



Abbott Analytical



Consulting Scientists to the Disinfectant Industry

Certificate of Analysis

Sample(s) : One sample of Remuvit and one sample of 'Average Recommended' Beer Line Cleaner

Received from: Klenitise Ltd. 14 Cherry Grove, Sketty, Swansea, SA2 8AS

Date received: 8 March 2010 & 23 March 2010 **Date tested:** 29 March 2010

Certificate no: 10C.117-KR.CLE **Certificate date:** 1 April 2010

Sample ref: 10C/035 & 117 **Page:** 1 of 2

Analysis required: To prove efficacy of Remuvit disinfectant in situ as a suitable pipe cleaner and disinfectant

Test procedure:

A 30cm length of 1cm bore clear plastic tubing was immersed in an overnight suspension of a mix of *Saccharomyces cerevisiae*, *Penicillium chrysogenum* and *Pseudomonas aeruginosa* for 15 minutes, ensuring that the tubing was totally filled with the microbial suspension. After this time the tube was removed and allowed to drain under gravity for approximately 1 hour.

After draining, the tube was cut in half and the two halves were examined by passing sterile swabs through the bore of the tube several times to remove micro-organisms deposited on the wall of the tube. The swabs were then examined using standard microbiological recovery techniques and the numbers of yeasts, moulds and bacteria determined.

The pieces of tubing were then treated with Remuvit solution and the average recommended beer line cleaner respectively, using the technique normally adopted in situ for cleaning and sanitising beer pipes. After the cleaning process the insides of the two pieces of tubing were swabbed with separate clean sterile swabs and the numbers of surviving micro-organisms determined in the same manner as before cleaning.

The results obtained are tabulated on the following page.

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Page 2 of 2

Results:

	<i>Pseudomonas aeruginosa</i>	<i>Penicillium chrysogenum</i>	<i>Saccharomyces cerevisiae</i>
Pipe treated with the 'Average recommended' beer line cleaner			
Before cleaning	2.83×10^5	5.10×10^3	4.80×10^4
After cleaning	80	20	<10
Pipe treated with Remuvit			
Before cleaning	2.94×10^5	5.75×10^3	8.15×10^4
After cleaning	<10	<10	<10

Conclusion:

Remuvit performs better than the 'average recommended' beer line cleaner at cleaning beer pipes when used in accordance with the manufacturer's instructions.

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