

Note: This is a reference cited in AP 42, *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 reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

AP42 Section:	9.12.1
Background Chapter	4
Reference:	26
Title:	Emission Test Report, Dryers #1 and #4, Anheuser Busch, Inc., Columbus, Ohio, Pollution Control Science, Miamisburg, OH, December 20, 1983.

D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported		
			Run 3	Run 5	Average
1	Stack temperature	Deg F	210	211	
SPENT GRAIN DRYER (uncontrolled) OPERATING NORMALLY	Moisture	%	16.55	15.64	
	Oxygen	%	19.3	17.2	
	Volumetric flow, actual	acfm	32207	32679	
	Volumetric flow, standard	dscfm	20684	21191	
	Isokinetic variation	%	90.8	98	
Production rate: based on dried grain produced		TPH	3.045	3.285	
Pollutant concentrations:					
	Filterable PM	g/dscf	0.0806	0.0584	
	CO2	%	1.3	3.2	
Pollutant mass flux rates:					
	Filterable PM	lb/hr	14.3	10.6	
	CO2	lb/hr	1842	4646	
Emission factors:					Average
	Filterable PM	lb/ton	4.69	3.23	3.96
	CO2	lb/ton	605	1414	1010

Test ID	Parameter	Units	Values reported		
			Run 3	Run 5	Average
2	Stack temperature	Deg F	136	130	
SPENT GRAIN DRYER WITH WET SCRUBBER (NORMAL OP.)	Moisture	%	18	17.4	
	Oxygen	%	19.8	20.0	
	Volumetric flow, actual	acfm	39081	40112	
	Volumetric flow, standard	dscfm	27762	29005	
	Isokinetic variation	%	97.2	98.6	
Production rate: based on dried grain produced		TPH	3.045	3.285	
Pollutant concentrations:					
	Filterable PM	g/dscf	0.013	0.0106	
	CO2	%	1.3	1.0	
Pollutant mass flux rates:					
	Filterable PM	lb/hr	3.05	2.64	
	CO2	lb/hr	2473	1987	
Emission factors:					Average
	Filterable PM	lb/ton	1.02	0.802	0.909 D.9T
	CO2	lb/ton	812	605	709

PM Control Eff.
77%

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 4	Average
3	Stack temperature	Deg F	217	220	219	
SPENT GRAIN DRYER (uncontrolled) OPERATING @ CAPACITY	Moisture	%	37.2	36.6	34.7	
	Oxygen	%	15.8	16.1	17.2	
	Volumetric flow, actual	acfm	35562	32570	32188	
	Volumetric flow, standard	dscfm	17157	15556	15934	
	Isokinetic variation	%	94.3	94.8	97.5	
Production rate: based on dried grain produced		TPH	4.76	5.135	4.745	
Pollutant concentrations:						
	Filterable PM	g/dscf	0.2022	0.173	0.1623	
	CO2	%	3.0	4.7	3.2	
Pollutant mass flux rates:						
	Filterable PM	lb/hr	29.7	23.1	22.2	
	CO2	lb/hr	3527	5010	3494	
Emission factors:						Average
	Filterable PM	lb/ton	6.25	4.49	4.67	5.14
	CO2	lb/ton	741	976	736	818

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 4	Average
4	Stack temperature	Deg F	160	161	158	
SPENT GRAIN DRYER W/WET SCRUBB OPERATING @ CAPACITY	Moisture	%	32.3	32.9	32.4	
	Oxygen	%	17.9	17.8	17.5	
	Volumetric flow, actual	acfm	36195	34487	33155	
	Volumetric flow, standard	dscfm	20574	19352	19828	
	Isokinetic variation	%	105.6	102.7	100.5	
Production rate: based on dried grain produced		TPH	4.76	5.135	4.745	
Pollutant concentrations:						
	Filterable PM	g/dscf	0.1262	0.0969	0.1105	
	CO2	%	2.8	3.3	2.8	
Pollutant mass flux rates:						
	Filterable PM	lb/hr	22.3	16.1	18.8	
	CO2	lb/hr	3947	4376	3804	
Emission factors:						Average
	Filterable PM	lb/ton	4.68	3.13	3.96	3.92
	CO2	lb/ton	829	852	802	828

PM Control Eff.
24%