

ACE 1 Solar Biomass Cookstove Controlled Cooking Test Results – Cambodia

Stove Manufacturer	African Clean Energy
Stove Model	ACE 1 Solar Biomass Cookstove
Testing Organisation	SNV Netherlands Development Organisation
Testing Location	Sustainable Green Fuel Enterprise (SGFE), Phnom Penh, Cambodia
Test Protocol	Controlled Cooking Test (CCT) protocol version 2.0
Fuel Used	Average Cambodian Hardwood
Pot Used	Commonly used aluminum pots and pans
Number of Cooks	Three
Number of Dishes per Test	Three (Fried beef with ginger, Pork soup with zucchini, White rice)
Number of Tests per Stove	Nine
Test Dates	2-5 February 2016

Controlled Cooking Test

Specific Fuel Consumption (grams of fuel per kg of food consumed)					
Stove Model	Fuel Size	Total Mean (g/kg)	Total St Dev (g/kg)	Total CoV	FUEL SAVINGS vs TLS
ACE 1	Small	98	6	6%	20.11%
Traditional Lao Stove (TLS)*	Large	123	7	6%	0%

* The most prominent baseline stove in Cambodia for wood is the Traditional Lao Stove (TLS) (~60% of wood users) based on a 2,100 household solid biomass fuel use survey commissioned by SNV in 2014. Therefore all stoves tested have been compared to the TLS in the summary table to determine fuel savings.

Fuel Size

Fuel Size	Mean Weight per piece (g)	Mean Length per piece (cm)	Mean Width per piece (cm)	Mean Height per piece (cm)	Mean Diameter per piece (cm) (D=LxWxH)	Mean Moisture Content (%)
Small	52.50	10.4	3.1	1.5	50.6	13.60
Large	166.33	37.3	3.3	2.0	242.3	14.19