Introduction

The Agilent FactorFour VF-23ms bonded phase is a highly polar phase with high cyano substitution having an optimized stabilization structure. Combined with fused silica surface treatment a temperature stability of up to 260 °C isothermally was realized which results in very low bleed. Accurate quantification of trace components as well as fast stabilization and reduced contamination of detection systems (such as ms) are obtained. Due to the high cyano content and the special bonding technology, this phase is very stable.
## Conditions

**Technique**: GC  
**Column**: Agilent VF-23ms, 0.53 mm x 15 m fused silica  
(df = 0.50 μm) (Part no. CP8830)  
**Temperature**: 230 °C & 210 °C  
**Carrier Gas**: Hydrogen, 7 kPa & 35 kPa  
**Injector**: Split, 1:100  
\[ T = 275 ^\circ C \]  
**Detector**: FID  
**Sample Size**: 0.1 μL  
**Concentration Range**: ca. 5 ng per component on the column  
**Solvent Sample**: 0.2% in Hexane, components as alditol acetates  

**Courtesy**: J. Peene, Agilent R&D laboratories, Middelburg, The Netherlands

### Peak identification

1. rhamnitol  
2. fucitol  
3. ribitol  
4. arabinitol  
5. mannitol  
6. galactitol  
7. clucitol  
8. inositol

![Graph showing peak identification with conditions: 230°C, 7 kPa, and 9 minutes.](image)