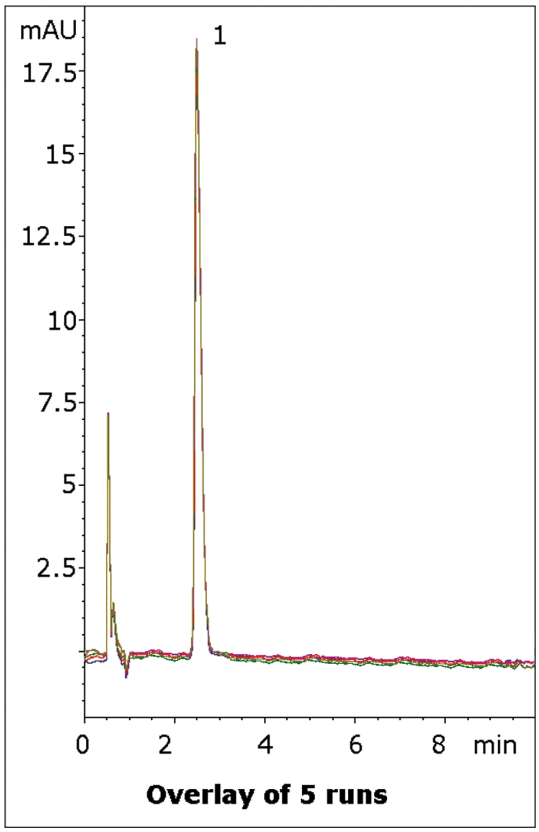
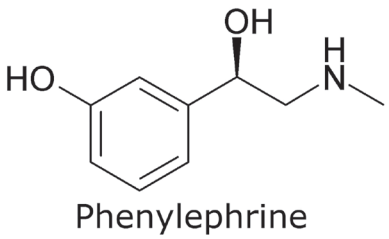
Phenylephrine HCl Tablet

Retention of highly polar compound





Phenylephrine

Note: Phenylephrine is a common decongestant used in many over-the-counter cold medications. Combination with other drugs is also prevalent in many formulations, so there is a need for a reliable separation method for phenylephrine from other APIs.

Method Conditions

Column: Cogent Diamond Hydride 2.ō™, 2.2µm, 120Å

Catalog No.: 70200-05P-2

Dimensions: 2.1 x 50 mm

Mobile Phase: 5% A: DI H_2O / 0.1% TFA (v/v)
95% B: Acetonitrile / 0.1% TFA (v/v)

Injection vol.: 0.2 microL

Flow rate: 0.4 mL/min

Detection: UV 225 nm

Sample: 10mg strength phenylephrine HCl tablet was ground and added to a 25mL volumetric flask. A portion of the mobile phase was added and the flask was sonicated 10 min. Then it was diluted to mark and mixed. A portion was filtered through a 0.45µm nylon syringe filter (MicroSolv Tech Corp.).

Peak: 1. Phenylephrine

t_0: 0.5 min

Discussion

Phenylephrine was first studied under various reversed phase conditions using a C18 stationary phase, but even using a 95% aqueous mobile phase a retention factor of no more than 0.6 could be obtained. With such low retention, it may be difficult to separate phenylephrine from excipients or other APIs. In this Cogent Diamond Hydride 2.ō method, however, the retention factor was 3.7 and also an excellent peak shape was observed. The method is suitable for routine assay of this API in a tablet formulation.

Five runs are shown in the figure to illustrate the repeatability of the data.

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