

	Chromegabond® WR (Wide Range) HPLC Columns
	Application News 701 South Route 73 • West Berlin, New Jersey 08091-2621 • (856) 753-8400 • Fax (856) 753-8484

Chromegabond® WR material features include:

- Specially Deactivated material to Produce Superior Peak Shapes for Amines and Acids
- The Ultimate in C4, C8, and C18 HPLC Column Technology
- Maximum Performance and Reproducibility Delivered by Superior QC Testing
- Validated Sets Available for Method Validation

Chromegabond WR (Wide Range) is specially deactivated to produce superior peak shapes for amines and acids. Chromegabond WR superior performance is the result of a multistep process beginning with ultra pure synthetically produced spherical silica. This synthetic silica is manufactured using ultra pure metal free reagents. The resultant particles are carefully analyzed to ensure that their metal-free properties are completely maintained. The ultra-pure silica particles are then fully hydroxylated before they undergo an extensive bonding of either monomeric C4, C8 or C18 alkyl chains, using our proprietary bonding procedures. The bonded particles are then exhaustively endcapped to react any remaining silanol groups.

The Chromegabond WR product, as a result of our special bonding treatment, is highly hydrophobic and exceptionally inert for the analysis of both acids and bases. It is useful for the separation of molecules that contain polar groups along with hydrophobic groups. The 3 micron Chromegabond WR columns are highly efficient and exhibit theoretical plate measurements of between 160,000 to 170,000 plates/meter.

A key to the maximum performance and reproducibility of Chromegabond WR is the strict quality control parameters applied to the finished columns. Every batch of Chromegabond WR encounters a battery of QC tests. These QC protocols are designed to test the critical performance parameters for Chromegabond WR.

Test Probes look for undesirable interactions for amines, acids, and metals. In addition, tests focus on reproducibility by careful measurements of relative retention time, tailing factors, resolution factors, and plate counts. Because rigorous test conditions have been established, the HPLC chromatographer can be confident that Chromegabond WR delivers superior base deactivation batch to batch, and column to column. For example, every Chromegabond WR batch is tested with a series of tricyclic antidepressants (Nortriptyline, imipramine and amitriptyline) using a pH=6.8 mobile phase. Tricyclic antidepressants are excellent probes to ensure that the columns have been base deactivated to the fullest extent. The tricyclic antidepressants have a combination of unique properties making them ideally suited as test probes.

These compounds contain strong amine groups and possess enough hydrophobic character to enable the molecules to interact completely with the stationary phase. This complete interaction assures the

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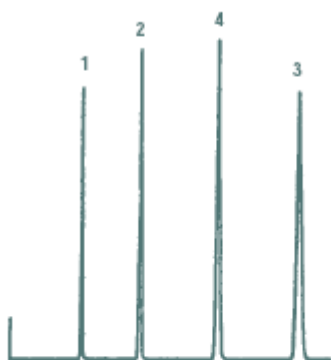
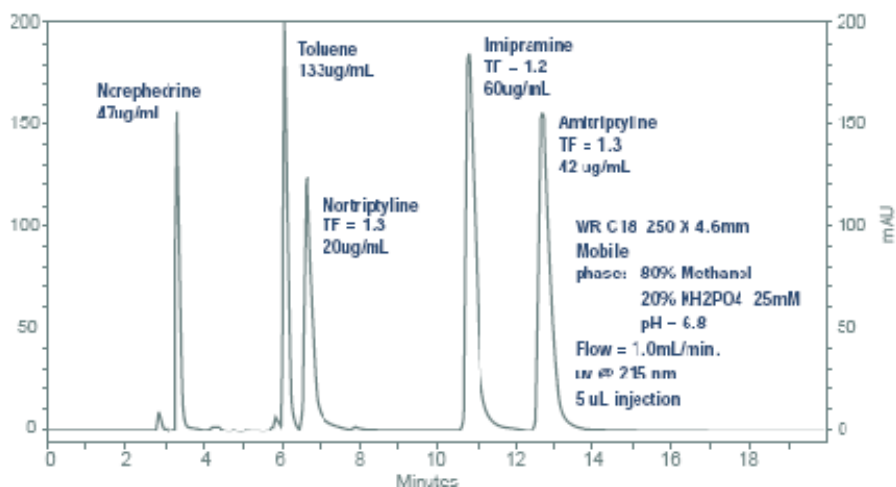


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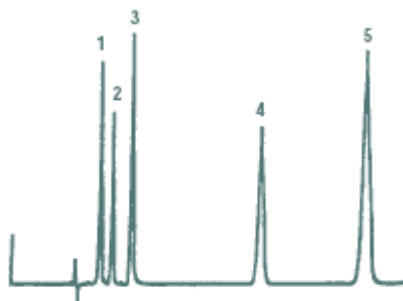
total exposure of the tricyclic antidepressants to any remaining silanol groups. In addition, the pH=6.8 mobile phase, used for the test, also assures the complete exposure of the test probes to residual silanol groups.



Substituted Anilines and Phenol

Column: Chromegabond WR-C18, 250 x 4.6 mm ID, 5 μ
Catalog No.: 155291-WR-C18
Chromatographic conditions: UV 254 nm
Flow rate: 1 mL/min.
Mobile phase: 70% Acetonitrile 30% Water

1. Phenol
2. Dimethylaniline
3. Diethylaniline
4. Di-N-Butyl Phthalate



Drug Related Molecules

Column: Chromegabond WR-C18, 250 x 4.6 mm ID 5 μ
Catalog No.: 155291-WR-C18
Chromatographic conditions: UV 254 nm
Flow rate: 1 mL/min.
Mobile phase: 70% Methanol/30% 4 mM KH₂PO₄, pH = 3

1. Acetylsalicylic acid
2. p-Acetophenetidide
3. Salicylic acid
4. Phenylbutazone
5. Indomethacin

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