

Basic Compounds Analysis

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GC Analysis of Non-Purgeable Solvents in Pharmaceutical Discharges

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similar phases

DB-CAM, Carbowax® Amine, CP Wax 51 for amines

Stabilwax®-DB Columns (fused silica)

(polar phase; Crossbond® base-deactivated Carbowax® polyethylene glycol—for amines and basic compounds)

- Application-specific columns for underivatized amines and other basic compounds, including alkylamines, diamines, triamines, nitrogen-containing heterocyclics. No need for column priming.
- Temperature range: 40 °C to 220 °C.

Stabilwax®-DB columns reduce adsorption and improve responses for many basic compounds, without analyte derivatization or column priming. For different selectivity of basic compounds, or higher oven temperatures, use an Rtx®-5 Amine column.

Stabilwax®-DB is a bonded stationary phase, but avoid rinsing these columns with water or alcohols.

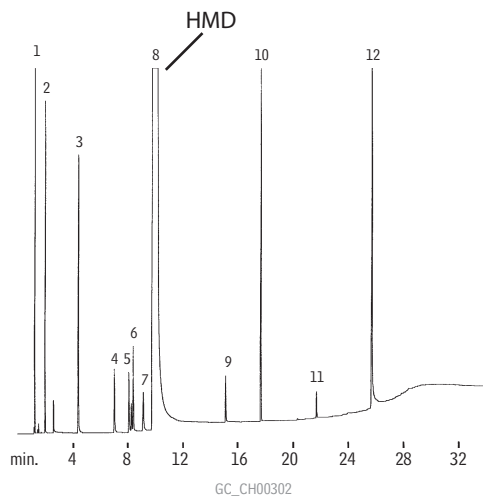
| ID | df | temp. limits | 15-Meter | 30-Meter | 60-Meter |
|--------|--------|-----------------|----------|----------|----------|
| 0.25mm | 0.25µm | 40 to 210/220°C | 10820 | 10823 | |
| | 0.50µm | 40 to 210/220°C | | 10838 | |
| 0.32mm | 0.25µm | 40 to 210/220°C | 10821 | 10824 | |
| | 0.50µm | 40 to 210/220°C | | 10839 | |
| | 1.00µm | 40 to 210/220°C | 10851 | 10854 | 10857 |
| 0.53mm | 0.50µm | 40 to 210/220°C | | 10840 | |
| | 1.00µm | 40 to 210/220°C | 10852 | 10855 | 10858 |
| | 1.50µm | 40 to 210/220°C | | 10869 | |

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Hexamethylenediamine (HMD) on a Stabilwax®-DB column.



Excellent resolution and peak shape for impurities in HMD!

1. cyclohexane
2. hexamethyleneimine
3. 1,4-diaminobutane
4. pentamethylenediamine
5. 1,2-diaminocyclohexane
6. 1,5-diamino-2-methylpentane
7. aminomethylcyclopentylamine
8. hexamethylenediamine
9. 6-aminocapronitrile
10. *n*-valeramide
11. adiponitrile
12. bis-hexamethylenetriamine

Column: Stabilwax®-DB, 30m, 0.32mm ID, 0.25µm (cat.# 10824)
 Sample: 0.4µL direct injection of a neat hexamethylenediamine (HMD) sample
 On-column conc.: 10 to 1,000ng/component
 Oven temp.: 95°C (hold 6 min.) to 235°C @ 7°C/min. (hold 4 min.)
 Inj./det. temp.: 250°C
 Carrier gas: hydrogen
 Linear velocity: 40cm/sec.
 FID sensitivity: 2 x 10⁻¹¹ AFS