

User profiles	profile	Bad combustion
Accomplished user	55 %	0 %
Average user	30 %	10 %
Problem user	15 %	50 %
Average over profiles		10,5 %
Average if no problem users		3,0%

Käännökset	
Varaava takka	Masonry heater
Leivinuuni	Masonry oven
Puuliesi	Kitchen range
Liesi-leivinuuniyhdistelmä	Kitchen range
Takka-leivinuuniyhdistelmä	Masonry heater
Takkasydämellä varustettu avotakka	Masonry heater
Avotakka (ei suuluukkuja)	Open fire place and other stoves
Puukamiina	Iron stove
Puulämmitteinen saunan kiuas	Sauna stove
Puukeskuslämmityskattila	Manually fed boiler
Öljy-puukaksoispesäkattila	Manually fed boiler
Kiertoilmataikka	Iron stoves
Pihakeittiöt ja paljut	Open fire places and other stoves
Muu tulisija	Open fire places and other stoves

	Share of combustion practice	
	Normal	Bad
Boiler, Automatic Fed Wood Chips	100 %	0 %
Boiler, Automatic Fed Pellets	100 %	0 %
Boiler, Manually Fed with accumulator	100 %	0 %
Boiler, Manually Fed without accumulator	100 %	0 %
Boiler, Manually Fed Modern	100 %	0 %
Open fire place and other stoves	89,5 %	10,5 %
Stove, Kitchen range	89,5 %	10,5 %
Stove, Masonry Heaters Conventional	89,5 %	10,5 %
Stove, Masonry Heaters Modern	89,5 %	10,5 %
Stove, Masonry Ovens	89,5 %	10,5 %
Stove, Sauna stoves	89,5 %	10,5 %
Stove, Sauna stoves modern	89,5 %	10,5 %
Stove, Iron stoves conventional	89,5 %	10,5 %
Stove, Iron stoves modern	89,5 %	10,5 %

	PM2.5				PM1			
	Emission factors [mg/MJ]		Increase factor in bad combustion	Applied em. fac [mg/MJ]	Emission factors [mg/MJ]		Increase factor in bad combustion	Applied em. fac [mg/MJ]
	Normal	Bad			Normal	Bad		
Boiler, Automatic Fed Wood Chips	16	16	1	16	15	15	1	15
Boiler, Automatic Fed Pellets	20	20	1	20	19	19	1	19
Boiler, Manually Fed with accumulator	135	135	1	135	131	131	1	131
Boiler, Manually Fed without accumulator	700	700	1	700	677	677	1	677
Boiler, Manually Fed Modern	17	17	1	17	16	16	1	16
Open fire place and other stoves	578	1155	2,0	638	559	1118	2,0	618
Stove, Kitchen range	48	95	2,0	53	46	92	2,0	51
Stove, Masonry Heaters Conventional	93	517	5,6	137	90	500	5,6	133
Stove, Masonry Heaters Modern	33	184	5,6	49	32	178	5,6	47
Stove, Masonry Ovens	43	87	2,0	48	42	84	2,0	46
Stove, Sauna stoves	259	778	3,0	314	251	753	3,0	304
Stove, Sauna stoves modern	104	389	3,0	134	101	303	3,0	122
Stove, Iron stoves conventional	76	428	5,6	113	74	414	5,6	110
Stove, Iron stoves modern	49	272	5,6	72	47	263	5,6	70

	BC				VOC			
	Emission factors [mg/MJ]		Increase factor in bad combustion	Applied em. fac [mg/MJ]	Emission factors [mg/MJ]		Increase factor in bad combustion	Applied em. fac [mg/MJ]
	Normal	Bad			Normal	Bad		
Boiler, Automatic Fed Wood Chips	0,5	1	1	1	3	3	1	3
Boiler, Automatic Fed Pellets	0,6	1	1	1	3	3	1	3
Boiler, Manually Fed with accumulator	40,61	41	1	41	49	49	1	49
Boiler, Manually Fed without accumulator	210	210	1	210	402	402	1	402
Boiler, Manually Fed Modern	0,5	1	1	1	49	49	1	49
Open fire place and other stoves	35	53	1,5	37	308	1232	4	405
Stove, Kitchen range	32	48	1,5	34	70	280	4	92
Stove, Masonry Heaters Conventional	38	127	3,3	47	159	636	4	209
Stove, Masonry Heaters Modern	15	50	3,3	19	106	424	4	139
Stove, Masonry Ovens	14	21	1,5	15	70	280	4	92
Stove, Sauna stoves	119	179	1,5	125	963	3852	4	1266
Stove, Sauna stoves modern	48	72	1,5	51	482	1926	4	633
Stove, Iron stoves conventional	22,2	74	3,3	28	303	1212	4	398
Stove, Iron stoves modern	14,1	47	3,3	18	62	248	4	82

	CO				NOx			
	Emission factors [mg/MJ]		Increase factor in bad combustion	Applied em. fac [mg/MJ]	Emission factors [mg/MJ]		Increase factor in bad combustion	Applied em. fac [mg/MJ]
	Normal	Bad			Normal	Bad		
Boiler, Automatic Fed Wood Chips	233	233	1	233	80	80	1	80
Boiler, Automatic Fed Pellets	127	127	1	127	80	80	1	80
Boiler, Manually Fed with accumulator	2770	2770	1	2770	80	80	1	80
Boiler, Manually Fed without accumulator	2770	2770	1	2770	80	80	1	80
Boiler, Manually Fed Modern	233	233	1	233	80	80	1	80
Open fire place and other stoves	6970	20910	3	8434	80	80	1	80
Stove, Kitchen range	1780	5340	3	2154	80	80	1	80
Stove, Masonry Heaters Conventional	2200	6600	3	2662	80	80	1	80
Stove, Masonry Heaters Modern	1020	3060	3	1234	80	80	1	80
Stove, Masonry Ovens	1540	4620	3	1863	80	80	1	80
Stove, Sauna stoves	6970	20910	3	8434	80	80	1	80
Stove, Sauna stoves modern	3485	10455	3	4217	80	80	1	80
Stove, Iron stoves conventional	2717	8151	3	3288	80	80	1	80
Stove, Iron stoves modern	1380	4140	3	1670	80	80	1	80

	BaP			
	Emission factors [mg/MJ]		Increase factor in bad combustion	Applied em. fac [mg/MJ]
	Normal	Bad		
Boiler, Automatic Fed Wood Chips	0,00007	0,00007	1	0,00007
Boiler, Automatic Fed Pellets	0,00011	0,00011	1	0,00011
Boiler, Manually Fed with accumulator	0,113	0,11300	1	0,11
Boiler, Manually Fed without accumulator	0,584	0,58400	1	0,58
Boiler, Manually Fed Modern	0,003	0,00300	1	0,00
Open fire place and other stoves	0,809	8,09000	10	1,57
Stove, Kitchen range	0,061	0,61000	10	0,12
Stove, Masonry Heaters Conventional	0,061	0,61000	10	0,12
Stove, Masonry Heaters Modern	0,003	0,03000	10	0,01
Stove, Masonry Ovens	0,061	0,61000	10	0,12
Stove, Sauna stoves	1	1,61800	2	0,89
Stove, Sauna stoves modern	0	0,80900	2	0,45
Stove, Iron stoves conventional	0,092	0,92000	10	0,18
Stove, Iron stoves modern	0,007	0,07000	10	0,01

Lähteet: Savolahti ym. 2016; Tissari ym. 2019