

Ethylene oxide C_2H_4O

NO.163LL



Performance

| | | |
|---|--|-------------|
| Measuring Range | 0.1 to 5 ppm | 5 to 10 ppm |
| Number of Pump Stroke | 4 | 2 |
| Correction Factor | 1 | 2 |
| Sampling Time | 1.5 minutes per pump stroke | |
| Detecting Limit | 0.05 ppm (n=4) | |
| Colour Change | Yellow → Pale orange | |
| Reaction Formula | $C_2H_4O + \text{Oxidiser} \rightarrow 2HCHO$ $3HCHO + (NH_2OH)_3H_3PO_4 \rightarrow H_3PO_4$ $H_3PO_4 + \text{Base} \rightarrow \text{Phosphate}$ | |
| Coefficient of Variation | 15% (for 0.1 to 1 ppm), 10% (for 1 to 5 ppm) | |
| Shelf Life | 1 Year | |
| Corrections for temperature & humidity | Temperature correction is necessary | |

Store the tubes in the refrigerator to keep at 10°C (50°F) or below.

Possible coexisting substances and their interferences

| Substance | Concentration | Interference | Change colour by itself |
|--------------|---------------|--------------|-------------------------|
| Acetaldehyde | 1.5 ppm | Plus error | Discolours pale orange |
| Ketones | 15 ppm | Plus error | Discolours pale orange |
| Alcohols | 300 ppm | No effect | No discoloration |
| Formaldehyde | 0.5 ppm | Plus error | Discolours pale orange |

Calibration gas generation Permeation tube method

| TLV-TWA | TLV-STEL | Explosive range |
|---------|----------|-----------------|
| 1ppm | - | 3.6 to 100% |