

SOLAR WATER PASTEURIZER TEST REPORT RESULTS

“The Solar Water Pasteurizer was determined to be a superior disinfectant of water based on its ability to inactivate more than 99.999% of fecal indicator bacteria”. – Dr. Roger Fujioka

Concentration of Indicator Micro-organisms Recovered from Cistern and Manoa Stream Water Before Solar Pasteurization on November 30, 1994.

Samples	FC	EC	CP	EN	H ₂ MF	H ₂ S Test	TB CFU/ml	Phage PHU/ml
Tap	0	0	0	0	0	-	8	0
C1	788	312	0	456	472	+	1480	0
C2	110	72	0	22	40	+	1400	0
C3	140	65	0	14	166	+	11200	0
C4	388	264	0	780	660	+	7600	0
MS	7080	2280	76	2400	1200	+	1200	0
SE	3E+06	3E+07	300	1E+05	1E+05	1E+06	320000	30

Concentration of Indicator Micro-organisms Recovered from Cistern and Manoa Stream Water After Solar Pasteurization on November 30, 1994.

Samples	FC	EC	CP	EN	H ₂ MF	H ₂ S Test	TB CFU/ml	Phage PHU/ml
Tap	0	0	0	0	0	-	1	0
C1	0	0	0	0	0	-	8	0
C2	0	0	0	0	0	-	1.4	0
C3	0	0	0	0	0	-	2.64	0
C4	0	0	0	0	0	-	7.6	0
MS	0	0	0	0	0	-	5.4	0
SE	0	0	0	0	2	-	3.2	0

Indicator Micro-organisms:

FC = Fecal Coliform (CFU/100ml)

EC= *E. coli* (CFU/100ml)

CP = *C. perfringens* (CFU/100ml)

EN= Enterococci (CFU/100ml)

TB = Total Heterotropic Bacteria (CFU/ml)

H₂S = Hydrogen Sulfide Bacteria MF (CFU/100ml)

Phage = F specific Bacteriophage (PFU/ml)

H₂S test = presence-absence in 100 ml (filter strip method)

Conclusion of “Evaluation of the Safe Water Systems Solar Water Pasteurizer to Disinfect Drinking Water” by Dr. Roger Fujioka, University of Hawaii Water Resources Research Center, February 1995:

The solar water pasteurizing system, as developed by Safe Water Systems of Honolulu, was evaluated as a disinfectant of water. The results of field testing this unit showed that this system can be relied on to completely disinfect fecal indicator microorganisms naturally found in cistern waters, stream waters, and sewage waters. Thus, this system can be expected to render water safe for drinking based on the concentrations of fecal indicator bacteria. The Solar Water Pasteurizer was determined to be a superior disinfectant of water based on its ability to inactivate more than 99.999% of fecal indicator bacteria in sewage as well as Salmonella bacteria and MS2 virus seeded into Manoa Stream water.”

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For a copy of the complete test report, please contact:

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