

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:	20
Title:	Grain Dryer Diagnostic VOC Report for Coors Brewing Company, Air Pollution Testing, Inc., Westminster, CO, November, 1992.

Emission Test Report Review Checklist--Short Form

Reviewer: BRIAN SHRAGER
 Review Date: 9/14/94

A. Background Information

1. Facility name: COORS
 Location: GOLDEN, CO
2. Source category: MALT BEVERAGES
3. Test date: Nov. 9-10, 1992
4. Test sponsor: COORS
5. Testing contractor: Air Pollution Testing, Inc.
6. Purpose of test: To determine the effect of overdrying on VOC emissions from spent grain dryers.
7. Pollutants measured (include test method and indicate if valid): THC - EPA M. 25A
COE - EPA M3 (ORSAT ANALYZER)

8. Process overview: Attach a process description and a block diagram. Identify processes tested with letters from the beginning of the alphabet (A, B, C, etc...) and APC systems with letters from the end of the alphabet (V, W, X, etc...). Also identify test locations with Arabic numerals (1,2,3, ...). Using the ID symbols from the diagram, complete the table below.

Test ID	Process	Process ID	Emissions tested		APCD (controlled emissions only)
			Uncontrolled	Controlled	
1	SPENT GRAIN DRYER	A	✓		ID: Type: Model #:
					ID: Type: Model #:
					ID: Type: Model #:
					ID: Type: Model #:

B. Process Information

1. Provide a brief narrative description of the process and attach process flow diagram. (Note: If the process description provided in the test report is adequate, attach a copy here.)

Uncontrolled spent grain dryer VOC emissions tested at scrubber inlet. Overdrying grain had no effect on emissions. Therefore, 6 test runs can be averaged together.

COOPS REPORT 10 TEST DATA SUMMARY

D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported						
			Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	
1	Stack temperature	Deg F	174	175	174	183	180	178	
SPENT GRAIN DRYER	Moisture	%	56.6	56.4	57	56.3	57.1	56	
	Oxygen	%	20.9	20.9	20.9	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	4847	4968	4871	5051	4969	4957	
	Volumetric flow, standard	dscfm	1431	1474	1428	1485	1440	1476	
	Isokinetic variation	%	NA	NA	NA	NA	NA	NA	
	Production rate: based on plant average	ton/hr	1.158	1.158	1.158	1.158	1.158	1.158	
	0.44 brews/hr/dryer*1 dryer*2.6315 tons dry grain/brew	dry grain							
Pollutant concentrations:									
	TOC as propane	ppmw	28.8	27.6	37.9	31.2	25	31.3	
Pollutant mass flux rates:									
	TOC as propane	lb/hr	0.652	0.641	0.864	0.728	0.576	0.721	
Emission factors:									
	TOC as propane	lb/ton	0.56	0.55	0.75	0.63	0.50	0.62	
								Average	0.60