



Consulting

Hyder Environmental  
Laboratories and Sciences

Northern Laboratories  
Howard Court  
Manor Park  
Rugby CV21 1SU

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 -  $1.86 \times 10^6$  cfu/100ml.

Mean Challenge (Geometric) -  $4.73 \times 10^6$  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 8<sup>th</sup> May 1997

OA10191/MC/DLA/0423/1

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