

AP42 Section: 9.5.2

**Title: related information: Test data from oscar meyer foods corporation
Feb 1994
emission test
MRI**

Note: This material is related to a section in *AP42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources*. AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the file number, the AP42 chapter and then the section. The file name "rel01_c01s02.pdf" would mean the file relates to AP42 chapter 1 section 2. The document may be out of date and related to a previous version of the section. The document has been saved for archival and historical purposes. The primary source should always be checked. If current related information is available, it will be posted on the AP42 webpage with the current version of the section.

TEST DATA FROM OSCAR MAYER FOODS CORPORATION 02/94 EMISSION TEST
 FILENAME: F:\PRIVATE\BRI\AP42\SMOKEHSE\REF4DATA.WQ1

D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
1	Stack temperature	Deg F	150	151	152	
CONTINUOUS SMOKEHOUSE	Moisture	%	4.33	5.09	5.84	
	Oxygen	%	20.2	20.2	20.1	
	Volumetric flow, actual	acfm	3612	3679	3884	
	Volumetric flow, standard	dscfm	2891	2916	3049	
	Isokinetic variation	%	93.7	97.7	99	
Sawdust use rate		TPH	0.0545	0.0533	0.0544	
Pollutant concentrations:						
	Filterable PM	gr/dscf	0.176	0.2	0.187	
	Condensable organic PM**	gr/dscf	0.07136	0.0707	0.07813	
	Condensable inorganic PM	gr/dscf	0.0811	0.0696	0.0758	
	THC as propane	ppmdv	152.7	61.4	44.7	
**Includes back half acetone PM, assumed = acetone wash of back half lines						
Pollutant mass flux rates:						
	Filterable PM	lb/hr	4.36	5.00	4.89	
	Condensable organic PM**	lb/hr	1.77	1.77	2.04	
	Condensable inorganic PM	lb/hr	2.010	1.740	1.981	
	THC as propane	lb/hr	3.02	1.23	0.934	

lb/ton of
sawdust
used

TEST 1 EMISSION FACTORS BASED ON SAWDUST USAGE--ENGLISH UNITS						AVERAGE
Filterable PM	lb/ton	80.0	93.9	89.8		87.9
Condensable organic PM**	lb/ton	32.4	33.2	37.5		34.4
Condensable inorganic PM	lb/ton	36.8	32.7	36.4		35.3
THC as propane	lb/ton	55.5	23.0	17.2		31.9
THC as methane	lb/ton	20.2	8.38	6.24		11.6

kg/Mg of
sawdust
used

TEST 1 EMISSION FACTORS BASED ON SAWDUST USAGE--METRIC UNITS						AVERAGE
Filterable PM	kg/Mg	40.0	46.9	44.9		43.9
Condensable organic PM**	kg/Mg	16.2	16.6	18.8		17.2
Condensable inorganic PM	kg/Mg	18.4	16.3	18.2		17.7
THC as propane	kg/Mg	27.7	11.5	8.58		15.9
THC as methane	kg/Mg	10.1	4.19	3.12		5.80

MIDWEST RESEARCH INSTITUTE CALCULATION SHEET

Test ID	Parameter	Units	Values reported			
			Run 1	Run 3	Run 4	Run 2
2	Stack temperature	Deg F	120	132	140	Aborted due to process problems
CONTINUOUS SMOKEHOUSE	Moisture	%	7.57	7.78	6.55	
	Oxygen	%	20.3	20.4	20.4	
	Volumetric flow, actual	acfm	3238	3061	3227	
	Volumetric flow, standard	dscfm	2660	2457	2590	
	Isokinetic variation	%	99.6	100.5	98.2	
Sawdust use rate:		TPH	0.0480	0.0500	0.0520	
Pollutant concentrations:						
	Filterable PM	gr/dscf	0.214	0.206	0.196	
	Condensable organic PM**	gr/dscf	0.1681	0.1069	0.1341	
	Condensable inorganic PM	gr/dscf	0.0794	0.0668	0.0751	
	THC as propane	ppmdv	136.8	51.1	43.8	
**Includes back half acetone PM, assumed = acetone wash of back half lines						
Pollutant mass flux rates:						
	Filterable PM	lb/hr	4.88	4.34	4.35	
	Condensable organic PM**	lb/hr	3.83	2.25	2.98	
	Condensable inorganic PM	lb/hr	1.81	1.41	1.67	
	THC as propane	lb/hr	2.49	0.86	0.78	

lb/ton of
sawdust
used

TEST 2 EMISSION FACTORS BASED ON SAWDUST USAGE--ENGLISH UNITS					AVERAGE
Filterable PM	lb/ton	102	86.8	83.7	90.7
Condensable organic PM**	lb/ton	79.8	45.0	57.3	60.7
Condensable inorganic PM	lb/ton	37.7	28.1	32.1	32.6
THC as propane	lb/ton	51.9	17.2	14.9	28.0
THC as methane	lb/ton	18.9	6.26	5.44	10.2

kg/Mg of
sawdust
used

TEST 2 EMISSION FACTORS BASED ON SAWDUST USAGE--METRIC UNITS					AVERAGE
Filterable PM	kg/Mg	50.8	43.4	41.8	45.3
Condensable organic PM**	kg/Mg	39.9	22.5	28.6	30.4
Condensable inorganic PM	kg/Mg	18.9	14.1	16.0	16.3
THC as propane	kg/Mg	26.0	8.60	7.47	14.0
THC as methane	kg/Mg	9.44	3.13	2.72	5.10

MIDWEST RESEARCH INSTITUTE CALCULATION SHEET

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
3	Stack temperature	Deg F	117	110	95	
CONTINUOUS SMOKEHOUSE	Moisture	%	3.39	3.97	3.89	
	Oxygen	%	20.4	20.4	20.4	
	Volumetric flow, actual	acfm	1514	2192	2477	
	Volumetric flow, standard	dscfm	1293	1885	2190	
	Isokinetic variation	%	93.9	96.8	95.1	
Sawdust use rate:		TPH	0.0174	0.0160	0.0167	
Pollutant concentrations:						
	Filterable PM	gr/dscf	0.109	0.0578	0.0299	
	Condensable organic PM**	gr/dscf	0.0541	0.0672	0.0989	
	Condensable inorganic PM	gr/dscf	0.0163	0.0431	0.0683	
	THC as propane	ppmdv	136.1	53.3	22.7	
**Includes back half acetone PM, assumed = acetone wash of back half lines						
Pollutant mass flux rates:						
	Filterable PM	lb/hr	1.21	0.934	0.561	
	Condensable organic PM**	lb/hr	0.600	1.086	1.856	
	Condensable inorganic PM	lb/hr	0.181	0.696	1.282	
	THC as propane	lb/hr	1.206	0.688	0.341	

lb/ton of sawdust used

TEST 3 EMISSION FACTORS BASED ON SAWDUST USAGE--ENGLISH UNITS					AVERAGE
Filterable PM	lb/ton	69.5	58.4	33.7	53.8
Condensable organic PM**	lb/ton	34.5	67.9	111.4	71.2
Condensable inorganic PM	lb/ton	10.4	43.5	76.9	43.6
THC as propane	lb/ton	69.3	43.0	20.4	44.3
THC as methane	lb/ton	25.2	15.6	7.43	16.1

kg/Mg of sawdust used

TEST 3 EMISSION FACTORS BASED ON SAWDUST USAGE--METRIC UNITS					AVERAGE
Filterable PM	kg/Mg	34.7	29.2	16.8	26.9
Condensable organic PM**	kg/Mg	17.2	33.9	55.7	35.6
Condensable inorganic PM	kg/Mg	5.19	21.8	38.5	21.8
THC as propane	kg/Mg	34.7	21.5	10.2	22.1
THC as methane	kg/Mg	12.6	7.82	3.72	8.05