

Particulate emission reduction from alternatives to conventional stoves burning cordwood

Appliance/Fuel	Efficiency (%)	Mass particulate emissions per delivered heat (g/MJ)	Reduction (%)
Conventional	54	1.68	-
Certified non-catalytic	68	0.49	71
Certified catalytic	72	0.44	74
Pellet stove	78	0.13	92
Masonry heater	58	0.25	85
Conventional/densified fuel	57	1.20	27
Certified non-catalytic/ Densified fuel	70	0.21	88

Particulate emission reduction from alternatives to conventional open radiant fireplaces burning cordwood for space heating

Appliance/Fuel	Efficiency (%)	Mass particulate emissions per delivered heat (g/MJ)	Reduction (%)
Conventional open radiant fireplace	7	8.55	-
Double shell convection, natural draft	13	4.60	46
Convection tube, "C" shaped, glass door	15	3.99	53
Double shell convection, blower, glass doors	32	1.87	78
Certified non-catalytic insert	66	0.50	94
Certified catalytic insert	70	0.45	95
Pellet stove insert	76	0.13	98
Gas insert	75	Negligible	~100
Gas fireplace	50	Negligible	~100
Certified catalytic "fireplace-like" woodstove	70	0.45	95
Masonry fireplace with shaped fire chambers and glass doors	42	1.22	86

Particulate emission reduction from alternatives to conventional open radiant fireplaces burning cordwood for aesthetic and minor heating purposes

Appliance/Fuel	Mass particulate emissions per unit time (g/h)	Reduction (%)
Conventional radiant fireplace	60	-
Manufactured wax logs	19	68
Decorative gas logs	Negligible	~100