

Device range (ppm)	Interference ratio
0–100 .....	10% CO <sub>2</sub> per 50 ppm CO.

### 5.0 Safety

Refer to section 5.0 of Method 7E.

### 6.0 Equipment and Supplies

Figures 10–1, 10–2, and 10–3 are schematic diagrams of acceptable continuous and integrated measurement systems and the analytical system. You must use a measurement system for CO that meets the following specifications for the essential components.

6.1 *What do I need for the measurement system?* Sample Probe, Particulate Filter, Heated Sample Line, Sample Lines, Moisture Removal System, Sample Pump, Flow Control/Gas Manifold, Sample Gas Manifold, and Data Recorder. You must follow the noted specifications in section 6.1 of Method 7E.

6.2 CO Analyzer. An instrument that uses nondispersive infrared detection principal to continuously measure CO in the gas stream and meets the specifications in section 13.0. The dual-range analyzer provisions of section 6.1.8.1 of Method 7E apply.

### 7.0 Reagents and Standards

7.1 Calibration Gas. *What calibration gases do I need?* Refer to section 7.1 of Method 7E for the calibration gas requirements.

7.2 Interference Check. *What additional reagents do I need for the interference check?* Use the test gases listed in Table 7E–5 of Method 7E to conduct the interference check. Conduct the interference check by sequentially introducing the gases listed in

Table 7E–5 (one at a time) both with and without CO into the calibrated analyzer and recording the apparent concentrations after waiting at least 3 times the analyzer response time. This is then repeated with a blend containing a known CO concentration greater than 80 percent of the analyzer's range and calculating the difference between the known value and the apparent concentration. For each potential interferent gas, identify the largest of the 2 absolute values as the potential interference. The interference for all potential interferent gases in the source category must be less than 2.5 percent of the range to be acceptable. Record the data on a form similar to Figure 7E–8.

### 8.0 Sample Collection, Preservation, Storage, and Transport

#### Emission Test Procedure

8.1 Sampling Site and Sampling Points. You must follow section 8.1 of Method 7E.

8.2 Measurement System Performance Tests. You must follow the Calibration Gas Verification, Measurement System Preparation, Analyzer Calibration Error Test, Initial Sampling System Bias Check, Measurement System Response Time, and Interference Check procedures in sections 8.2 and 8.3 of Method 7E.

8.3 Sample Collection. Follow section 8.1. Sample within 5 percent of the rate you used during the sampling system bias check.

8.4 Post-Run Sampling System Bias Check and Alternative Dynamic Spike Procedure. Follow sections 8.5 and 8.6 of Method 7E.

### 9.0 Quality Control

Follow quality control procedures in section 9.0 of Method 7E.

### 10.0 Calibration and Standardization

Follow the procedures for calibration and standardization in section 10.0 of Method 7E.

### 11.0 Analytical Procedures

Because sample collection and analysis are performed together (*see* section 8), additional discussion of the analytical procedure is not necessary.

### 12.0 Calculations and Data Analysis

You must follow the procedures for calculations and data analysis in section 12.0 of Method 7E, as applicable.

### 13.0 Method Performance

13.1 The Analytical Range, Sensitivity, System Response and Minimum Sampling Times, Analyzer Calibration Error, Sampling System Bias, Interference Test and Alternative Dynamic Spike Check specifications are the same as in section 13.0 of Method 7E.

### 14.0 Pollution Prevention [Reserved]

### 15.0 Waste Management [Reserved]

### 16.0 Alternative Procedures

16.1 Alternative Interference Check.  
16.2 Dynamic Spiking Procedure, Manufacturer's Stability Test and Annual Primary Interference Recheck (as applicable). These procedures are the same as in section 16 of Method 7E.

### 17.0 References

1. "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards" September 1997 as amended, EPA-600/R-97/121.

### 18.0 Tables, Diagrams, Flowcharts, and Validation Data

TABLE 10–1.—FIELD DATA

Location:		Date:
Test:		Operator:
Clock Time	Rotameter Reading liters/min (cfm)	Comments