



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 *Vibrio cholerae* from a contaminated water supply. Cholera is a significant waterborne pathogen, and has been found in recent studies to be one of the most difficult bacterial test organisms to be removed.

#### 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 -  $1.4 \times 10^5$  cfu/100ml.

Mean Challenge (Geometric) -  $1.6 \times 10^6$  cfu/100ml.(1557358)

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	1236364	4	99.9997
2	2309091	75	99.9968
3	1518182	55	99.9964
4	136364	<1	>99.999
5	15500000	18	99.9998

#### Conclusions

Based on the above result the Doulton Sterasyl candles are capable of removing cholera from a contaminated source to an efficiency of >99.99%.

The average efficiency over the test was 99.998%.

signed

Date

8<sup>th</sup> May 1997

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