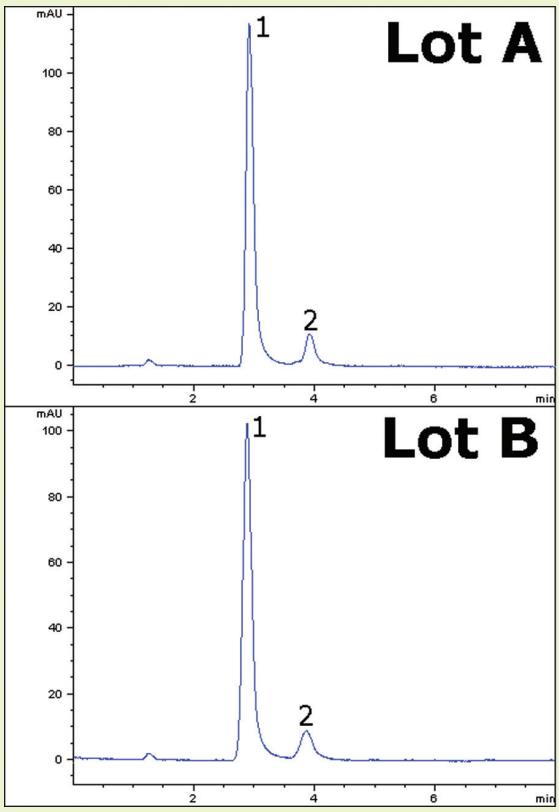
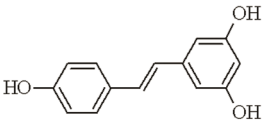
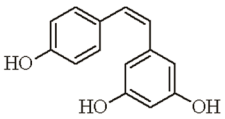
Resveratrol Capsule with Near UHPLC Column

Simple isocratic separation of isomers





1. trans-resveratrol



2. cis-resveratrol

Note: Resveratrol is a natural product found in the skin of red grapes and other sources. It has been reported to have anti-cancer, anti-aging, cardio-protective, and anti-diabetic effects.

Method Conditions

Column: **Cogent Bidentate C18 2.ō™**, 2.2µm, 120Å

Catalog No.: 40218-05P-2

Dimensions: 2.1 x 50 mm

Mobile Phase: 75% DI H_2O / 25% Acetonitrile / 0.1% formic acid

Injection vol.: 0.2µL

Flow rate: 0.2mL/min

Detection: UV 308nm

Sample: 100mg strength resveratrol capsule contents were added to a 100 mL volumetric flask containing a portion of 50/50/0.1 DI H_2O / acetonitrile / formic acid. It was then sonicated 10 min and diluted to mark. After mixing, a portion was filtered with a 0.45µm nylon syringe filter (MicroSolv Tech. Corp.)

Peaks: 1. trans-Resveratrol
2. cis-Resveratrol

t_o: 1.2 min

Discussion

In this easy isocratic method, the cis and trans isomers of resveratrol are separated using a near-UHPLC stationary phase. The Cogent Bidentate C18 2.ō column produces excellent efficiency for both analyte peaks. The sample used here is an actual capsule formulation, demonstrating the suitability of the column for real-world samples. With more sophisticated detection methods such as LC-MS, the method could be applied to complex samples where resveratrol may be present such as red wine.

Data from two different stationary phase lots demonstrates the reproducibility of the material.

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