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EPA ID # NJ03048 NJ DEP ID # 08012

MCHM REDUCTION TEST REPORT

Report # 15-150-MCHM Reduction Test (Auro Solution)
Customer Name: Auro, LLC.
Report Date: July 3, 2015

EXECUTIVE SUMMARY

One liter of tap water was spiked with 135 µg of 4-Methyl-1-cyclohexanemethanol (MCHM) in a one liter volumetric flask, 2 mL of Auro Solution was added to this solution in a closed volumetric, after 24 hours the spiked tap water was filtered through the Sawyer filter system, the spiked tap water solution and the filtered Auro Solution were tested following the EPA method 525 with extraction, the MCHM in the tap water was reduced by 86.2%.

INTRODUCTION

One liter of tap water was spiked with 135 µg of 4-Methyl-1-cyclohexanemethanol (MCHM) in a one liter volumetric flask, 2 mL of Auro Solution was added to this solution in a closed volumetric, mixed well, the volumetric flask was set up in a fume hood, after 24 hours the spiked tap water was filtered through the Sawyer filter system, the spiked tap water solution and the filtered Auro Solution were tested following the EPA method 525 with extraction, the MCHM in the tap water was reduced by 86.2%.

REAGENTS AND LAB EQUIPMENT

Auro Solution mineral solution with Sawyer Filter model SP128 with 0.1 micron membrane.
4-Methyl-1-cyclohexanemethanol (MCHM) TCI America, Product Code M1412, CAS # 34885-03-5, Reagent grade >98.0%.
Hewlet Packard 5890/5972 GC/MS with Chem Station data system.
Micro syringes and type A glassware necessary to perform the EPA 525 method for drinking water analysis.

PROCEDURE

One liter of tap water was spiked with 135 µg of 4-Methyl-1-cyclohexanemethanol (MCHM) in a one liter volumetric flask. Added 2 mL of Auro Solution to the spiked solution, mixed well and let sit for 24 hours inside a fume hood. The solution was filtered through a Sawyer 0.1 micron membrane filter, the spiked solution and the filtered solution were tested following the EPA method 525. The results are summarized in Tables 1 and 2 below.

RESULTS

Table 1
Spiked Tap Water Properties

Parameter	Spiked Tap Water	Target
pH	7.20	7.00 to 8.00
TDS	275 mg/L	200 to 500 mg/L
Temperature	19.5 °C	20 ± 2.5°C
Turbidity	0.35 NTU	< 1 Nephelometric Turbidity Units
Free Chlorine	0.5 mg/L	0.25 to 2.0 mg/L
MCHM	133.7 µg/L	135 µg/L

Table 2
Filtered Water Results

Parameter Tested	Auro Solution Filtered Water	% Reduction
MCHM	18.4 µg/L	86.2%

CONCLUSION

The Auro Solution mineral solution combined with the Sawyer filter reduced the MCHM concentration in the tap water by 86.2%.

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