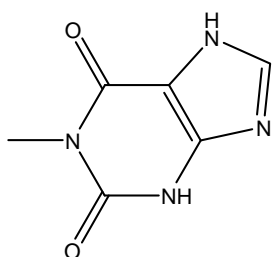


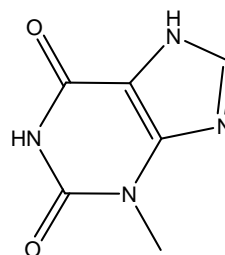
## キサンチン類

## Xanthines

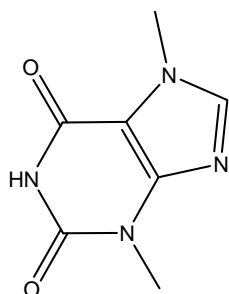
6種のキサンチン類, 3-メチルキサンチン, 1-メチルキサンチン, テオブロミン, 1,7-ジメチル尿酸, テオフィリン, 及びカフェインの一斉分析例を示します. CAPCELL PAK ADME S3 (4.6 mm i.d. x 150 mm) を用いることにより, 良好なピーク形状で十分な分離が得られました.



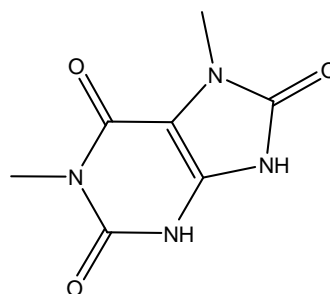
1. 3-メチルキサンチン (114  $\mu\text{g/mL}$ )  
3-Methylxanthine (M.W. 166.1)



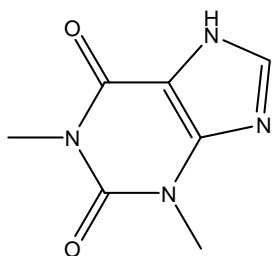
2. 1-メチルキサンチン (114  $\mu\text{g/mL}$ )  
1-Methylxanthine (M.W. 166.1)



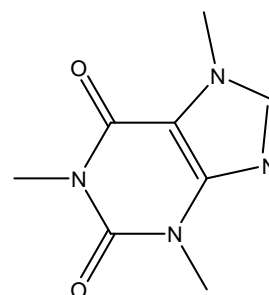
3. テオブロミン (114  $\mu\text{g/mL}$ )  
Theobromine (M.W. 180.2)



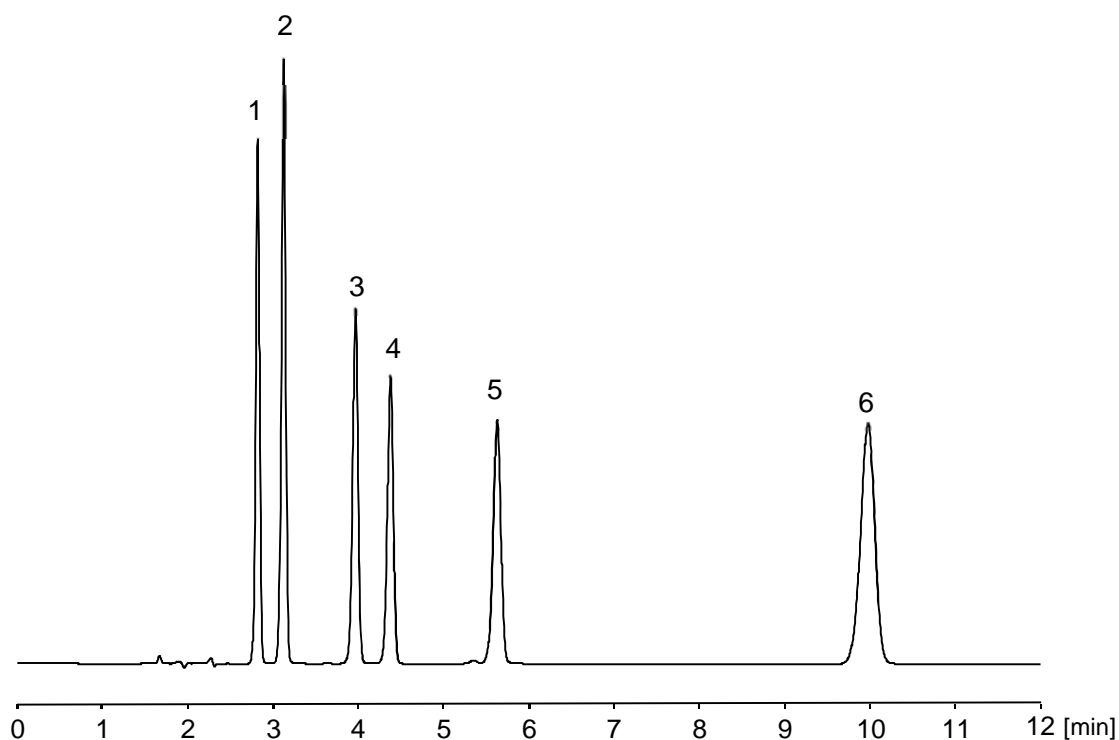
4. 1,7-ジメチル尿酸 (136  $\mu\text{g/mL}$ )  
1,7-Dimethyluric acid (M.W. 196.2)



5. テオフィリン (114  $\mu\text{g/mL}$ )  
TheoCaffeine (M.W. 180.2)



6. カフェイン (227  $\mu\text{g/mL}$ )  
Caffeine (M.W. 194.2)



**【HPLC Conditions】**

Column : CAPCELL PAK ADME S3 ; 4.6 mm i.d. x 150 mm  
 Mobile phase : 0.1 vol% HCOOH, H<sub>2</sub>O / CH<sub>3</sub>CN = 90 / 10  
 Flow rate : 1 mL/min  
 Temperature : 40 °C  
 Detection : UV 254 nm  
 Inj. vol. : 5 μL  
 Sample dissolved in : 1-Methylxanthine, 3-methylxanthine and 1,7-dimethyluric acid were dissolved in 0.15 mol/L NH<sub>3</sub> aq at 1 mg/mL. All the other compounds were dissolved in water at 1 mg/mL. Caffeine (500 μL), 1,7-dimethyluric acid (300 μL), and the other compounds (250 μL) were mixed together. Water was added to the mixture to make it at 2.2 mL.  
 ※ 1 μg/mL = 1 ppm