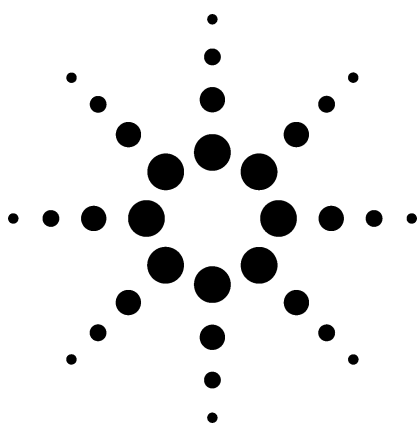


# Application 262-00

## Agilent Monomer Analyzer

### Impurities in Polymer Grade Ethylene and Polymer Grade Propylene

### Technical Overview



### Application Highlights

Dual Flame Ionization Detectors (FID)

**Method 1** performs the trace impurities analysis in polymer-grade ethylene.

**Method 2** performs the trace impurities analysis in polymer-grade propylene.

**FID 1 monitors the sample for:**

- Carbon monoxide
- Carbon dioxide
- Methane

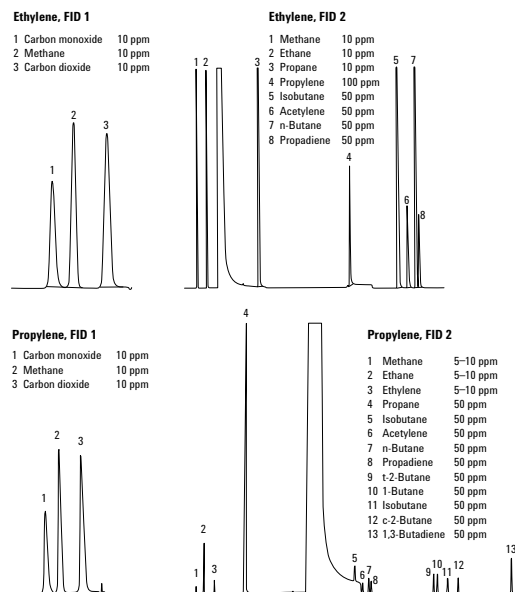
**FID 2 detects:**

- Methane
- Ethane
- Ethylene
- Propane
- Propylene
- Isobutane
- Acetylene
- n-Butane
- Propadiene
- *trans*-2-Butene
- 1-Butene
- Isobutene
- *cis*-2-Butene
- Isopentane
- Methyl acetylene
- n-Pentane
- 1,3 Butadiene

- **Detection limits for both methods:** FID 1 is 0.05 ppm for all components. The lower limit on FID 2 is 1 ppm for all components.
- Analysis time is approximately 30 minutes.

### Optional Configurations

- Impurities in isoprene
- Impurities in high purity styrene monomer
- Analysis of vinyl chloride monomer
- Analysis of trace C4 olefins (10 ppb) in polymer grade propylene
- Analysis of 30 different trace oxygenates in polymer grade propylene by MSD



### For More Information

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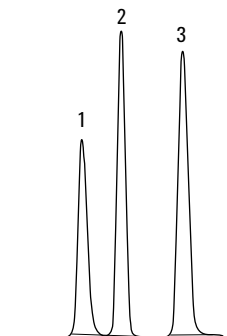
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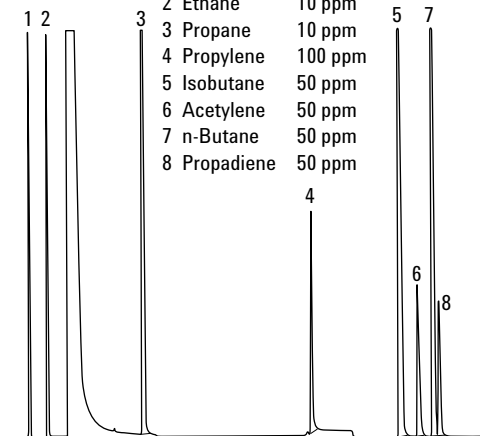
**Ethylene, FID 1**

- 1 Carbon monoxide 10 ppm
- 2 Methane 10 ppm
- 3 Carbon dioxide 10 ppm



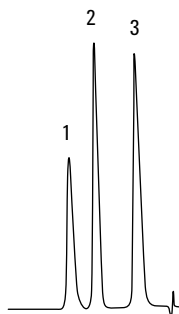
**Ethylene, FID 2**

- 1 Methane 10 ppm
- 2 Ethane 10 ppm
- 3 Propane 10 ppm
- 4 Propylene 100 ppm
- 5 Isobutane 50 ppm
- 6 Acetylene 50 ppm
- 7 n-Butane 50 ppm
- 8 Propadiene 50 ppm



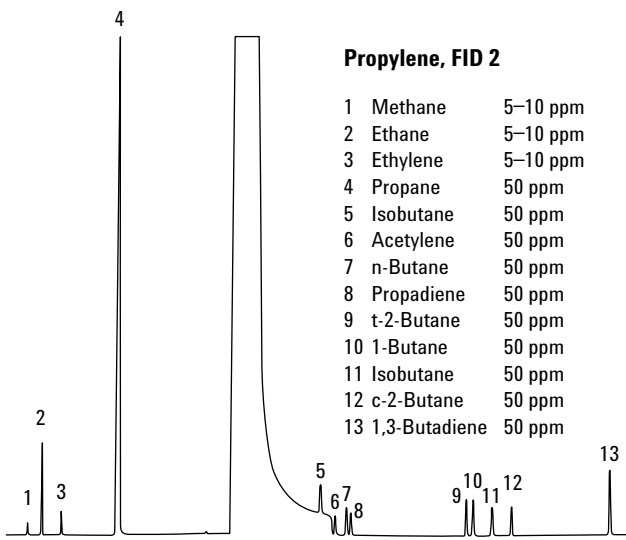
**Propylene, FID 1**

- 1 Carbon monoxide 10 ppm
- 2 Methane 10 ppm
- 3 Carbon dioxide 10 ppm



**Propylene, FID 2**

- 1 Methane 5-10 ppm
- 2 Ethane 5-10 ppm
- 3 Ethylene 5-10 ppm
- 4 Propane 50 ppm
- 5 Isobutane 50 ppm
- 6 Acetylene 50 ppm
- 7 n-Butane 50 ppm
- 8 Propadiene 50 ppm
- 9 t-2-Butane 50 ppm
- 10 1-Butane 50 ppm
- 11 Isobutane 50 ppm
- 12 c-2-Butane 50 ppm
- 13 1,3-Butadiene 50 ppm



**FID 1 and FID 2 output of the Agilent Monomer Analyzer.**

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