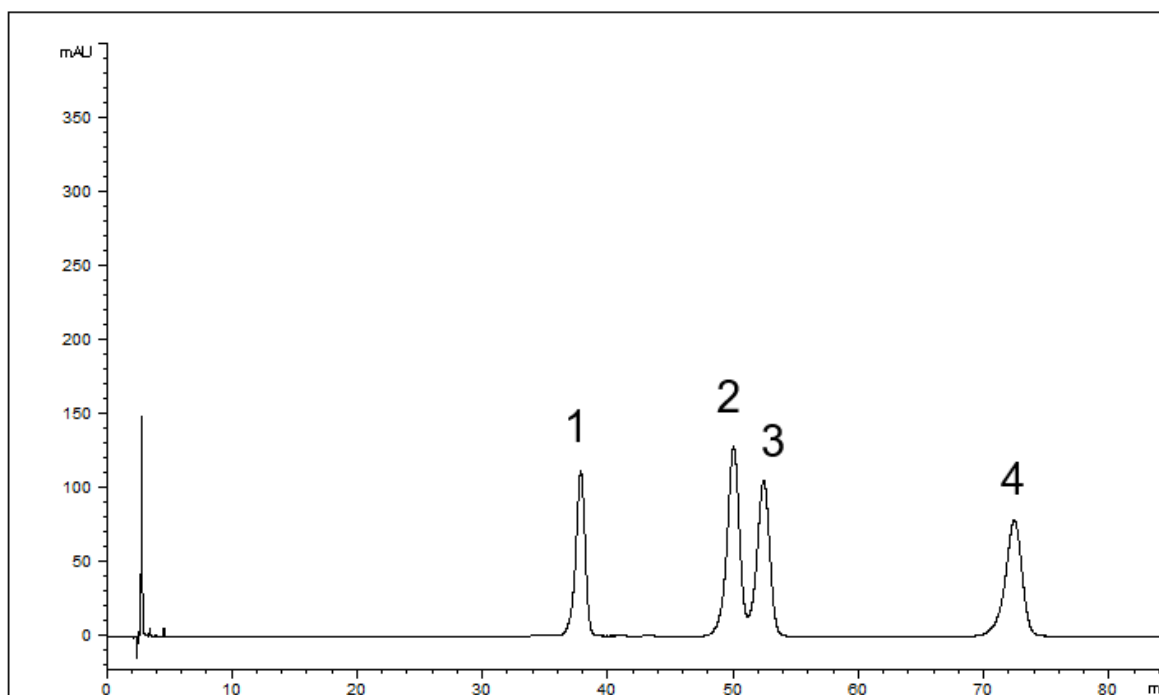


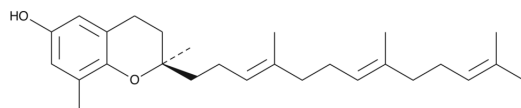
Tocotrienols Analyzed by HPLC - AppNote

Date: 05-August-2026 Last Updated: 06-August-2026

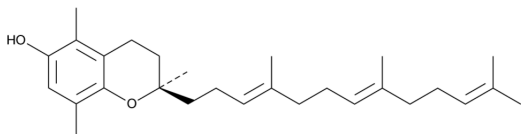
Tocotrienols can present a significant chromatographic challenge due to their closely related structures and physicochemical properties. The α -, β -, γ -, and δ -forms differ only in the number and position of methyl groups on the chromanol ring, resulting in very similar chromatographic behavior and often leading to co-elution or poor resolution with conventional HPLC methods. aration essential for research and quality control.

The ability to achieve separation of all all four tocotrienols provides a powerful tool for vitamin E profiling in nutraceuticals, edible oils, and dietary supplements.

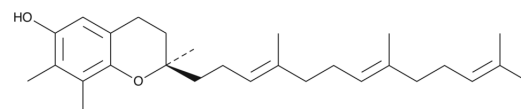




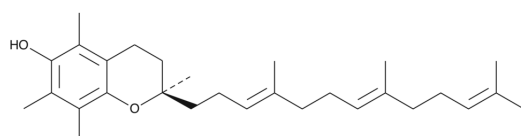
δ-Tocotrienol



β-Tocotrienol



γ-Tocotrienol



α-Tocotrienol

Peaks:

1. δ-Tocotrienol, 2. β-Tocotrienol, 3. γ-Tocotrienol, 4. α-Tocotrienol

Method Conditions:

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

Catalog No.: [40018-25P](#)

Dimensions: 4.6 x 250 mm

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

Flow Rate: 1.0 mL / minute

Detection: 220 nm

Injection Volume: 1 uL

Sample Preparation: β-Tocotrienol, α-Tocotrienol, γ-Tocotrienol, δ-Tocotrienol were each prepared as a 1.0 mg / mL concentration in MeOH.

Note: Although all four tocotrienols belong to the vitamin E family, they differ only in the number and position of methyl groups on the chromanol ring. These subtle structural differences can significantly affect biological activity, making accurate chromatographic separation essential for research and quality control.
