

# Application Report 28

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## Impurities in Methyl Ethyl Ketone on the Equity-1701

Raw Data File Name:

C:\HPCHEM\2\Data\Back0599.D,  
Back0600.D, Back0602.D

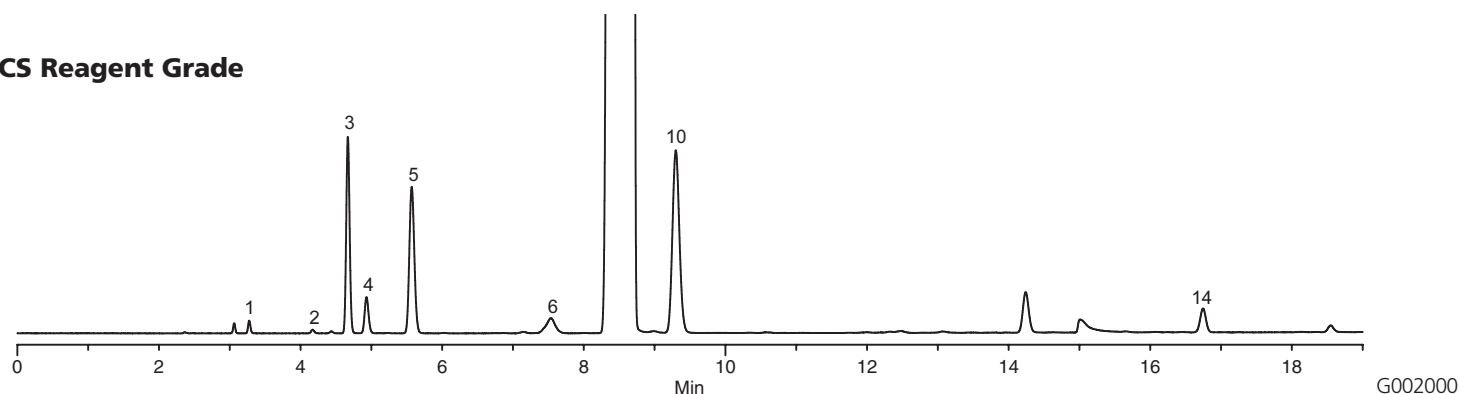
Acquisition System: GC 9499

ASTM Method D2804 outlines the analysis of methyl ethyl ketone for impurities. In this application, we used the Equity-1701 column to analyze three different grades of MEK. These were ACS reagent grade, commercial grade (obtained at a local hardware store) and a lab standard spiked with some of the common impurities described in the ASTM method.

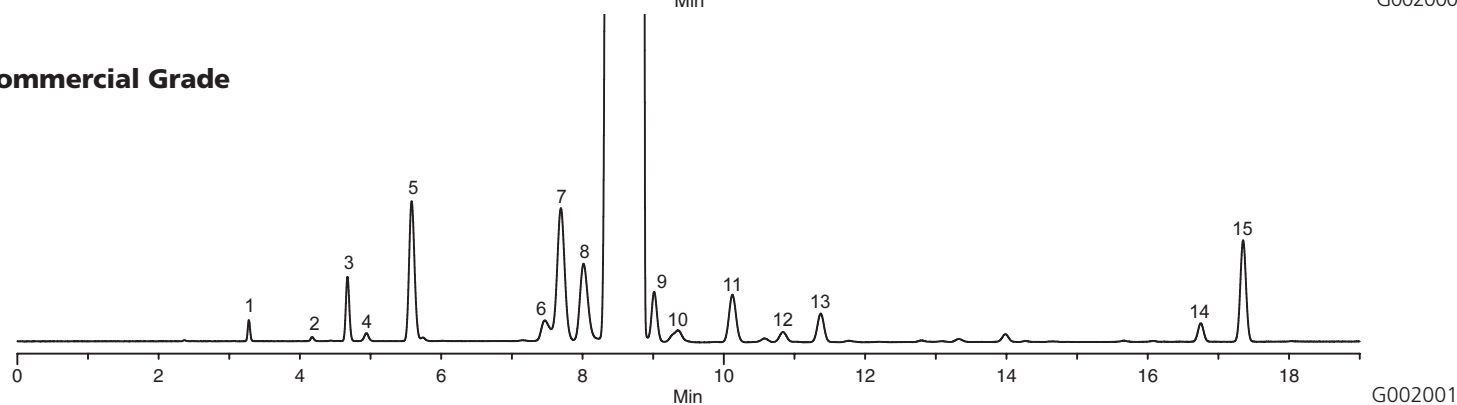
### Key Words

MEK, impurities, Equity, 28396-U, ASTM

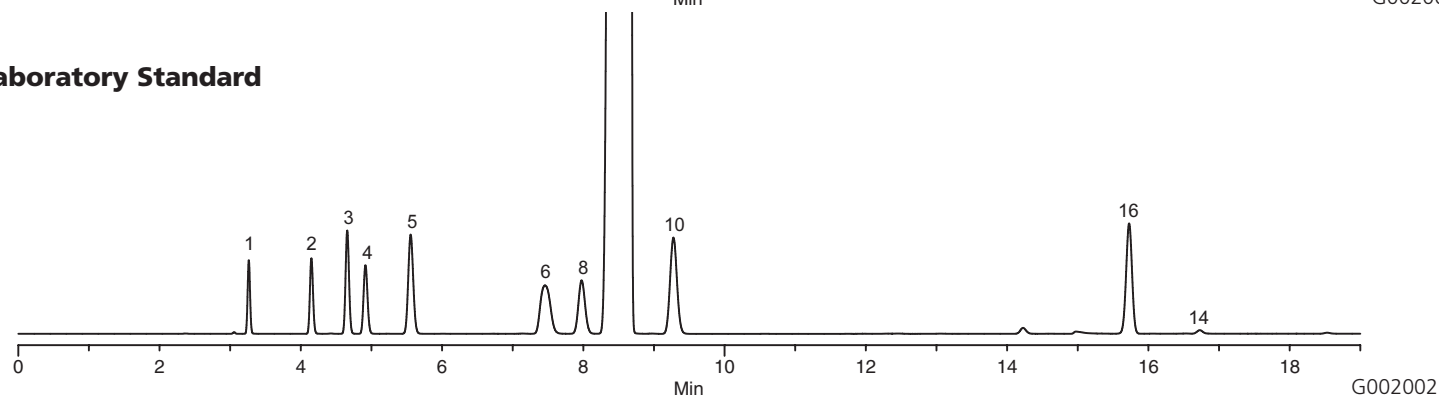
### ACS Reagent Grade



### Commercial Grade



### Laboratory Standard



#### Conditions

Column: Equity-1701, 30m x 0.53mm ID, 1.5µm  
Cat. No.: 28396-U  
Oven: 35°C (10 min) to 100°C @ 5°C/min  
Inj.: 250°C  
Det.: FID, 250°C  
Flow: Helium, 25cm/sec @ 35°C  
Injection: 1µL, 50:1 split  
Liner: 4mm ID cup style  
Sample: Methyl ethyl ketone of various purity levels

#### Peak IDs

- |                  |                            |
|------------------|----------------------------|
| 1. Methanol      | 9. Diethoxymethane         |
| 2. Ethanol       | 10. sec-Butanol            |
| 3. Acetone       | 11. Methyl isobutyl ketone |
| 4. Isopropanol   | 12. Isopropyl acetate      |
| 5. t-Butanol     | 13. Isobutanol             |
| 6. n-Propanol    | 14. Toluene                |
| 7. n-Butanol     | 15. 4-Methyl-2-pentanone   |
| 8. Ethyl acetate | 16. 1-Octene               |