



Consulting

Hyder Environmental
Laboratories and Sciences
Northern Laboratories
Howard Court
Manor Park
Runcorn WA7 1SJ

Tel: +44 (0)1928 579 955
Fax: +44 (0)1928 579 970

TEST CERTIFICATE
DOULTON STERASYL CANDLE

Object

To assess the performance capability of a Doulton Sterasyl candle to remove *Salmonella* from a contaminated water supply. *Salmonella* are significant waterborne pathogens, and have been found in recent studies to be difficult bacterial test organisms to be removed by filtration.

Protocol

The test was designed to give a severe intensive challenge over a significant volume of throughput.

Water conditions - dechlorinated mains water spiked as follows:-

Minimum challenge - 1.86×10^6 cfu/100ml.

Mean Challenge (Geometric) - 4.73×10^6 cfu/100ml.(4731628)

Cultured organisms for use as a bacterial challenge were prepared as per the US EPA protocol

Temperature - $20 \pm 2^\circ\text{C}$.

TOC - Approx 2 mg/l.

Turbidity - Low.

Cycle Time - 3 mins on, 12 off, stagnation overnight.

Results

Day	Influent (cfu/100ml)	Effluent (cfu/100ml)	% Removal efficiency
1	6000000	<1	99.999983
2	7000000	<1	99.999986
3	11000000	92	99.99916
4	1863636	<1	99.999946
5	2754545	4	99.99985

Conclusions

Based on the above result the Doulton Sterasyl candles are capable of removing *Salmonella* from a contaminated source to an efficiency of >99.999%.

The average efficiency over the test was 99.99979%.

signed

Date 8th May 1997