



Consulting

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### TEST CERTIFICATE

### DOULTON STERASYL CANDLE

#### Object

To assess the performance capability of a Doulton Sterasyl candle to remove *Shigella* from a contaminated water supply. *Shigella sonnei* was used as a surrogate to represent all *Shigella* species, particularly *Shigella dysenteriae*.

#### 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 -  $6.14 \times 10^5$  cfu/100ml.

Mean Challenge (Geometric) -  $7.2 \times 10^5$  cfu/100ml.(721518)

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	722727	<1	>99.99986
2	666667	<1	>99.99985
3	881818	<1	>99.99989
4	613636	<1	>99.99984
5	750000	<1	>99.99987

#### Conclusions

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

The average efficiency over the test was 99.99986%.

signed

Date

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