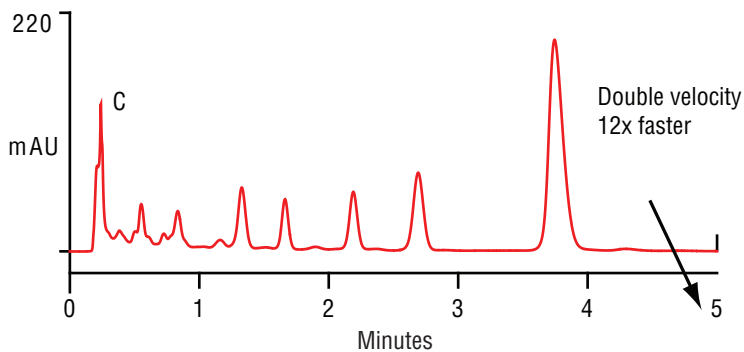
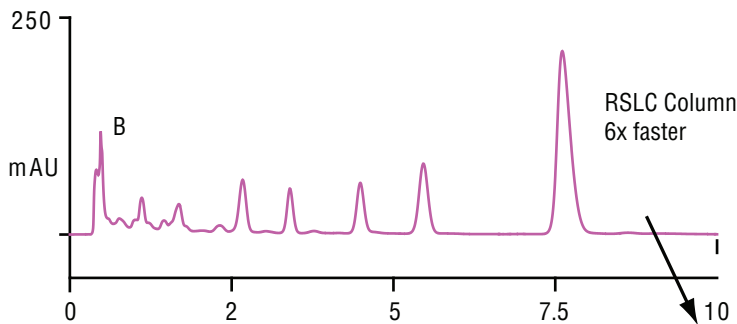
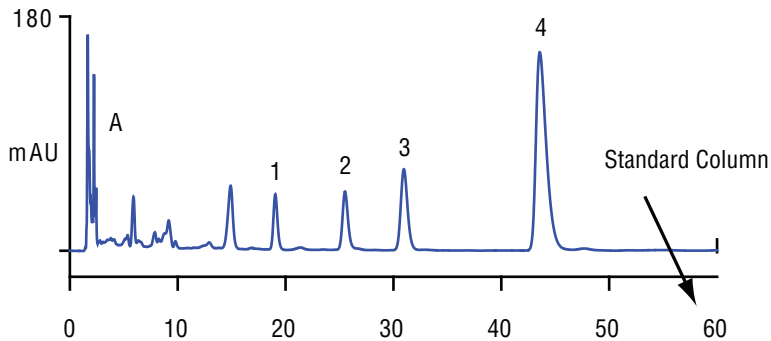


Accelerated Assays of Vanilla Extract on a Thermo Scientific™ Acclaim™ 120 C18 Column



Column: Thermo Scientific™ Acclaim™ 120 C18
 A: 5 μ m, 4.6 \times 150 mm
 B, C: 2.2 μ m, 2.1 \times 150 mm

LC System: Thermo Scientific™ Dionex™ UltiMate™ 3000 RSLC

Mobile Phase: 200 mM Acetic acid in 10% methanol (v/v)

Flow Rate: A: 1.00 mL/min
 B: 0.41 mL/min
 C: 0.82 mL/min

Temperature: 20 °C

Inj. Volume: A: 10 μ L
 B, C: 1.2 μ L

Detection: UV at 254 nm

Sample: Commercial vanilla extract, filtered

Peaks: 1. *p*-Hydroxybenzoic acid
 2. *p*-Hydroxybenzaldehyde
 3. Vanillic acid
 4. Vanillin

Reference: AOAC Official Method 990.25

25460

The AOAC Official Method 990.25 specifies a 4.6 \times 250 mm column packed with C8, 10 μ m irregular particles—a column that has only about 7000 plates, and takes over an hour to run. The Acclaim RSLC C18 rapid separation column has the same number of plates, but has improved selectivity and a much shorter run time. Using well-known geometric scaling rules, the assay can be accelerated sixfold. Doubling the flow rate accelerates the analysis 12-fold, with no sacrifice in the quality of the separation.