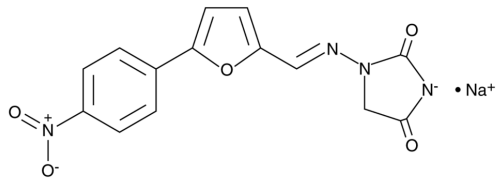
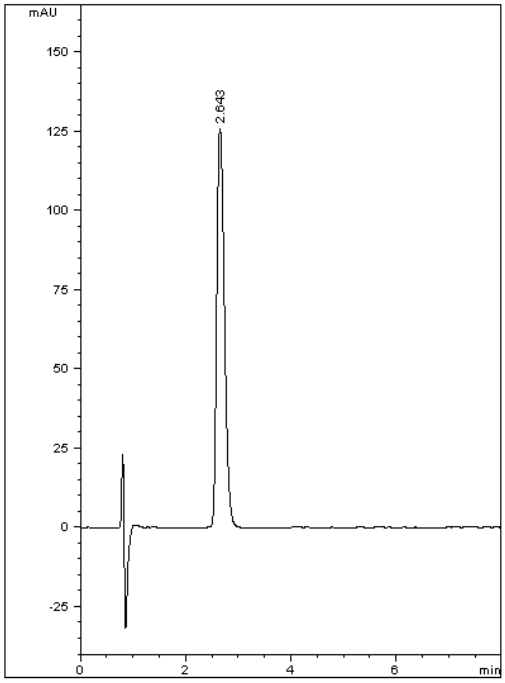
Dantrolene Sodium

Simple Symmetrical Analysis of Organic Amine



Dantrolene sodium



Notes: Essential to muscle contraction are ryanodine receptors that regulate the release of calcium from the sarcoplasmic reticulum of muscle cells. Dantrolene sodium is a postsynaptic muscle relaxant that lessens the "excitation-contraction" coupling response in these cells. It achieves this by inhibiting calcium binding to ryanodine receptor 1 and decreasing intracellular calcium concentrations.

Method Conditions

Column: **Cogent Bidentate C18™**, 4µm, 100Å

Catalog No.: 40018-75P

Dimensions: 4.6 x 75 mm

Mobile Phase: 60% DI H_2O / 40% acetonitrile / 0.1% formic acid (v/v)

Injection vol.: 2µL

Flow rate: 1.0 mL/min

Detection: 225 nm

Sample: 0.1 mg/mL Dantrolene sodium in 50:50 acetonitrile: DI H_2O

Peaks: 1. Dantrolene sodium

Discussion

Dantrolene sodium has several amine groups that can interact with lone-silanols causing problematic peak tailing when analyzed with conventional HPLC columns. By utilizing a Bidentate C18™ column with its Silica Hydride™ surface, challenging compounds like Dantrolene can be readily retained with symmetrical peak shape.

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