

GEHS 7500

Air Sampling & Analysis

Air Flow Measurements

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Air Flow Measurements

1. collect air sample
2. Prepare & analyze collected sample

$$CV_T^2 = CV_1^2 + CV_2^2$$

CV_1 for sample collection ~ 5%

- to minimize variability, use good equipment
- to minimize bias, calibrate

air flow rate: the rate of volume displacement with time

$$Q = V/t \quad [\text{L/min, cfm}]$$

air volume: the product of flow rate and sample time

$$V = Qt \quad [\text{L, m}^3, \text{ft}^3]$$

- $1 \text{ ft}^3 = 28.3 \text{ L}$; $1 \text{ m}^3 = 1,000 \text{ L}$