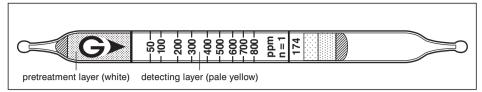
1,3-Butadiene CH2:CHCH:CH2

No.174



Performance

| Measuring range | 50 to 800 ppm | | |
|------------------------|---------------|--|--|
| Number of pump strokes | 1 (100 ml) | | |
| Correction factor | 1 | | |
| Sampling time | 1.5 min | | |

 $\begin{array}{lll} \mbox{Detecting limit:} & \mbox{10 ppm (1 pump stroke)} \\ \mbox{Colour change:} & \mbox{Pale yellow} \rightarrow \mbox{White} \\ \end{array}$

Corrections for temperature & humidity: Temperature correction is necessary.

Relative standard deviation: 10 % (for 50 to 200 ppm), 5 % (for 200 to 800 ppm)

Shelf life: 3 years

Reaction principle

CH₂:CHCH:CH₂ + (NH₄)₂MoO₄ + PdSO₄ → White product

Possible coexisting substances and their interferences

| Substance | Concentration | Interference | Changes colour by itself to |
|-------------------|---------------|--------------|-----------------------------|
| Hydrogen | ≥ 20 % | + | Blue (whole layer) |
| Acetylene | ≥ 10 ppm | + | |
| Carbon monoxide | ≥ 10 ppm | + | Blue |
| Ethylene | ≥ 1 ppm | + | J |
| Hydrogen sulphide | ≥ 10 ppm | + | Black |
| Styrene | | + | Pale blue |
| Ammonia | | + | White |
| Hydrogen cyanide | | + |) white |

Other substance measurable with this detector tube

| Substance | Correction | No. of pump strokes | Measuring range |
|----------------|-------------|---------------------|-----------------|
| 1,3-Pentadiene | Factor: 5.0 | 1 | 250 to 4000 ppm |

Calibration gas generation

Static gas dilution method