

LifeStraw® Family – Instant Microbiological Purifier



LifeStraw® Family – Introduction

Empowering people with homemade drinking water

Half of the world's poor suffer from waterborne disease, and nearly 6,000 people - mainly children - die each day by consuming unsafe drinking water.

LifeStraw® water purifiers have been developed as a practical way of preventing disease and saving lives, as well as achieving the Millennium Development Goal of reducing by one-half the proportion of people without sustainable access to safe water by the year 2015.

LifeStraw® Family - Product Features

- Filters a minimum of 18,000 litres of water - provides safe drinking water for a family for up to 3 years (calculated approximately on a family's consumption of 20 litres water/day).
- Has a high flow rate.
- Removes minimum 99.9999% of all bacteria.
- Removes minimum 99.99% of all viruses.
- Removes minimum 99.9% of all parasites.
- Works even on highly turbid water.
- Complies with EPA guidelines for microbiological water purifiers.
- No electrical power or batteries required.
- No spare parts required for the lifetime of the product.
- No running water required.
- Easy-to-clean pre-filter as well as purifier cartridge.
- Easy-to-ship, carry and store



LifeStraw® Family – Test Results

LifeStraw® Family has been tested at the University of Arizona for longevity and microbial reduction performance.

The challenge water characteristics are mentioned below:

Water characteristics	EPA standard of challenge water	Challenge water used by University of Arizona*
Water pH	9.0 ± 0.2	9.0 + 0.2
Total dissolved solids	1500-150 mg/L	1500-150 mg/L
Turbidity	> 30 NTU	> 100 NTU
TOC	10 mg/L	> 10 mg/L (as tannic or humic acid)
Disinfectant residue	not detectable	at least < 0.1mg/L in active chlorine
Bacteria	10 ⁷⁻⁸ CFU/100 mL	10 ⁷⁻⁸ CFU/100 mL
Virus	> 5 X 10 ⁶ PFU/100 mL	> 5 X 10 ⁶ PFU/100 mL
Cysts	> 5 X 10 ⁴ oocysts/L	> 5 X 10 ⁴ oocysts/L

The ageing water characteristics are mentioned below:

Water characteristics	EPA standard of ageing water	Ageing water used by University of Arizona*
Water pH	6.5-8.5	7.5 + 0.25
Total dissolved solids	50-500 mg/litre	50-500 mg/litre
Turbidity	0.1-5 NTU	15 NTU
TOC	0.1-5 mg/litre	5 mg/litre (as tannic or humic acid)
Disinfectant residue	not detectable	< 0.1mg/litre in active chlorine
Bacteria/virus/cysts	not detectable	CFU or PFU/100 ml or unit/L

Microbiological Efficacy

On average the following Log₁₀ reductions for each microbe and for all three units during the lifetime of the filters was as follows:

Micro-organism	LOG ₁₀ reductions	EPA requirements
E. Coli	6.8	6.0
MS2 virus	4.4	4.0
Cryptosporidium oocysts	3.6	3.0

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