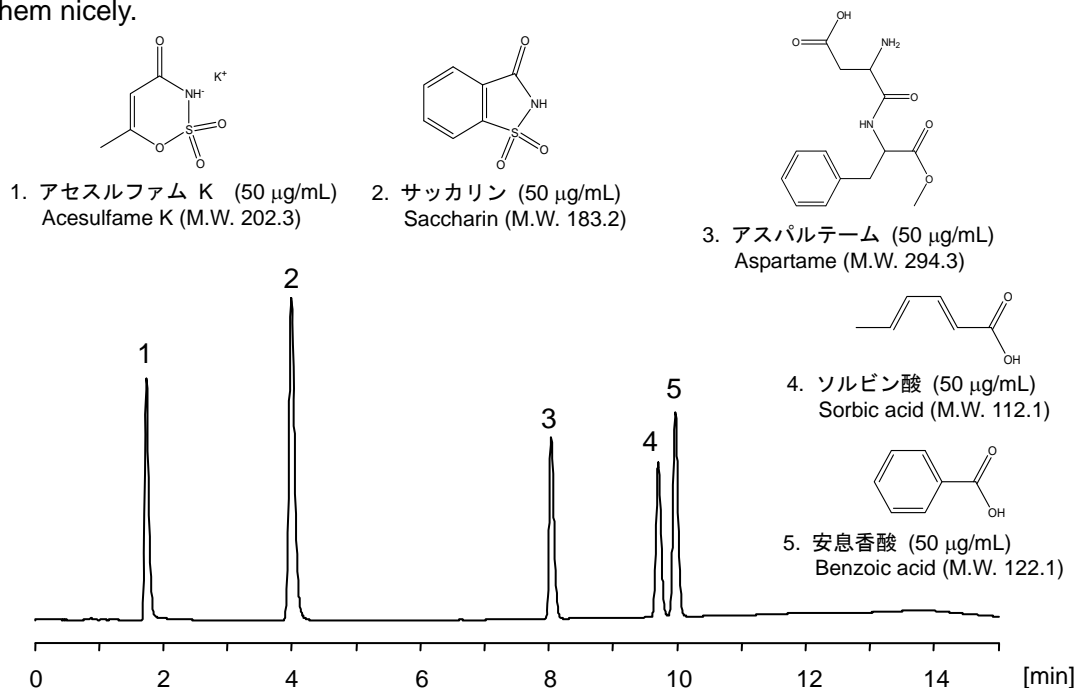


## 人工甘味料及び保存料

## Artificial sweeteners and preservatives

人工甘味料のアセスルファム K, サッカリン, アスパルテームと, 食品保存料のソルビン酸, 安息香酸の 5 物質の一斉分析例を示します。共に共役二重結合を持つ芳香族の安息香酸, 脂肪族のソルビン酸は C<sub>18</sub> カラムでは分離が困難ですが, CAPCELL CORE ADME S2.7 (2.1 mm i.d. x 100 mm) を用いると完全に分離することが可能です。

Three artificial sweeteners, acesulfame K, saccharin, and aspartame, and two preservatives, sorbic and benzoic acids, were simultaneously analyzed. Benzoic and sorbic acids are aromatic and aliphatic organic acids, respectively. They possess conjugated double bonds and show a similar polarity, and are very difficult to separate from each other with a C<sub>18</sub> column. CAPCELL CORE ADME S2.7 (2.1 mm i.d. x 100 mm) could separate them nicely.



### 【HPLC Conditions】

|                     |  |
|---------------------|--|
| Column              | : CAPCELL CORE ADME S2.7 ; 2.1 mm i.d. x 100 mm  |
| Mobile phase        | : A) 0.1 vol% H <sub>3</sub> PO <sub>4</sub> , 10 mmol/L KH <sub>2</sub> PO <sub>4</sub> , B) CH <sub>3</sub> CN<br>B 5 % (0 min) → 5 % (2 min) → 30 % (12 min)<br>→ 5 % (12.1 min) Gradient   |
| Flow rate           | : 300 μL/min   |
| Temperature         | : 40 °C  |
| Detection           | : UV 210 nm  |
| Inj. vol.           | : 1 μL   |
| Sample dissolved in | : Saccharin was first dissolved in 50% CH <sub>3</sub> CN at 1 mg/mL.<br>Others were dissolved in H <sub>2</sub> O at 1 mg/mL. Equivolume mixture<br>of all the solutions were diluted 20 fold with H <sub>2</sub> O to 50 μg/mL.<br>※ 1 μg/mL = 1 ppm |