

Application Note

Extraction of Tricyclic Antidepressant Drugs from Serum

Field	Pharmaceutical/Clinical													
Sample	Trimipramine, Amitriptyline, Imipramine, Nortriptyline, Doxepine, Desmethylclomipramine, Clomipramine													
Matrix	Serum													
Extraction Column	BAKERBOND spe™ Cyano (CN), 1 mL (100 mg)													
Safety and Protective Equipment	Goggles and face shield, lab coat and apron, vent hood proper gloves, Type B fire extinguisher.													
Sample Preparation	Mix 0.5 mL serum with 0.5 mL 0.2M phosphate buffer (pH 7.4) and 0.1 mL of an appropriate internal standard solution.													
Column Conditioning	Condition column with 2 × 1 mL methanol, followed by 1 mL HPLC grade water, followed by 1 mL 0.2M phosphate buffer (pH 7.4). Do not allow column to run dry.													
Sample Addition/Wash	Slowly aspirate (3 mL/min) sample through column. Wash with 1 mL HPLC grade water, followed by 1 mL acetonitrile/HPLC grade water (40:50). Air dry column.													
Sample Elution	Elute tricyclic antidepressants with 0.5 mL acetic acid/ n-butylamine/acetonitrile (1:1:98). Evaporate eluate almost to dryness (at 45°C under a flow of nitrogen). Dissolve residue in HPLC mobile phase.													
Final Analytical Method	<table border="1"> <tr> <td colspan="3">HPLC-UV</td> </tr> <tr> <td>Analytical Column:</td> <td colspan="2">Wide-Pore Cyanopropyl, 5 micron</td> </tr> <tr> <td>Mobile Phase:</td> <td colspan="2"> HPLC Grade Water 590 mL Acetic Acid 10 mL Acetonitrile 400 mL n-Butylamine 120 mL </td> </tr> <tr> <td>Flow Rate:</td> <td colspan="2">1.0 mL/min.</td> </tr> </table>		HPLC-UV			Analytical Column:	Wide-Pore Cyanopropyl, 5 micron		Mobile Phase:	HPLC Grade Water 590 mL Acetic Acid 10 mL Acetonitrile 400 mL n-Butylamine 120 mL		Flow Rate:	1.0 mL/min.	
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Product List

Product Number	Description
7021-01	BAKERBOND spe™ Cyano (CN), 1 mL (100 mg)
9515-03	Glacial Acetic Acid, BAKER ANALYZED® HPLC
9017-03	Acetonitrile, BAKER ANALYZED® HPLC
4218-03	Water, BAKER ANALYZED® HPLC



Phillipsburg, NJ 9001:2008 & 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, the Netherlands 9001:2008 & 14001:2004 & 13485:2003
Selangor, Malaysia 9001:2008

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