzed for test substance concentrations and confirmation of the amount of fluorochemical components in the solution.

REFERENCES

This study was conducted by the 3M Company, Environmental Laboratory, St. Paul, MN, Lab Request number 6260S, 1981.

OTHER

Last changed: 4/01/01