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CERTIFICATE

TITLE : **Evaluation of filteration efficiency of Nasaka Gravity Filter "Model NSK- XTRA PURE PM 060431014479" against water borne pathogens.**

TEST UNIT : NASAKA XTRA PURE, 5 Stages, Using Ultra Filtration Technology

SUBMITTED BY: Okaya Power Ltd., D-7, Udhyog Nagar, Rohtak Road, New Delhi 110041.

TEST ORGANISM:

1. Escherichia coli (Clinical Strain)
2. Salmonella typhi (Clinical Strain)
3. Shigella flexneri (Clinical Strain)
4. Pseudomonas aeruginosa (Clinical Strain)
5. Staphylococcus aureus (Clinical Strain)
6. Enterococcus faecalis (Clinical Strain)
7. Clostridium perfringes (Clinical Strain)
8. Vibrio cholerae (Clinical Strain)
9. Aspergillus niger (Clinical Strain)
10. Saccharomyces cerevisiae (Clinical Strain)

METHODOLOGY: All the test organisms were grown in peptone water for 24 to 48 hours. Firstly, the test unit was washed with 5 liter of sterile water and then passed 4 liter of tested organism's inoculum with specific strength. After passing through the filter cartridge and ultra filtration membrane, water sample was collected from the lower tank and processed for the Isolation of pathogenic organisms by Membrane Filter Technique Method, Most Probable Number Method, Rapid Water Test Kits and Direct Cultivation Methods (Pouring, Streaking and Spread Plate Method).

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RESULTS:

S.No.	Organisms	Input Count	Output Count	% Reduction
1.	Escherichia coli, cfu/100ml	1.7×10^6	Nil	> 99.99
2.	Salmonella typhi, cfu/100ml	2.2×10^6	Nil	> 99.99
3.	Shigella flexneri, cfu/100ml	1.6×10^6	Nil	> 99.99
4.	Pseudomona saeruginosa, cfu/100ml	1.4×10^6	Nil	> 99.99
5.	Staphylococcus aureus, cfu/100ml	1.5×10^6	Nil	> 99.99
6.	Enterococcus faecalis, cfu/100ml	1.9×10^6	Nil	> 99.99
7.	Clostridium perfringes, cfu/100ml	2.1×10^6	Nil	> 99.99
8.	Vibrio cholerae, cfu/100ml	1.9×10^6	Nil	> 99.99
9.	Aspergillus niger, cfu/100ml	1.8×10^6	Nil	100
10.	Saccharomyces cerevisiae, cfu/100ml	1.2×10^6	Nil	100

CONCLUSION: Based on test finding with above tested organisms, it proves that Nasaka Model **NSK- XTRA PURE PM 060431014479**, which uses Ultra filtration technology for water purification, achieves more than 99.99% reduction/ removal of pathogens responsible for water borne infection/ diseases.

Dated 18/11/2011

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