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HPLC Columns and Chromatography Accessories

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Lamotrigine Analyzed with HPLC – AppNote

USP Assay Method for a Very Polar Compound

The USP Assay Method for Lamotrigine uses a relatively low pH of 2.0. These conditions may promote hydrolysis of the bonded phase in many L1 Columns, but the unique chemistry of the Cogent Bidentate C18 Column (L1) is very rugged and shows no loss of Retention for the API, as the five Chromatogram overlay in the Figure below indicates. The Retention time %RSD for the five runs was 0.15%. In addition the Peak shape was highly Symmetrical.

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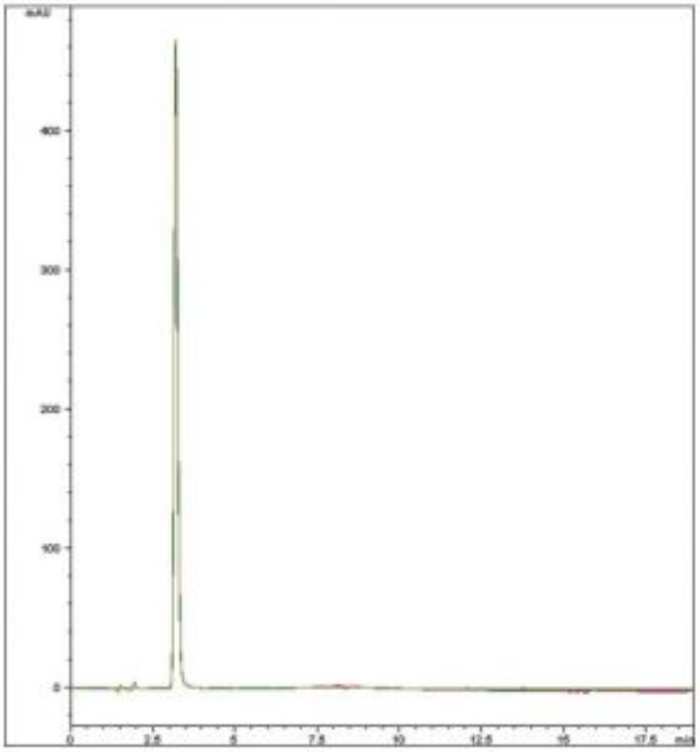

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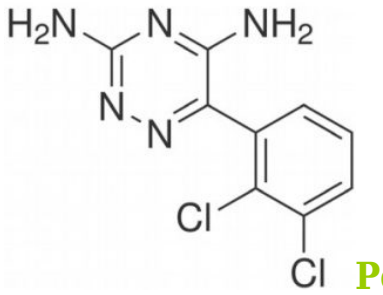

Peak:

Lamotrigine

Method Conditions

Column: Cogent Bidentate C18™, 4µm, 100Å
Catalog No.: 40018-15P
Dimensions: 4.6 x 150mm
Mobile Phase:

A: 2.7g / L KH_2PO_4 / Triethylamine 150:1 then adjusted to pH 2.0 with H_3PO_4
B: Acetonitrile

Gradient:

Time *(minutes)*	%B
0	23.5
4	23.5

14	80
15	23.5
19	23.5

Injection vol.: 10µL
Detection: UV @ 270nm
Sample Preparation: 25mg strength tablet was ground and dissolved in 5mL MeOH in a 100mL volumetric flask. The flask was diluted to mark with 0.10M HCL. It was sonicated and filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).
t_0: 1.9 minutes

Note: *Lamotrigine is a phenyltriazine anticonvulsant used to treat Epilepsy and Type I Bipolar disorder. It is believed to act as a Sodium channel blocker.*

COGENT HPLC Columns™

Attachment

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