

I03 - INCINERATOR, NATURAL GAS FIRED, MEDICAL WASTE, CONTROLLED AIR COMBUSTORS

CALCULATION METHODS

Annual Emissions: $E_a = U_a \times EF$ (lbs/ton charged or lbs/mm scf natural gas)

Hourly Emissions: $E_h = U_h \times EF$ (lbs/ton charged or lbs/mm scf natural gas)

Notes:

- * Control efficiencies must be included in emission factors since the calculation procedure will not refer to this data.
- * Trace toxic emission factors for medical waste incinerators are based on uncontrolled emissions data in Section 2.3 of AP-42 (7/93 Reformatted 1/95).
- * Emission factors for NOx, CO, SOx, TOG, and VOC are based on fuel usage and assumed to be equivalent to a small uncontrolled boiler, natural gas fired, 0.3-100 MMBtu/hr (AP-42 Section 1.4).
- * AP-42 (7/98) factors have been converted into lbs/mm scf by assuming a natural gas BTU content of 1020 BTU/scf
- * Use site specific VOC and particulate emissions testing for actual waste stream if available.
- * Emission factor for TOG is the AP-42 factor for TOC
- * Use site specific particulate emissions testing if available. The default value (6.5 lbs PM10/ton charged) is based on the emission limit of 0.3 grains/dscf exhaust.

POLLUTANT	DISTRICT EMISSION FACTORS (lbs/million ft3 fuel burned)	EPA REFERENCE DOCUMENT	EPA FACTOR	(UNITS)	COMMENTS
NOX	100	AP-42, Sect.1.4, 07/98, Table 1.4-1	100	lbs/million ft3	
CO	84	AP-42, Sect.1.4, 07/98, Table 1.4-1	21	lbs/million ft3	
SOX	0.6	AP-42, Sect.1.4, 07/98, Table 1.4-2	0.6	lbs/million ft3	
TOG	11	AP-42, Sect.1.4, 07/98, Table 1.4-2	11.0	lbs/million ft3	TOC emission factor in AP-42
VOC	5.50	AP-42, Sect.1.4, 07/98, Table 1.4-2	5.5	lbs/million ft3	

POLLUTANT	DISTRICT EMISSION FACTORS (lbs/ton charged)	EPA REFERENCE DOCUMENT	EPA FACTOR	(UNITS)	COMMENTS
TSP	6.5				Based on District emission standard of 0.3 grains / dscf exhaust (Rule 53)
PM10	6.5				Assumes all TSP is <PM10.
ACETALDEHYDE					
ARSENIC	2.42E-04	AP-42, Section 2.3 (1/95), Table 2.3-4	2.42E-04	lbs/ton charged	Use site and waste specific emissions data if available
BENZENE					
BERYLLIUM	6.25E-06	AP-42, Section 2.3 (1/95), Table 2.3-5	6.25E-06	lbs/ton charged	Use site and waste specific emissions data if available

POLLUTANT	DISTRICT EMISSION FACTORS (lbs/ton charged)	EPA REFERENCE DOCUMENT	EPA FACTOR	(UNITS)	COMMENTS
CADMIUM	5.48E-03	AP-42, Section 2.3 (1/95), Table 2.3-5	5.48E-03	lbs/ton charged	Use site and waste specific emissions data if available
CHROMIUM, NONHEXAVALENT	7.36E-04	AP-42, Section 2.3 (1/95), Table 2.3-6	7.36E-04	lbs/ton charged	Use site and waste specific emissions data if available
CHROMIUM, HEXAVALENT	3.88E-05		3.88E-05	lbs/ton charged	Assume 5% of Cr converted to hexavalent Cr per ARB Guidance
COPPER	1.25E-02	AP-42, Section 2.3 (1/95), Table 2.3-6	1.25E-02	lbs/ton charged	Use site and waste specific emissions data if available
FORMALDEHYDE					
HEXANE					
HYDROGEN CHLORIDE	3.35E+01	AP-42, Section 2.3 (1/95), Table 2.3-3	3.35E+01	lbs/ton charged	Use site and waste specific emissions data if available
HYDROGEN FLUORIDE	1.49E-01	AP-42, Section 2.3 (1/95), Table 2.3-10	14.90%	lbs/ton charged	Use site and waste specific emissions data if available
LEAD	7.28E-02	AP-42, Sect.2.1,10/96, Table 2.1-2	7.28E-02	lbs/ton charged	Use site and waste specific emissions data if available
MANGANESE	5.67E-4	AP-42, Sect.2.1,10/96, Table 2.1-7	5.67E-04	lbs/ton charged	Use site and waste specific emissions data if available
MERCURY	1.07E-1	AP-42, Sect.2.1,10/96, Table 2.1-7	1.07E-01	lbs/ton charged	Use site and waste specific emissions data if available
NICKEL	5.90E-04	AP-42, Sect.2.1,10/96, Table 2.1-7	5.90E-04	lbs/ton charged	Use site and waste specific emissions data if available
PAH'S, UNSPECIFIED					
* BENZO(A)ANTHRACENE					
*BENZO(B)FLUORANTHENE					
* BENZO(K)FLUORANTHENE					
* BENZO(A)PYRENE					
* INDENO(1,2,3-CD)PYRENE					
* DIBENZ(A,H,)ANTHRACENE					
PHENOL					
SELENIUM					
TOLUENE					
XYLENES					
ZINC					

Last Updated on 04/20/2022 By M. Abuelazaim