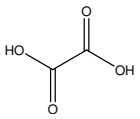
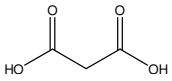
ジカルボン酸　Dicarboxylic acids

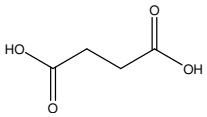
ジカルボン酸は 2 つのカルボキシ基を有する極性の高い化合物です。ここでは、炭素数2から炭素数10までのジカルボン酸 9 種を CAPCELL PAK C_{18} AQ S5（4.6 mm i.d. x 150 mm）を用いて分析した例を示します。



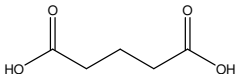
1. シュウ酸 (100 μg/mL)
   Oxalic acid (M.W. 90.0)



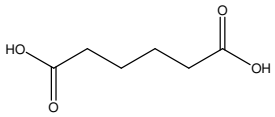
2. マロン酸 (1000 μg/mL)
   Malonic acid (M.W. 104.1)



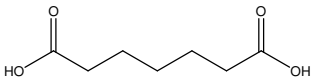
3. コハク酸 (500 μg/mL)
   Succinic acid (M.W. 118.1)



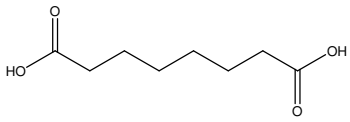
4. グルタル酸 (1000 μg/mL)
   Glutaric acid (M.W. 132.1)



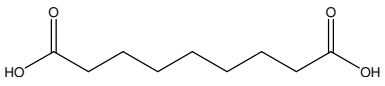
5. アジピン酸 (1000 μg/mL)
   Adipic acid (M.W. 146.1)



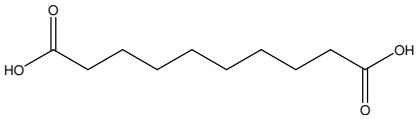
6. ピメリン酸 (1000 μg/mL)
   Pimelic Acid (M.W. 160.2)



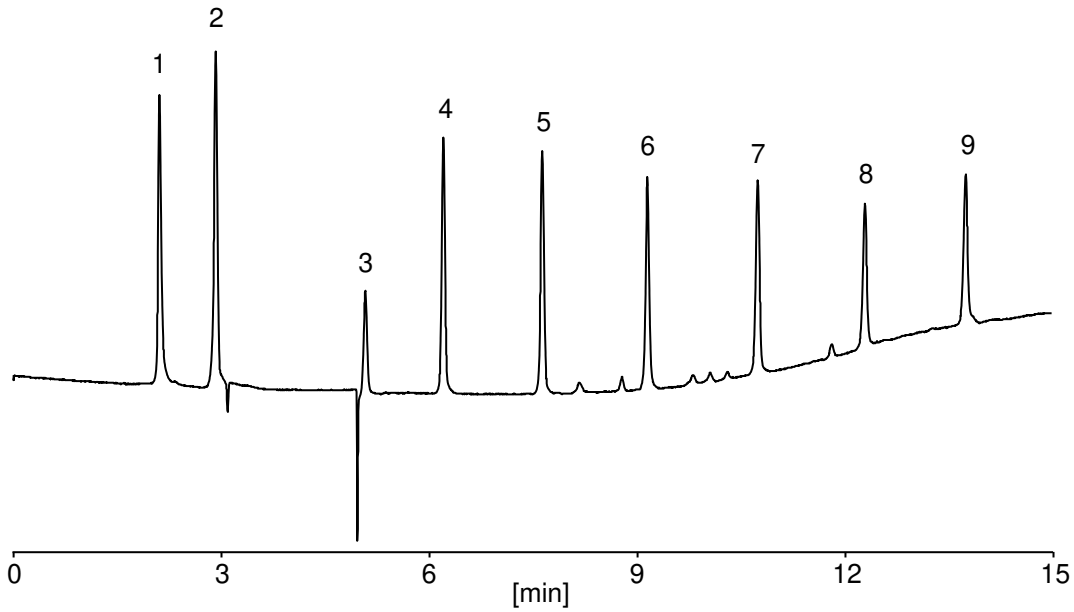
7. スベリン酸 (1000 μg/mL)
   Suberic Acid (M.W. 174.2)



8. アゼライン酸 (1000 μg/mL)
   Azelaic Acid (M.W. 188.2)



9. セバシン酸 (1000 μg/mL)
   Sebacic Acid (M.W. 202.3)



【HPLC Conditions】

Column	: CAPCELL PAK C_{18} AQ S5 ; 4.6 mm i.d. x 150 mm
Mobile phase	: A) 0.1 vol% H_3PO_4 B) 0.1 vol% H_3PO_4, CH_3CN B 0 % (0 min) -> 50 % (15 min) -> 0 % (15.1 min) Gradient
Flow rate	: 1 mL/min
Temperature	: 40 ˚C
Detection	: UV 210 nm
Inj. vol.	: 2 µL
Sample dissolved in	: Malonic acid and succinic acid were separately dissolved in water at 5 mg/mL. Oxalic acid, glutaric acid and adipic acid were separately dissolved in water at 10 mg/mL. Pimelic acid, suberic acid, azelaic acid and sebacic acid were separately dissolved in ethanol at 10 mg/mL. 90 µL of Ethanol, 10 µL of oxalic acid, 200 µL of malonic acid, 100 µL of succinic acid and 100 µL of other sample solutions were mixed. ※ 1 µg/mL = 1 ppm