

MICROBIOLOGY DEPARTMENT 7218

**THE MANAGING DIRECTOR
CRANE GROUP INTERNATIONAL
Attention: Mr Neal Balasny
364 Summit Avenue
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Your ref: (UF) Membrane

Our ref: 17/37/7

Enquiries: 428-6172/3

Date: 2005-06-14

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Preliminary Report: Water - Membrane Filtration System**1. Description of sample**

A water filtration unit features several pre-filters, an ultra filtration (UF) membrane and post carbon filter that will produce potable water was received for microbiological examination. The membrane filtration system was tested on 2005-06-08 and 2005-06-10.

2. TEST REQUESTED

To determine the bactericidal efficacy of the membrane filtration system against various bacteria species.

3. METHOD OF TEST

- 3.1 A 10^3 bacterial suspension of each of the following organisms: *Escherichia coli*, *Pseudomonas aeruginosa*, *Salmonella typhi* and *Staphylococcus aureus*.
- 3.2 After thorough mixing the suspension were plated out as controls.
- 3.3 The inlet water supply of membrane filter was spiked with the bacterial suspensions and samples collected in sterile 250ml bottles from the "Product" and "Waste" outlet pipes and plated out for viable counts at 37°C after 48h incubation.
- 3.4 The samples were tested in accordance with:
 - 3.4.1 SABS SM 221 Edition 4 2001: Microbiological quality of water: General test methods.
Total viable count.

4. RESULTS/...

Test House - SABS affiliated company

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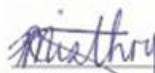
4.RESULTS

Water - Membrane Filtration System

Description of sample	Bacteria culture	Total viable bacteria count / ml	Percentage Reduction
1 Product pipe - filtered water	<i>Pseudomonas aeruginosa</i>	0	99,9%
2 Waste Pipe water	<i>Pseudomonas aeruginosa</i>	9 500	0%
3 Product pipe - filtered water	<i>Escherichia coli</i>	0	99,9%
4 Waste Pipe water	<i>Escherichia coli</i>	6 850	0%
5 Product pipe – filtered water	<i>Staphylococcus aureus</i>	0	99,9%
6 Waste Pipe water	<i>Staphylococcus aureus</i>	1 850	0%
7 Product pipe - filtered water	<i>Salmonella typhi</i>	6	99,85
8 Waste Pipe water	<i>Salmonella typhi</i>	4 000	0%



R A Roos Manager:
Microbiology Department



R.MISTHRY Microbiologist

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