

## LABORATORY TESTS AND CONCLUSIONS

The following are extracts from Independent European Laboratory Reports where tests were carried out on the Hydrosmart water conditioning units to European (EU) standards.

**Hydrosmart has no connection with this laboratory or its associated companies.**

### Test 1: Hardness test

(°dH = Degree German Hardness 1°dH = 1.25 English Hardness (°Clark). 1°dH = 10mg CaCo3 = 1.25° Clark.

Unit installed on water supply for 7 day water hardness test. Before installation hardness of water 7.25° dH. Thirty minutes after installation reading was 5.75° dH. Other results as follows:

20/8	21/8	22/8	23/8	24/8	25/8	26/8	27/8	28/8
5.25	5.25	5.25	5.25	4.75	4.50	4.50	4.25	4.25

dH

### Conclusions:

The hardness of water was reduced from 7.25° dH to 4.25° dH over a test period. The Hydrosmart unit reduced water hardness by 41% under test conditions.

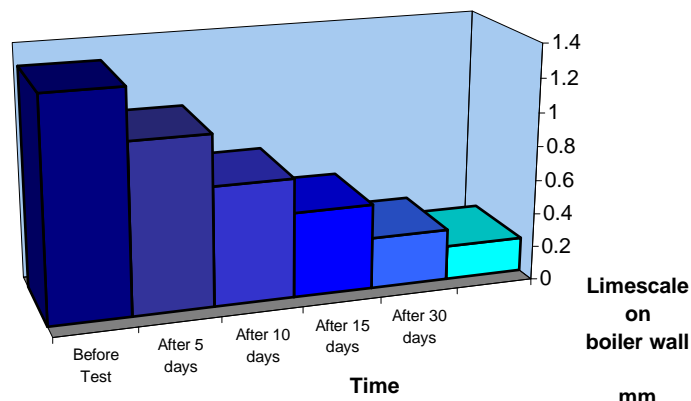
### Test 2: Turbidity

Shows the amount of calcium (and /or magnesium) salts affected by the unit and "neutralised" i.e made incapable of forming scale.

### Two month laboratory trial installed to laboratory water supply

	Before Test/	5days	10 days	15 days	30 days	2 mths
Ph	7.4	7.3	7.2	7.2	7.3	7.3
Calcium (ppm)	370	350	350	360	340	340
Turbidity (ppm)	5	95	90	75	45	45
% of Calc Susp.	0	96	92	90	90	90
Depth of Scale mm	1.3	1.0	0.7	0.5	0.3	0.2

## Reduction of limescale in boiling vessel



### CONCLUSIONS

The boiling vessel used in the trial contained a hard deposit of some 1.3mm calcium salts, accrued over 5 years use of the laboratory water supply. The Hydrosmart unit reduced depth of lime scale from 1.3mm to 0.2mm over a 2 month period. The unit installed and used as per manufacturer's instructions performed well over the test period. It can be said to perform its main function of removing and preventing lime scale in a very effective way, particularly in light of the test conditions, which were very rigorous. Other effects of the treatment are as claimed, (i.e. enhanced effectiveness of soaps and detergents, eventual extension of the working life of heating elements etc.)

The Hydrosmart Water Conditioner unit, reduced lime-scale deposits on the test vessel by 84% over a 60-day period under laboratory conditions.

Note: Chemical testing for TDS levels (total dissolved solids) in the treated water, decreased rapidly within a few days. This is because testing chemicals need free electron bonds to react with, in order to get a reading. As these bonds are neutralised by the Hydrosmart resonance frequencies, an artificially low reading occurs. However, as no crystals are forming and existing scale is being removed, the readings accurately reflect the de-scaling and scale prevention abilities of the Hydrosmart System.