Source Test Method **ST-8**

DIMETHYLSULFIDE

(Adopted January 20, 1982)

REF: Regulation 7-303

1. APPLICABILITY

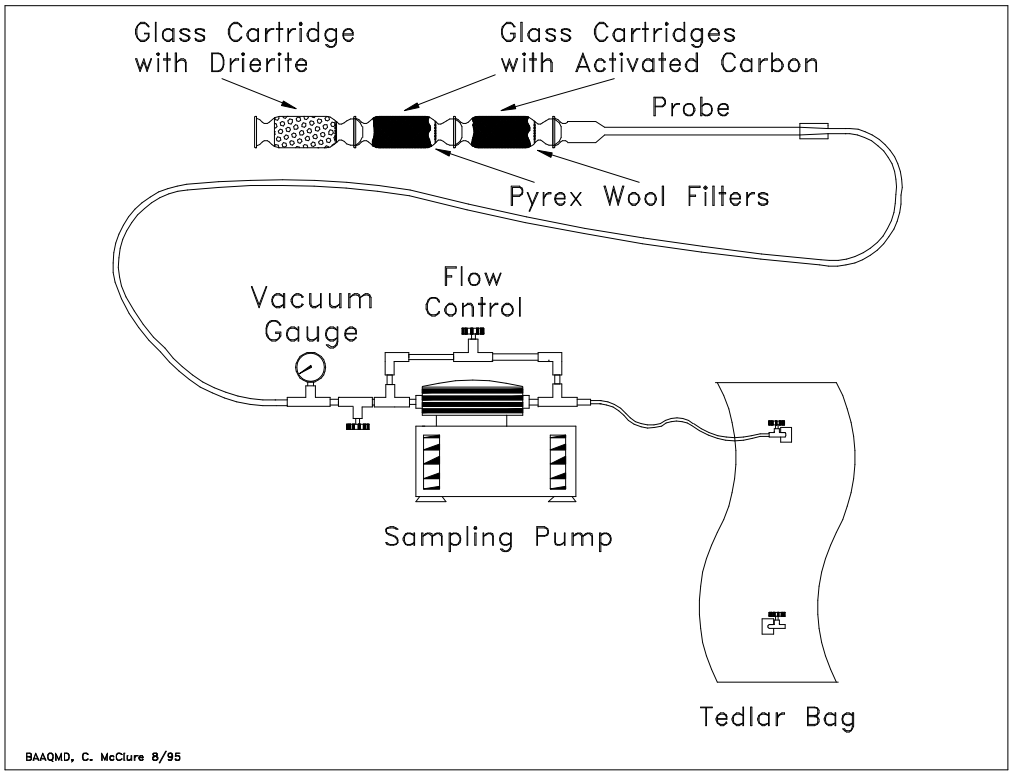
1.1 This method is used to determine emissions of dimethylsulfide (DMS). It is applicable to the determination of compliance with Regulation 7-303.

2. PRINCIPLE

2.1 A sample is collected in a clean Tedlar bag. The sample is analyzed for DMS by chromatography with flame photometric detection.

Figure 8-1

Dimethylsulfide Purge Train



3. RANGE AND SENSITIVITY

3.1 The minimum measurable concentration of DMS is 15 ppb.

3.2 Non-linear response by the flame photometric detector occurs for DMS concentrations over 10 ppm. However, appropriate dilution of the sample will allow concentrations up to 50 ppm to be analyzed.

4. INTERFERENCES - None known

5. APPARATUS

5.1 Sampling Probe. Use a borosilicate glass tube fitted at the downstream end with an appropriate tubing connector.

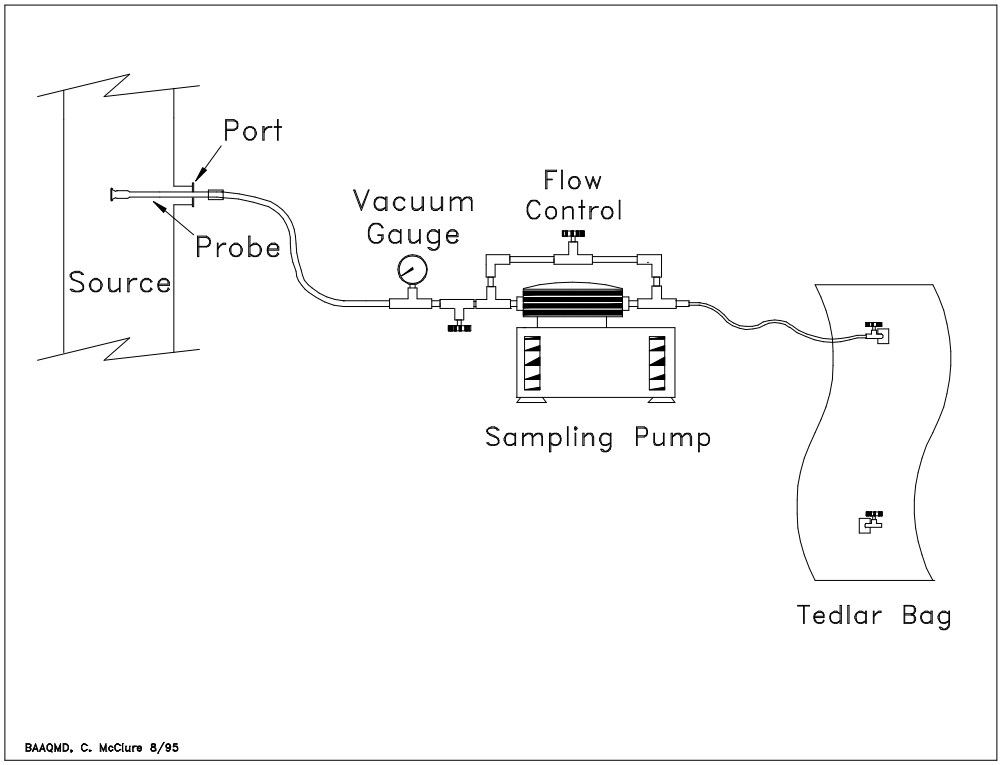
5.2 Sample Bag. Use a Tedlar bag with a capacity of at least 10 liters and equipped with two stainless steel valves.

5.3 Sampling Pump. Use a leak-free Teflon-lined diaphragm pump, or equivalent, capable of at least 0.5 CFM.

5.4 Drier/Deodorizer. Use three glass cartridges fitted with ball joints. The first contains Drierite (calcium chloride) the others contain activated carbon and shall be followed by a Pyrex wool filter.

Figure 8-2

Dimethylsulfide Sampling Train



6. PRE-TEST PROCEDURES

6.1 Before going to the test site, assemble the train as shown in Figure 8-1. Purge the entire train, including the Tedlar bag, until the discharge is clean.

The Tedlar bag is considered clean when the laboratory analysis determines the DMS concentration to be undetectable.

6.2 Evacuate the Tedlar bag.

6.3 At the sampling site, assemble the train as shown in Figure 8-2, leaving o ut the drier-deodorizer.

7. SAMPLING

7.1 For stack sources, insert the probe into the stack.

7.2 For ambient sample, sample where the odor appears to be strongest.

7.3 Start the pump and purge the gas to be sampled through the pump and bag for five minutes.

7.4 Then close the outlet valve on the Tedlar bag and fill the bag over a period of not less than three minutes.

7.5 Three bags filled as in 7.3 and 7.4 shall constitute a test.

8. POST-TEST PROCEDURES

8.1 The bags must be analyzed for DMS within four hours of collection. Refer to Analytical Procedure Lab-3.

9. REPORTING

9.1 The result of each test is reported as shown in Form 8-1.

Form 8-1

Distribution:	**BAY AREA AIR QUALITY MANAGEMENT DISTRICT**	**Report No.:**
Firm	*939 Ellis Street*	**Test Date:**
Permit Services	*San Francisco, California 94109*	**Test Times:**
Enforcement Services	*(415) 771-6000*	**Run A:**
Technical Services	**Summary of Source Test Results**	**Run B:**
Planning		**Run C:**
Requester		
DAPCO		

Source Information		**BAAQMD Representatives**
Firm Name and Address	Firm Representative and Title Phone No. ( )	Source Test Engineers
Permit Conditions:	Source: Plant No. Permit No. Operates	Permit Services Division/Enforcement Division Test Requested By:
Operating Parameters:		
Applicable Regulations:		**VN Recommended:**

Source Test Results and Comments:

METHOD	TEST	RUN A	RUN B	RUN C	AVERAGE	LIMIT
ST-8	Dimethylsulfide, ppm					

Air Quality Engineer II Date	Supervising Air Quality Engineer Date	Approved by Air Quality Engineering Manager