

## 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 or 1 hour filtration overnight.

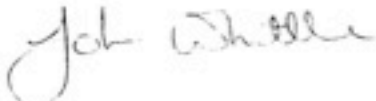
#### Results

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 1992