

ACE 1 Solar Biomass Cookstove Water Boiling and Safety Test Results

Stove Manufacturer	African Clean Energy
Stove Model	ACE 1 Solar Biomass Cookstove

Water Boiling Test

Testing Center	RENMI, LAO PDR
Test Protocol	Water Boiling Test - Version 4.2.3
Fuel Used	Natural wood (Mai bok)
Pot Used	5 Liter - Aluminum
Test Dates	29 to 31 October 2014

IWA PERFORMANCE TIERS	units	Average	St Dev	COV	Tier
High Power Thermal Efficiency	%	37%	4.1%	11.1%	3
Low Power Specific Fuel Consumption	MJ/(min·L)	0.029	0.002	7.5%	2
High Power CO	g/MJ	3.8	0.3	8.3%	4
Low Power CO	g/(min·L)	0.021	0.012	56.1%	4
High Power PM	mg/MJ	54	4	7.2%	3
Low Power PM	mg/(min·L)	0.1	0.1	44.6%	4
Indoor CO Emissions	g/min	0.321	0.022	6.8%	4
Indoor PM Emissions	mg/min	4.5	0.3	7.1%	3

Safety Test

Testing Center	Colorado State University
Test Protocol	Biomass Stove Safety Protocol (BSSP) v1.1
Fuel Used	Wood Pellets
Test Dates	14 January 2015

Test	Overall Point Score	Overall Rating
Safety	97	Best