



**SAGAN FILTER STUDY FINAL REPORT**

**Report Number:** R-SLC-140523-WTR-02

**Submission Date:** 23May14

**Client Information**

**Contact:** Rick Muir  
**Company:** Sagan LLC.

**Phone Number:** 832-675-3088  
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**Address:** 11035 Technology Place Suite 100  
 San Diego, CA 92127

**Test Sample Information**

The filter submitted by Sagan Filters on 23 May 2014 was used to filter all the chemicals listed below following approved study protocol (Chemical Filtration Efficacy Study Using Sagan Filter). All chemicals were filtered at a pump setting of 2 psi (4 in Hg).

**Testing Information**

Equipment	
Pump	
Filtration System Accessories (i.e Tubing and plugs)	
Containers and Pipets	
Sagan Filter Unit as shown at the end of the report	
Material	Lot Number
Distilled Water	N/A
Chemicals Filtered (Refer to the list below)	Refer to Certificate of Analysis

<b>Technician(s):</b>	E. Scarpelli-Board, Dan Ang
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**Approvals**

*Electronic signatures are equivalent to paper signed signatures.*

**Technical:**   
 \_\_\_\_\_  
**E. Scarpelli-Board**

**Date:** 1-Jul-14

**Quality:**   
 \_\_\_\_\_  
**Janina Wills**

**Date:** 1-Jul-14



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## Test Results –Test Code , MICSTUDY5

Analyte	EPA Method Used	Conc. Per Mfr. Cert (ug/mL)	MRL* (ug/L)	Water Vol. Used (L)	Analyte Vol. Used (mL)	Pre-Filtered Conc (ug/L)	Post Filtration Result (ug/L)	% Reduction
Beryllium	200.8	1,000	0.1	0.5	0.1	200	Not detected	>99.95
Bromate	300.1	1,000	5	0.25	0.25	1000	18	98.20
Chlorite	300.1	1,000	10	0.25	0.25	1000	21	97.90
Cyanide	335.4	1,000	5	1	0.5	500	170	66.00
<b>Fumigants (EBD, DBCP)</b>	504.1			0.5	1			
1,2-Dibromo-3-chloropropane		2066	0.01			4132	0.09	100.00
1,2-Dibromoethane (EDB)		2097	0.02			4194	0.065	100.00
<b>Organochlorine Pesticides &amp;PCBs</b>	508			3.5	1			
4,4'-DDD		1987	0.01			567.7	Not detected	>99.998
4,4'-DDE		1969	0.01			562.6	Not detected	>99.998
4,4'-DDT		2047	0.01			584.9	Not detected	>99.998
Aldrin		2000	0.01			571.4	Not detected	>99.998
alpha-BHC		2012	0.01			574.9	0.026	100.00
Endosulfan sulfate		2000	0.01			571.4	Not detected	>99.998
Endrin		2000	0.01			571.4	Not detected	>99.998
Endrin aldehyde		1929	0.01			551.1	0.013	100.00
gamma-BHC (Lindane)		2026	0.01			578.9	Not detected	>99.998
Heptachlor		1944	0.01			555.4	Not detected	>99.998
Heptachlor epoxide		2000	0.01			571.4	Not detected	>99.998
Methoxychlor		1978	0.01			565.1	Not detected	>99.998
Toxaphene		2057	1		1	587.7	Not detected	>99.83

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<b>Chlorinated Acid Herbicides</b>	515.3			1	0.1			
2,4,5-T		105	0.2			10.5	Not detected	>98.1
2,4,5-TP (Silvex)		105	0.2			10.5	Not detected	>98.1
2,4-D		110	0.4			11	Not detected	>96.36
2,4-DB		106	2			10.6	Not detected	>81.13
3,5-Dichlorobenzoic acid		107	1			10.7	Not detected	>90.65
Acifluorfen		105	0.4			10.5	Not detected	>96.19
Bentazon		110	2			11	Not detected	>81.82
Dalapon		105	0.4			10.5	0.92	91.24
Dicamba		105	0.6			10.5	Not detected	>94.29
Dichloroprop		106	0.3			10.6	Not detected	>97.17
Dinoseb		108	0.4			10.8	Not detected	>96.3
Pentachlorophenol		105	0.2			10.5	Not detected	>98.1
Picloram		106	0.6			10.6	Not detected	>94.34
<b>Volatile Organic Compounds</b>	524.2			1	1			
1,1,1-Trichloroethane		2011	0.5			2011	45	97.76
1,1,1,2-Tetrachloroethane		1961	0.5			1961	23	98.83
1,1,2-Trichloroethane		1993	0.5			1993	40	97.99
1,1,2,3-Tetrachloroethane		1975	0.5			1975	Not reported	N/A
1,2,3-Trichlorobenzene		1986	0.5			1986	Not detected	>99.97
1,2,3-Trichloropropane		1970	0.5			1970	47	97.61
1,2,4-Trichlorobenzene		1985	0.5			1985	Not detected	>99.97
1,2,4-Trimethylbenzene		1958	0.5			1958	0.52	99.97

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1,3,5-Trimethylbenzene		1957	0.5			1957	1	99.95
2-Butanone		1899	5			1899	66	96.52
\2-Chloroethyl vinyl ether		1923	1			1923	Not detected	>99.95
2-Chlorotoluene		1960	0.5			1960	Not detected	>99.97
2-Hexanone		1845	5			1845	13	99.30
4-Chlorotoluene		1961	0.5			1961	Not detected	>99.97
4-Methyl-2-pentanone		1884	5			1884	1.3	99.93
Acetone		1901	5			1901	8.5	99.55
Acrylonitrile		1972	2			1972		100.00
Benzene		2005	0.5			2005	8.6	99.57
Bromobenzene		1978	0.5			1978	Not detected	>99.97
Bromochloromethane		2000	0.5			2000	15	99.25
Bromodichloromethane		1982	0.5			1982	3.9	99.80
Bromoform		1963	0.5			1963	20	98.98
Bromomethane		1945	0.5			1945	1.6	99.92
Carbon Disulfide		1881	0.5			1881	6.6	99.65
Carbon tetrachloride		2020	0.5			2020	23	98.86
Chlorobenzene		1968	0.5			1968	0.89	99.95
Chloroethane		1943	0.5			1943	45	97.68
Chloroform		1980	0.5			1980	6.6	99.67
Chloromethane		1877	0.5			1877	3.6	99.81
cis-1,2-Dichloroethylene		2016	0.5			2016	29	98.56

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## Test Results –Test Code , MICSTUDY5

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cis-1,3-Dichloropropene		1977	0.5			1977	11	99.44
1,1-Dichloroethane		2026	0.5			2026	18	99.11
1,1-Dichloropropene		2040	0.5			2040	2.8	99.86
1,2-Dichloropropane		1993	0.5			1993	39	98.04
1,3-Dichloropropane		1982	0.5			1982	26	98.69
2,2-Dichloropropane		2028	0.5			2028	2.4	99.88
Dibromochloromethane		1980	0.5			1980	29	98.54
Dibromomethane		2000	0.5			2000	6.6	99.67
Dichlorodifluoromethane(Freon12)		1984	0.5			1984	35	98.24
Ethylbenzene		1961	0.5			1961	1.1	99.94
Hexachlorobutadiene		1986	0.5			1986	Not detected	>99.97
Methylene chloride		2027	0.5			2027	28	98.62
Naphthalene		1958	0.5			1958	Not detected	>99.97
n-Butylbenzene		1955	0.5			1955	Not detected	>99.97
n-Propylbenzene		1953	0.5			1953	Not detected	>99.97
o-Xylene		1966	0.5			1966	1	99.95
p-Isopropyltoluene		1969	0.5			1969	Not detected	>99.97
sec-Butylbenzene		1955	0.5			1955	Not detected	>99.97
Styrene		1969	0.5			1969	Not detected	>99.97
tert-Butylbenzene		1966	0.5			1966	0.87	99.96
Tetrachloroethene		2015	0.5			2015	1	99.95
Toluene		1973	0.5			1973	5.6	99.72

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trans-1,3-Dichloropropene		1976	0.5			1976	7.3	99.63
Trichlorofluoromethane		1945	0.5			1945	13	99.33
Vinyl chloride		2036	0.5			2036	29	98.58
<b>Regulated 3 &amp; 507 compounds</b>	525.2			3.5	1			
Alachlor		991	0.1			283	7.1	97.49
Atrazine		199.7	0.1			57	7.2	87.38
Benzo (a) pyrene		1000	0.1			286	Not detected	>99.97
Bis(2-ethylhexyl)adipate		1930	5			551	Not detected	>99.09
Bis(2-ethylhexyl)phthalate		1937	3			553	Not detected	>99.46
Bromacil		1082.3	0.5			309	16	94.83
Butachlor		986	0.1			282	0.49	99.83
EPTC		98.6	0.1			28	0.44	98.44
Metolachlor		990	0.1			283	6.2	97.81
Metribuzin		102.4	0.1			29	1.2	95.90
Molinate		98.1	0.1			28	0.52	98.14
Prometon		993	0.1			284	10	96.48
Simazine		953	0.1			272	5.3	98.05
Terbacil		99.1	2			28	Not detected	>92.94
<b>Carbamates</b>	531.1			0.5	1			
3-Hydroxycarbofuran		105.2	2			210.4	12	94.30
Aldicarb		101.2	2			202.4	8.4	95.85
Aldicarb sulfone		100.2	2			200.4	18	91.02

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## Test Results –Test Code , MICSTUDY5

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Aldicarb sulfoxide		100.5	2			201	22	89.05
Carbaryl		95.5	2			191	Not detected	>98.95
Carbofuran		99.6	2			199.2	6.7	96.64
Methiocarb		103	2			206	Not detected	>99.03
Methomyl		101.9	2			203.8	3.6	98.23
Oxamyl		100.5	2			201	15	92.54
Propoxur (Baygon)		104	2			208	7.1	96.59
<b>Glyphosate</b>	547	1005	5	0.5	1	2010	Not detected	>99.75
<b>Haloacetic Acids (HAA5)</b>	552.2			1	1			
Dibromoacetic acid (dbaa)		2011	1			2011	44	97.81
Dichloroacetic acid (dcaa)		2002	1			2002	22	98.90
Trichloroacetic acid (tcaa)		1984	2			1984	30	98.49
<b>Acrylamide</b>	8316	40000	0.1	0.5	0.0125	1000	9.6	99.04
<b>Fluoride</b>	300	1,000	100	1	0.2	200	Not detected	~100.00
<b>Odor (Threshold Number)</b>	140.1	N/A	1**	N/A	N/A	1**	1**	N/A
<b>Chlorine Residual, Total</b>	SM 4500Cl-G	1.89*	0.05***	1	1	1.89*	Not detected	>97.35

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\*\*Unit = T.O.N.

\*\*\*Unit = mg/L