SUMMARIZED EVALUATION PROCEDURES

Stove _____	**Location** _____
Tester _____	**Date** _____

1. SHARP EDGES AND POINTS

Equipment: Cloth, rag, or loose clothing

Procedure:

a) Rub cloth along exterior surfaces

b) Note if cloth catches / tears

Rating	Description
Fair	Catches, tears
Best	Does not catch

Result 1	

2. COOKSTOVE TIPPING *(perform only if cookstove is portable)*

Equipment: Fuel, ruler / tape measure, calculator

Procedure:

a) Load stove with fuel but do not ignite

b) Pick a side to tip towards and measure the height of its highest point, place value into Table A

c) Slowly tip the cookstove in that direction until the stove can tip on its own, hold cookstove there

d) Measure the new height of the point, place value into Table A

e) Using a calculator, divide the tipped height by the standing height to find the ratio R, place into Table A

f) Repeat process as many times as there are legs on the stove, or four times for a circular base

g) Use the largest ratio in Table A with the metric in Table B to find the most deficient rating for the result

A

Run	Starting Height	Tipped Height	Ratio
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____

B

Rating	Ratio
Poor	R > 0.978
Fair	0.961 < R < 0.978
Good	0.940 < R < 0.961
Best	R < 0.940

Result 2	

3. CONTAINMENT *(perform only if cookstove is portable)*

Equipment: Fuel

Procedures:

a) The cookstove should be stocked with fuel but not ignited
b) Allow cookstove to tip and fall over four times in each tipping direction
c) record the number of times wood falls from the stove
d) Sum this number to find the total times wood fell from the cookstove

Direction	Number of Instances
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____

Total _____

Rating	Amount (n)
Poor	$n \geq 9$
Fair	$6 \leq n \leq 8$
Good	$3 \leq n \leq 5$
Best	$n \leq 2$

Result 3	

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4. EXPULSION OF EMBER

Equipment: Fuel, ruler / tape measure, small cookpot

Procedure:

a) The cookstove should be stocked with fuel but not ignited
b) Place small cookpot onto burner
c) Measure smallest distance across each gap through which fuel can be seen
d) Compare largest measured distance, D, to find the rating

Rating	Hole Size (cm)
Poor	$D > 5$
Fair	$3 < D < 5$
Good	$1 < D < 3$
Best	$D < 1$

Largest _____

Result 4	

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5. OBSTRUCTIONS NEAR COOKING SURFACE

Equipment: Ruler / tape measure

Procedure:

a) Inspect cookstove for skirt, do not perform if skirt is present
b) Measure height difference between the cooking surface and obstructions surrounding the cooking surface
c) Use the largest height difference, D, to find the rating

Rating	Difference (cm)
Poor	$D > 4$
Fair	$2.5 < D < 4$
Good	$1 < D < 2.5$
Best	$D < 1$

Largest _____

Result 5	

6. SURFACE TEMPERATURE; 7. HEAT TRANSMISSION TO SURROUNDINGS; 8. HANDLE TEMPERATURE *(do not perform test 7 - wall & floor - if mounted)*

Equipment: Fuel, igniter, chalk, ruler / tape measure, hand-held thermocouple

Procedure:

a) Chalk 8 x 8 cm grid onto cookstove and also within an outline of cookstove on the floor if within 5 cm of undercarriage, and within an outline of cookstove onto the wall if within 10 cm, while continuing the grid 16 cm higher up the wall than the top of the cookstove

b) Chalk extra thick lines at 0.9 m and 1.5 m onto cookstove, if applicable ***c***) Ignite fuel and continue up to step 'g' then wait at that step until cookstove has reached max temp before proceeding, adding fuel when necessary

d) Device a convenient method for your stove that will tell what data taken corresponds to which data point tested

e) Measure air temp ***f***) Compute values for Tables B by adding air temp to temps located in Tables A

g) Take data using thermocouple at grid intersections ***h***) Start with wall and floor by moving cookstove away to take measurements for up to one minute, then return cookstove for at least five minutes, taking surface temp and handle temp data while waiting, repeat step 'h' until all data points have been checked

i) Find max temps for all scenarios ***j***) Find which rating is given by the max temp using Tables B

k) Use most deficient ratings for the results

Air temp _____

SURFACE TEMPERATURE

		Below child-line (< 0.9 m)		*Above child-line (> 0.9 m)*	
	Rating	**Metallic**	**Nonmetallic**	**Metallic**	**Nonmetallic**
6A	Poor	T > 50	T > 58	T > 66	T > 74
	Fair	44 < T < 50	52 < T < 58	60 < T < 66	68 < T < 74
	Good	38 < T < 44	46 < T < 52	54 < T < 60	62 < T < 68
	Best	T < 38	T < 46	T < 54	T < 62
6B	Poor	T > ___	T > ___	T > ___	T > ___
	Fair	___ < T < ___	___ < T < ___	___ < T < ___	___ < T < ___
	Good	___ < T < ___	___ < T < ___	___ < T < ___	___ < T < ___
	Best	T < ___	T < ___	T < ___	T < ___
	Max/Rating	___ / _____	___ / _____	___ / _____	___ / _____

HEAT TRANSFER TO THE ENVIRONMENT

	Rating	**Floor**	**Wall**
7A	Poor	T > 65	T > 80
	Fair	55 < T < 65	70 < T < 80
	Good	45 < T < 55	60 < T < 70
	Best	T < 45	T < 60
7B	Poor	T > ___	T > ___
	Fair	___ < T < ___	___ < T < ___
	Good	___ < T < ___	___ < T < ___
	Best	T < ___	T < ___
	Max/Rating	___ / _____	___ / _____

HANDLE TEMPERATURE

	Rating	**Metallic**	**Nonmetallic**
8A	Poor	T > 32	T > 44
	Fair	26 < T < 32	38 < T < 44
	Good	20 < T < 26	32 < T < 38
	Best	T < 20	T < 32
8B	Poor	T > ___	T > ___
	Fair	___ < T < ___	___ < T < ___
	Good	___ < T < ___	___ < T < ___
	Best	T < ___	T < ___
	Max/Rating	___ / _____	___ / _____

Result 6		**Result 7**		**Result 8**	

9. FLAMES SURROUNDING COOKPOT

Equipment: Cookpot

Procedure:

a) Keep cookstove fully ablaze from previous tests
b) Place cookpot into position
c) Observe the amount of uncovered flames surrounding the cookpot and record a description
d) Compare description with table to find rating
e) Remove cookpot

Rating	Amount of Uncovered Flames Touching Cookpot
Poor	entire cookpot and/or handles
Fair	most of cookpot, not handles
Good	less than 4 cm up the sides, not handles
Best	none

Result 9	

Description _____

10. FLAMES EXIT FUEL MAGAZINE

Equipment: None

Procedure:

a) Keep cookstove fully ablaze from previous tests ***b***) Visually inspect the amount, if any, of flames coming out of the fuel chamber and record a description ***c)*** Compare description to Table to find rating

Rating	Location of Fire
Poor	Flames protrude
Best	Flames are contained

Result 10	

Description _____

OVERALL COOKSTOVE SAFETY RATING

Rating	Quantity		Weight		Total
Poor	____	x	1	=	_____
Fair	____	x	2	=	_____
Good	____	x	3	=	_____
Best	____	x	4	=	_____

Rating	Sum (s)
Poor	$s \leq 16$
Fair	$17 \leq s \leq 25$
Good	$26 \leq s \leq 34$
Best	$s \geq 35$

SUM | |

Overall Rating	