Plants and processed foods contain a variety of hydroxycinnamic acid derivatives and hydroxybenzoic acid derivatives. A high-resolution column is required for their analysis to achieve mutual resolution and resolution from the impurity components in the sample. Methods using a long, sub-2 µm column are available to achieve high resolution, but they demand a UHPLC system with high pressure tolerance. The Nexera 130 MPa pressure tolerance offers adequate capacity to meet these requirements. This Application Data Sheet introduces the ultra-high-resolution analysis of aromatic carboxylic acids using Shimadzu Nexera with a Shim-pack XR-ODS III column.

**Simultaneous Analysis of 11 Aromatic Carboxylic Acid Components**

Ten aromatic hydroxycarboxylic acid components and benzoic acid were analyzed using a 150 mm-long Shim-pack XR-ODS III column (particle size: 2.2 µm, 100 MPa pressure tolerance) to achieve high resolution and to reduce the analysis time.

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**High Speed**

2.2 µm, 75 mm

N at Peak 11 = 12377

**Conventional**

4.6 µm, 150 mm

N at Peak 11 = 10793

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**Ultra High Resolution**

2.2 µm, 150 mm

N at Peak 11 = 18327

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Peaks: