ENVIROTEK LABORATORIES, INC.
33 Third Street, Bordentown, NJ 08505
PHONE 856-583-0445 www.enviroteklab.com
EPA ID # NJ01298 NJ DEP ID # 03048 NY ELAP ID # 12044

ATC SUPER STERASYL FILTER PHARMACEUTICALS TEST REPORT

Report # 16-374-Pharmaceuticals
Report Date: 11/15/2016
Customer Name: Fairey Industrial Ceramics, LTD.

EXECUTIVE SUMMARY

Four hundred gallons of tap water was spiked with Pharmaceutical Standard Solution to have a final concentration of 20 ± 5 µg/L; the spiked tap water was filtered through the filter element and tested; the Pharmaceutical drugs in the tap water were reduced by at least 99.5 % after 400 gallons.

INTRODUCTION

Four hundred gallons of tap water was spiked with Pharmaceutical Standard Solution to have a final concentration of 20 ± 5 µg/L; the spiked tap water was filtered through the filter element and tested by HPLC method for drugs; the Pharmaceutical drugs in the tap water were reduced by at least 99.5% after 400 gallons.

REAGENTS, MATERIALS, AND LAB EQUIPMENT

Agilent HPLC 1100, DAD detector.
Analytical Column Allure C18. Restek Pharmaceutical Mix #1, Catalog 3116, Lot A0102241.
Restek Pharmaceutical Mix #2, Catalog 3118, Lot A095125. Restek Pharmaceutical Mix #3, Catalog 3117, Lot A0101273.
ATC Super Sterasyl Filter.

PROCEDURE

Four hundred gallons of tap water was spiked with Pharmaceutical Standard Solution in a Tank and mixed well; this solution was tested and adjusted to have a final concentration of 20 ± 5 µg/L of Pharmaceutical Drugs; the influent water properties are summarized in Table 1 below. The solution was filtered through the ATC Super Sterasyl Filter and tested every 100 gallons following the HPLC Method for Pharmaceutical Drugs in drinking water. The results are summarized in Table 2 below.

RESULTS

Table 1
Influent Challenge Water Properties

Parameter	Influent Challenge Water	Target
pH	7.40	7.00 to 8.00
Temperature	20.5 °C	20 ± 2.5°C
TDS	350 mg/L	200 to 500 mg/L
Turbidity	0.65 NTU	<1 Nephelometric Turbidity Units

Table 2
Filtered Water Pharmaceutical Drugs Test Results

Drinking Water Contaminant Tested	Influent Water Results in µg/L	Filter Results 100 gallons	Filter Results 200 gallons	Filter Results 300 gallons	Filter Results 400 gallons	% Reduction at 400 gallons
Acetaminofen	20.2	<0.1	<0.1	<0.1	<0.1	99.5%+
Caffeine	20.0	<0.1	<0.1	<0.1	<0.1	99.5%+
Carbamazepine	20.1	<0.1	<0.1	<0.1	<0.1	99.5%+
Ciprofloxacin HCl	20.2	<0.1	<0.1	<0.1	<0.1	99.5%+
Erythromycin USP	20.3	<0.1	<0.1	<0.1	<0.1	99.5%+
Sulfamethoxazole	20.2	<0.1	<0.1	<0.1	<0.1	99.5%+
Trimethoprim	20.0	<0.1	<0.1	<0.1	<0.1	99.5%+
Bisphenol A	20.1	<0.1	<0.1	<0.1	<0.1	99.5%+
Diclofenac Sodium	20.5	<0.1	<0.1	<0.1	<0.1	99.5%+
4-para-Nonylphenol	20.0	<0.1	<0.1	<0.1	<0.1	99.5%+
4-tert-Octylphenol	20.4	<0.1	<0.1	<0.1	<0.1	99.5%+
Primidone	20.3	<0.1	<0.1	<0.1	<0.1	99.5%+
Progestrone	20.2	<0.1	<0.1	<0.1	<0.1	99.5%+
Gemfibrozil	20.1	<0.1	<0.1	<0.1	<0.1	99.5%+
Ibuprofen	20.4	<0.1	<0.1	<0.1	<0.1	99.5%+
Naproxen Sodium	20.5	<0.1	<0.1	<0.1	<0.1	99.5%+
Triclosan	20.6	<0.1	<0.1	<0.1	<0.1	99.5%+

ENVIROTEK LABORATORIES, INC.
33 Third Street, Bordentown, NJ 08505
PHONE 856-583-0445 www.enviroteklab.com
EPA ID # NJ01298 NJ DEP ID # 03048 NY ELAP ID # 12044

CONCLUSION:
The ATC Super Sterasyl Filter reduces the Pharmaceutical drugs concentration by at least 99.5% for up to 400 gallons, tested following the NSF Protocol 401.

CERTIFICATION OF RESULTS:
I certify in writing that all analyses, and reporting performed herein, comply with all requirements set forth in N.J.A.C. 7:9E and N.J.A.C. 7:18, and hereby certify that this laboratory is in compliance with all laboratory certification and quality control procedures and requirements as set forth in N.J.A.C. 7:18; the NYCRR Subpart 55-2 and the National Environmental Laboratory Accreditation Conference (NELAC) Institute Standards.

Disclaimer: The test results are only related to the filter sample tested.

Jaime A. Young
Jaime A. Young
Lab Director