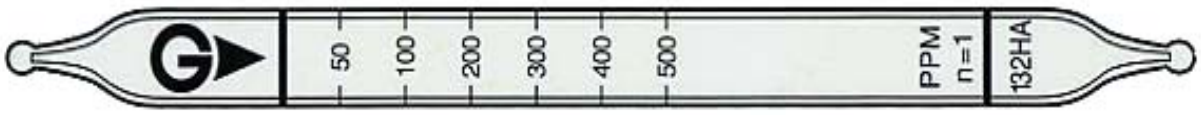
# Trichloroethylene $Cl_2C:CHCl$ NO.132HA




**Performance**

| | | | |
|---|---|---|---|
| **Measuring Range** | 20 to 50 ppm | 50 to 500 ppm | 500 to 1300 ppm |
| **Number of Pump Strokes** | 2 | 1 | 1/2 |
| **Correction Factor** | 0.4 | 1 | 2.6 |
| **Sampling Time** | 45 seconds per pump stroke | | |
| **Detecting Limit** | 4 ppm (n=2) | | |
| **Colour Change** | Yellow → Reddish Purple | | |
| **Reaction Principle** | Trichloroethylene is decomposed by nascent oxygen by oxidizing agent to liberate hydrogen chloride which discolours indicator to reddish purple.<br>$Cl_2C:CHCl + PbO_2 + H_2SO_4 \longrightarrow HCl$<br>HCl + Basic Compound → Chloride | | |
| **Coefficient of Variation** | 10% (for 50 to 100 ppm), 5% (for 100 to 500 ppm) | | |
| **Shelf Life** | 2 Years | | |
| **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 |
|---|---|---|---|
| Nitric Oxide, Nitrogen dioxide | - | No effect | No discoloration |
| Hydrogen chloride, Chlorine, Bromine | - | Plus error | Produce reddish purple stain |
| Acetone | ≦200 ppm | No effect | No discoloration |
| 1,1,1-Trichloroethane | - | Plus error | Produce reddish purple at ≧3000 ppm |
| Unsaturated Halogenated Hydrocarbons | - | Plus error | Produces reddish purple stain |
| Aromatic hydrocarbons | ≧100ppm | Minus error | No discoloration |

**Other substance measurable with this detector tube**

| Substance | Correction Factor | Pump Strokes | Measuring Range |
|---|---|---|---|
| 1,2-Dichloroethylene | 1.6 | 1 | 80 to 800 ppm |
| 1,3-Dichloropropene | 0.9 | 2 | 45 to 450 ppm |

**Calibration gas generation** Diffusion tube method

| TLV-TWA | TLV-STEL | Explosive range |
|---|---|---|
| 10ppm | 25ppm | - |