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TEST REPORT

(This Report is issued subject to the terms & conditions set out below)

Your reference No. : -
Our reference No. : FB-41519/T

DATE : 21/07/2009

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TESTED FOR : **Humico Pte Ltd**
39A Jalan Pemimpin
#05-05 Halcyon Building
Singapore 577183
Attn: Mr Yeow H M

DATE OF ANALYSIS : 8/07/2009

SUBJECT : To establish the efficacy of Humico Filter (Fridge Panel) on challenge organisms.

SAMPLE DESCRIPTION : 2 bags of Humico Filter (Fridge Panel) received on 16/06/09

TEST ORGANISMS : A total of 10 test organisms were used for this challenge.

Bacteria: *Aeromonas hydrophila* ATCC 7966
Bacillus cereus ATCC 11778
Bacillus subtilis ATCC 6633
Escherichia coli ATCC 25922
Listeria monocytogenes ATCC 7644
Pseudomonas aeruginosa ATCC 9027
Salmonella typhimurium ATCC 14028
Staphylococcus aureus ATCC 6538
Yeast : *Candida albicans* ATCC 10231
Mould : *Aspergillus niger* ATCC 16404

APPLICATION : Two bags of Humico Filter were position at the return loop (one on each end) in the Bio-Safety Cabinet. Each test organism (in 90mm sterile petri dishes) was exposed in the Bio-Safety Cabinet as Test Specimen.
All Test Specimens and controls were tested in duplicate.

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Commercial Filter



Domestic Filter

RESULTS: On analysis, the following results were obtained (24 hours exposure with Humico Filter)

Test Organisms	*1 Control (cfu/ml)	*2 Test Specimen (exposed for 24 hours) (cfu/ml)	% reduction	*3 Found in
<i>Aeromonas hydrophila</i> ATCC 7966	6.8 x 10 ⁵	4.7 x 10 ⁵	30	Fish, Poultry, Red Meat
<i>Bacillus cereus</i> ATCC 11778	4.5 x 10 ⁵	1.2 x 10 ⁵	73	Rice, Potato, Macaroni
<i>Bacillus subtilis</i> ATCC 6633	5.6 x 10 ³	5.1 x 10 ³	8	Spoiled Bread Dough, Soil
<i>Escherichia coli</i> ATCC 25922	8.4 x 10 ⁵	7.6 x 10 ⁵	9	Vegetable, Raw Ground Beef
<i>Listeria monocytogenes</i> ATCC 7644	4.9 x 10 ⁵	1.5 x 10 ⁵	69	Cheese, Deli Meat, Hotdogs
<i>Pseudomonas aeruginosa</i> ATCC 9027	4.1 x 10 ⁵	2.6 x 10 ⁵	36	Water, Soil
<i>Salmonella typhimurium</i> ATCC 14028	6.1 x 10 ⁵	5.0 x 10 ⁵	18	Dairy Products, Egg, Milk
<i>Staphylococcus aureus</i> ATCC 6538	7.2 x 10 ⁵	5.8 x 10 ⁵	19	Seafood Salads, Meat
<i>Candida albicans</i> ATCC 10231	5.3 x 10 ⁵	3.5 x 10 ⁵	33	Yeast, Fungus
<i>Aspergillus niger</i> ATCC 16404	3.6 x 10 ⁵	2.9 x 10 ⁵	19	Mould

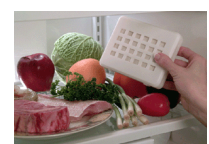

MARIANA
MICROBIOLOGIST
BIOLOGICAL & CHEMICAL TECHNOLOGY DIVISION

NOTE:

- *1 - Bacteria count without Humico Filters.
- *2 - Bacteria count WITH Humico Filters.
- *3 - Not included in the test report. Printed for your information only.



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