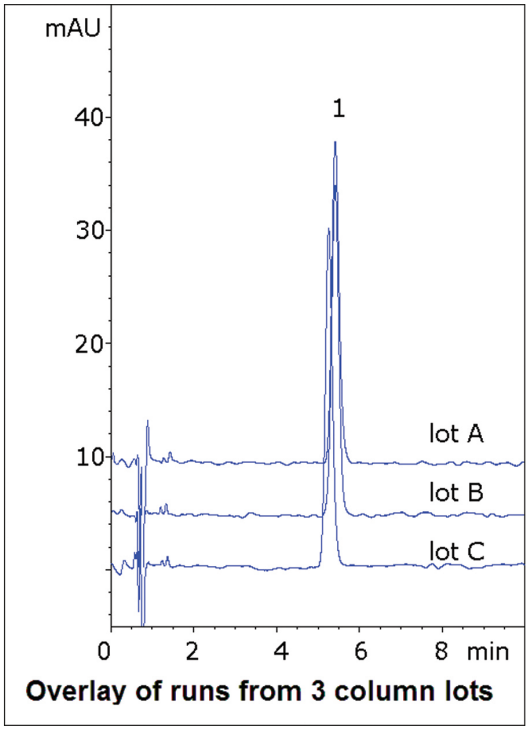
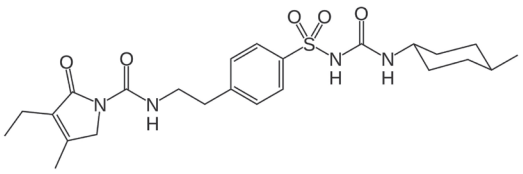
Glimepiride Tablet

Isocratic assay method for diabetes drug



Overlay of runs from 3 column lots



Glimepiride

Method Conditions

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

Catalog No.: 40018-75P

Dimensions: 4.6 x 75 mm

Mobile Phase: 50% DI H_2O / 50% acetonitrile / 0.1% formic acid (v/v)

Injection vol.: 5µL

Flow rate: 1.0 mL/min

Detection: UV 230 nm

Sample: 1mg strength glimepiride tablet was ground and transferred to a 4mL volumetric flask. A portion of 50/50 acetonitrile / DI H_2O was added and the flask was sonicated 10 min. It was then diluted to mark and mixed. A portion was filtered with a 0.45µm nylon syringe filter (MicroSolv Tech Corp.) and diluted 1:10.

Peak: 1. Glimepiride

t_0: 0.9 min

Discussion

In this study, an HPLC method for glimepiride analysis in a tablet formulation is presented. The USP assay method for this drug calls for a phosphate buffer and is therefore not LC-MS compatible. This Cogent Bidentate C18 method uses formic acid instead and produces a symmetrical well-retained peak. Therefore the analysis could be applied to various LC-MS studies as well, such as with clinical laboratories dealing with biological extracts.

Data from three column lots is shown in the figure in order to demonstrate the stationary phase reproducibility.

Note: Glimepiride is a sulfonylurea drug indicated to treat type 2 diabetes mellitus. It works by increasing insulin production in the pancreas. It is sold under trade names such as Amaryl®.

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