

# ENVIROTEK LABORATORIES, INC.

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EPA ID # NJ01298 NJ DEP ID # 08012

## PESTICIDES/HERBICIDES REDUCTION TEST REPORT

Report # 12-147-2 (Tyent Ultra Filtration System)  
Report Date: 05/23/2012  
Customer Name: Tyent USA  
Site Address: 137 Hurfville Crosskeys, Sewell NJ 08080  
Date Sampled: 05/18/2012

### EXECUTIVE SUMMARY

A Tyent Ultra Filtration System was tested for reduction of Pesticides/Herbicides following the procedures of the NSF/ANSI Standard 53, section 7.2.1. The filter reduced the Pesticides to levels below the limits set forth by the NSF Standard 53. Passed.

### INTRODUCTION

A Tyent Ultra Filtration System was tested for reduction of Pesticides/Herbicides following the procedures of the NSF/ANSI Standard 53, section 7.2.1. The filter was challenged with water prepared at the Pesticides/Herbicides concentrations set forth in the NSF Standard 53; the filtration system reduced the Pesticides tested. The filtration system conforms to all the Pesticides/Herbicides reduction testing set forth by the NSF/ANSI standard 53. Passed.

### REAGENTS, MATERIALS, AND LAB EQUIPMENT

HP 5890/5972 GC/MS system with ChemStation data system.  
HP 5MS GC column 30m, 0.25mm ID, 0.25um film.  
HP 5890 GC/ECD system with ChemStation data system.  
Restek Pesticide mix standard solution, catalog #33012 and 32415.  
Hanna TDS meter Combo pH & EC.  
DI water ASTM reagent type 3.  
Sodium Chloride.  
Tyent Ultra Filtration System  
    1<sup>st</sup> Filter Serial # Oct.21.2011  
    2<sup>ND</sup> Filter Serial # May.18.2011  
Electric Pump (Flow Pressure 60 PSI).

### PROCEDURE

Connected the feeding chemical electric pump to a Tyent Ultra Filtration System, flushed about 1 gallon of tap water through the filter. Prepared 10 gallons of influent water with Pesticides/Herbicides at a concentration set forth by the NSF Standard 53; Table 2 summarized the Influent water properties. Pumped 10 gallons of Influent water through the filter system at a flow pressure of less than 125 PSI. Collected the effluent water and analyzed the filtered water for Pesticides/Herbicides using EPA 525 and 508 method of analysis. The results are summarized in Table 1 below.

## RESULTS

**Table 1**  
**Pesticides/Herbicides Concentrations**  
**Tyent Ultra Filtration System**

Test Parameter	Influent Water Concentration	Effluent Water Ultra Filter System	Maximum Effluent Concentration
Alachlor	0.04 mg/L	<0.0005 mg/L	0.002 mg/L
Atrazine	0.009 mg/L	<0.0005 mg/L	0.003 mg/L
Carbofuran	0.08 mg/L	<0.0005 mg/L	0.04 mg/L
Chlordane	0.04 mg/L	<0.0005 mg/L	0.002 mg/L
2,4-D	0.21	<0.0005 mg/L	0.07 mg/L
Dinoseb	0.021	<0.0005 mg/L	0.007 mg/L
Endrin	0.006 mg/L	<0.0005 mg/L	0.002 mg/L
Heptachlor	0.08 mg/L	<0.0001 mg/L	0.0004 mg/L
Heptachlor Epoxide	0.004 mg/L	<0.0001 mg/L	0.0002 mg/L
Hexachlorocyclopentadiene	0.15 mg/L	<0.0005 mg/L	0.05 mg/L
Lindane	0.002 mg/L	<0.0001 mg/L	0.0002 mg/L
Methoxychlor	0.12 mg/L	<0.0005 mg/L	0.04 mg/L
Pentachlorophenol	0.01 mg/L	<0.0005 mg/L	0.001 mg/L
PCB's (Aroclor 1260)	0.01 mg/L	<0.0005 mg/L	0.001 mg/L
Simazine	0.012 mg/L	<0.0005 mg/L	0.004 mg/L
Silvex	0.15 mg/L	<0.0005 mg/L	0.05 mg/L
Toxaphene	0.015 mg/L	<0.0005 mg/L	0.003 mg/L

**Table 2**  
**Reduction Test Water Properties**

Parameter	Reduction Test Water	Target
pH	7.40	7.00 to 8.00
Temperature	21.5 °C	20 ± 2.5°C
TDS	345 mg/L	200 to 500 mg/L
TOC	≥1.0 mg/L	≥1.0 mg/L
Turbidity	0.45 NTU	< 1 NTU
Flow Pressure	60 PSI	20 to 125 PSI

## CONCLUSION

The Tyent Ultra Filtration System reduced the Pesticides/Herbicides in the water to levels below the NSF acceptable limits. The Filter system met the requirements for the NSF/ANSI 53 Pesticides reduction section 7.2.1. Total volume tested: 10 gallons.

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