Calion Standards

PRODUCT NOTE

Gas Chromatography/ Mass Spectrometry

Key Features:

- No dilution or liquid standard preparation necessary in the field or laboratory
- No solvent peaks or solvent related interference in the chromatogram
- Compatibility with solid phase microextraction (SPME) for solventless injections
- Allows GC retention time and retention index calibrations
- Allows mass calibration of the MS

Solventless Standards for GC and GC/MS Instruments

In recent years, person-portable gas chromatograph mass spectrometer (GC/MS) systems have become commercially available and enable sample analysis and compound identification to be performed. To guarantee that quality GC/MS results are produced in the field, reliable and easy-to-use instrument calibration and performance validation standards are essential.

Calion® Standards are solventless standards used to calibrate and validate the performance of GC and GC/MS instruments. Additionally, they are reliable and easy-to-use for GC and MS instrument calibration. Typical laboratory practices for calibrating a GC/MS are not always practical for on-site field analysis due to the time involved to complete multistep processes. Also, liquid standards are not ideal to carry into the field as they can spill or leak. Furthermore, liquid standards can be unstable over time, particularly in harsh conditions.

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For the Better

Calion Standards come in a closed vial that contains liquid standards that have been adsorbed into a granular solid matrix. The solid granules prevent the liquid standards from spilling or leaking. Calion Standards offer extended stability compared to conventional standards prepared in volatile liquid solvents. Standards in the vapor phase are collected using a solid phase microextraction (SPME) fiber. This technique is ideal for adsorbing the analytes from the headspace and transferring them to the injection port of a GC/MS. PerkinElmer's Custodion® SPME Syringe needle can be easily inserted into the headspace of the vial through a Mininert® vial. The SPME fiber is exposed to the vapor phase analytes for 15 to 30 seconds to collect the standards. The standards are then analyzed on the GC/MS system to complete calibration and performance validation procedures.

The Calion Mix contains 13 compounds specifically customized for calibration and performance validation of PerkinElmer's person portable GC/MS, the Torion® T-9. Functions such as filament emission, signal resolution and EM detector response are tuned as a result of analyzing a Calion Standard. The convenience of using Calion Standards allows instrument tuning to occur in the field quickly, ensuring quality data and reliable instrument performance.

Calion calibration standards are simple, reproducible, and stable. The combination of using Calion Standard Mixes with the Custodion SPME is rapid and ideal for in-field calibration of GC/MS instrumentation.

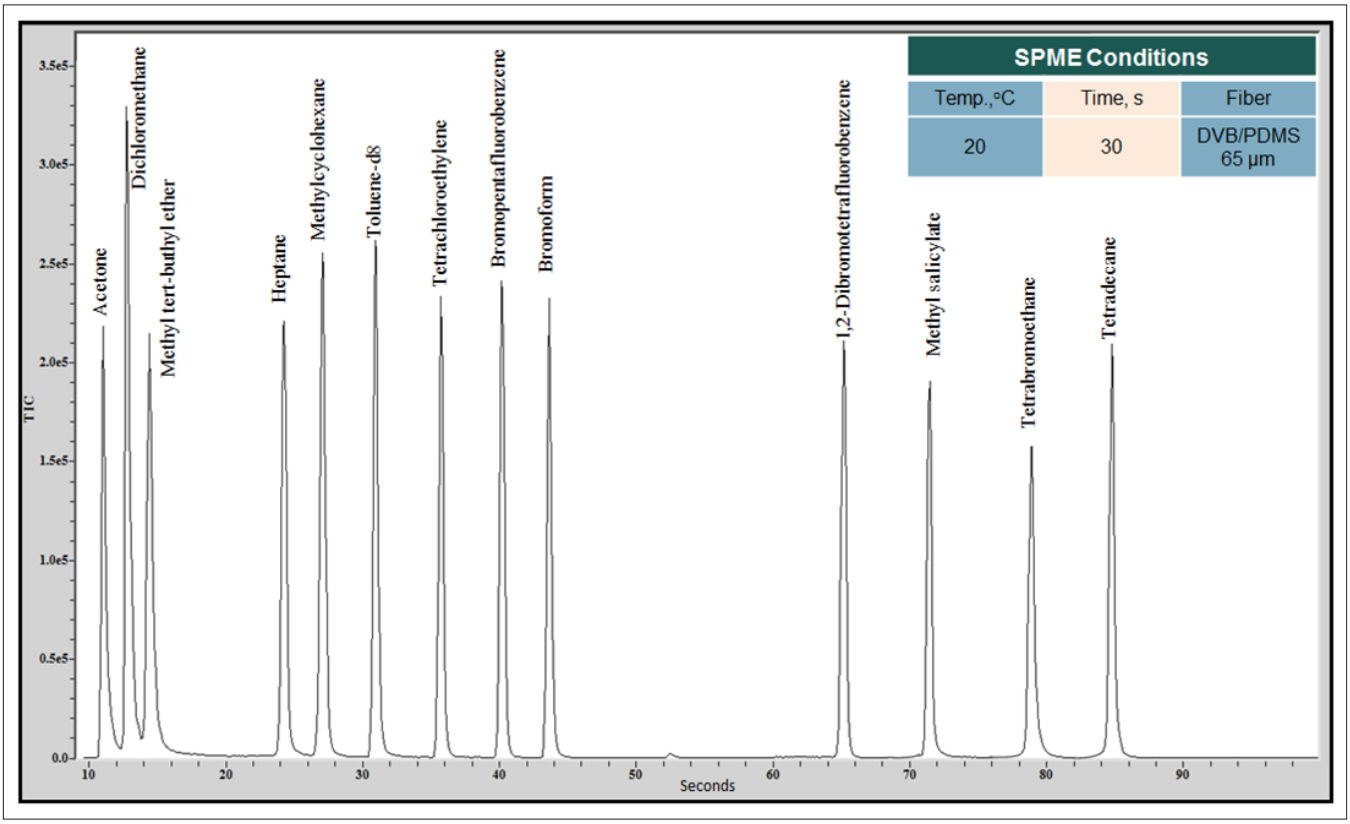

Figure 1. 13 Mix Calion Chromatogram.

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