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Facility: 13792

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Result	**PASS**	Report Date	16-SEP-2015
Customer Name	Doulton Water Filters		
Tested To	Standard 53 Cyst Live Cryptosporidium POU/POE		
Description	HIP/Sterasyl Inline		
Test Type	5 Year Testing		
Job Number	J-00170136		
Project Number	W0141475		
Project Manager	Demarrio Boles		

Thank you for having your product tested by NSF International.

Please contact your Project Manager if you have any questions or concerns pertaining to this report.

Report Authorization   _Kerri L. LeVanseler_   **Date**   16-SEP-2015

Kerri Levanseler - Director, Chemistry Laboratory

Standard 53 Cyst Live Cryptosporidium POU/POE: PASS

Manufacturer's Name: Fairey Industrial Ceramics Ltd.

Job ID: J-00170136

Date of Job Creation: 12-AUG-2015

Date Sample Received: 12-AUG-2015

Date Test Completed: 11-SEP-2015

Sample Type: 5 Year Testing

Product: HIP/Sterasyl Inline

DCC Number: HIP/Sterasyl Inline

Flushing Time: 10 minutes, let stand 24 hours, then flush 10 minutes

Maximum Rated Op. Pressure: 100 psi

On Cycle: 50/50

Percent Capacity: 200%

Physical Description of Sample: Plumbed in to Separate Tap without Reservoir

Rated Service Flow: 1.05 GPM

Test Description: STD 53 - Live Cyst Reduction - HIP/Sterasyl Inline - 5Y

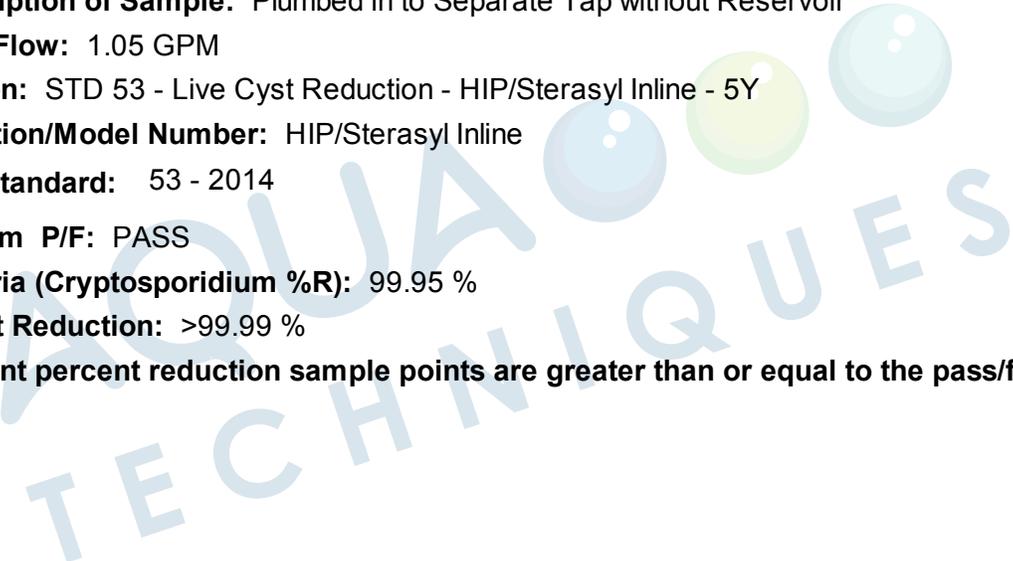**Trade Designation/Model Number:** HIP/Sterasyl Inline

Performance Standard: 53 - 2014

Cryptosporidium P/F: PASS

Pass/Fail Criteria (Cryptosporidium %R): 99.95 %

Overall Percent Reduction: >99.99 %

All of the effluent percent reduction sample points are greater than or equal to the pass/fail criteria.: YES

Data Summary Table

Sample Point	Accumulated Volume (gal)		Dynamic Pressure (psi)	
	Effluent 1	Effluent 2	Influent 1	Influent 2
Flush++	18	15		
8th Cycle	144	133	60	60
25%	218	202	61	61
50%	263	244	62	62
75%	299	283	62	62

Sample Point	Cryptosporidium (Oocysts/L)				Flow Rate (gpm)	
	Influent 1	Influent 2	Effluent 1	Effluent 2	Effluent 1	Effluent 2
Flush++			ND(1)	ND(1)	1.5	1.4
8th Cycle	100000	100000	ND(1)	9	1.5	1.4
25%	100000	100000	ND(1)	2	0.95	1.1
50%	100000	100000	ND(1)	ND(1)	0.61	0.57
75%	100000	100000	ND(1)	ND(1)	0.32	0.31

Cryptosporidium Detection Limit: 1 Oocysts/L

Data Analysis Table

Sample Point	Inf. Average (oocysts/L)		Average (oocysts/L)		Eff. % Reduction (%)	
	Influent 1	Influent 2	Effluent 1	Effluent 2	Effluent 1	Effluent 2
8th Cycle	100000	100000	ND(1)	9	99.99	99.99
25%	100000	100000	ND(1)	6	99.99	99.99
50%	100000	100000	ND(1)	4	99.99	99.99
75%	100000	100000	ND(1)	3	99.99	99.99

Sample Point	Ave. % Reduction (%)		Maximum (oocysts/L)	
	Influent 1	Influent 2	Effluent 1	Effluent 2
8th Cycle	99.99	99.99	ND(1)	9
25%	99.99	99.99	ND(1)	9
50%	99.99	99.99	ND(1)	9
75%	99.99	99.99	ND(1)	9

Inf. Average: Influent Average

Average: All Effluent Average

Eff. % Reduction: Effluent percent reduction at this sample point.

Ave. % Reduction: Percent reduction calculated from all prior influents and effluents.

Maximum: Maximum Effluent

Water Characteristics

Characteristic	Units	Range		
		Minimum	Average	Maximum
Hardness, Total	mg/LCaCO3	75	75	75
Solids, Total Dissolved	mg/L	250	250	250
Temperature	degrees C	21	21	21
Turbidity	NTU	ND(0.1)	ND(0.1)	ND(0.1)
pH		7.72		7.72

All analyses performed at NSF International, 789 N. Dixboro Road, Ann Arbor MI 48105

Calculation Definitions

All calculations use values as presented in the Data Summary Table and rounding is performed only at the conclusion of the calculation.

Percent Reduction Calculations

Overall Percent Reduction:

Influent Average includes all influents.
Effluent Average includes all effluents.

$$\% \text{ Reduction} = \frac{\text{Influent Average} - \text{Effluent Average}}{\text{Influent Average}} * 100$$

Percent Reduction for Current Influent Point:

The influent value for the specific sample point.
Effluent Average includes all effluents for the current sample point.

$$\% \text{ Reduction} = \frac{\text{Influent} - \text{Effluent Average}}{\text{Influent}} * 100$$

Percent Reduction for Current Effluent Point:

The influent value for the specific sample point.
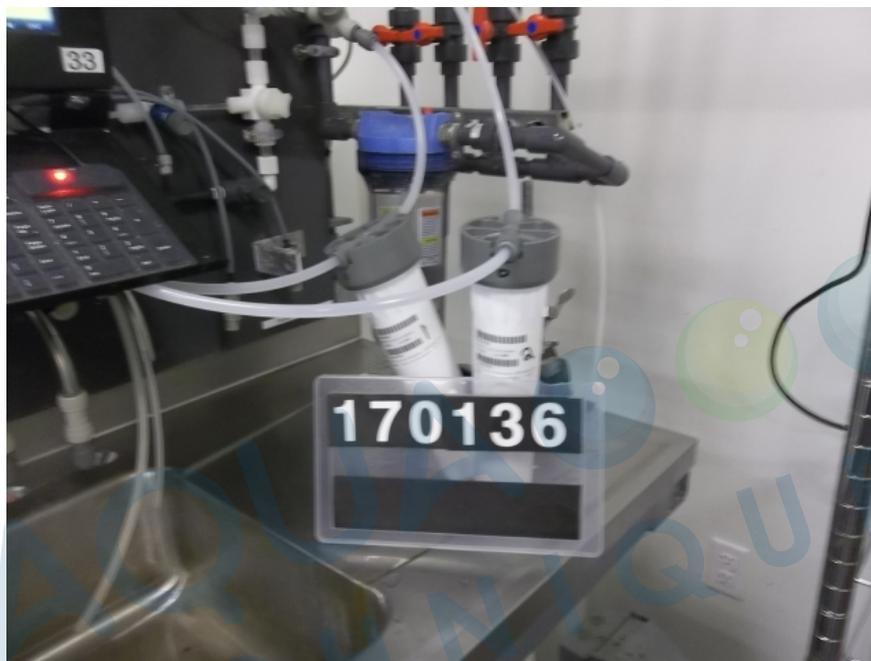Effluent includes the effluent value for the specific sample point.

$$\% \text{ Reduction} = \frac{\text{Influent} - \text{Effluent}}{\text{Influent}} * 100$$

Average Percent Reduction Calculations

Average Percent Reduction:

Influent Average includes all influents up to and including the current sample point.
Effluent Average includes all effluents up to and including the current sample point.

$$\% \text{ Reduction} = \frac{\text{Influent Average} - \text{Effluent Average}}{\text{Influent Average}} * 100$$

Test Configuration