

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 - 1.4×10^5 cfu/100ml.

Mean Challenge (Geometric) - 1.6×10^6 cfu/100ml (1557358)

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

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

TOC - Approx 2 mg/l.

Turbidity - Low.

Cycle Time - 3 mins (with 12 hrs lag station 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	1550000	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 8th May 1997