

Analysis of Pharmaceuticals and Crude Drugs (3) 医薬品の分析 (3)

An analysis of acetaminophen contained in cold medicine. Develosil RPAQUEOUS-AR was used for the column

かぜ薬の中に含まれ、解熱鎮痛作用を持つアセトアミノフェンの分析例を紹介します。
カラムには「Develosil RPAQUEOUS-AR」を使用しました。

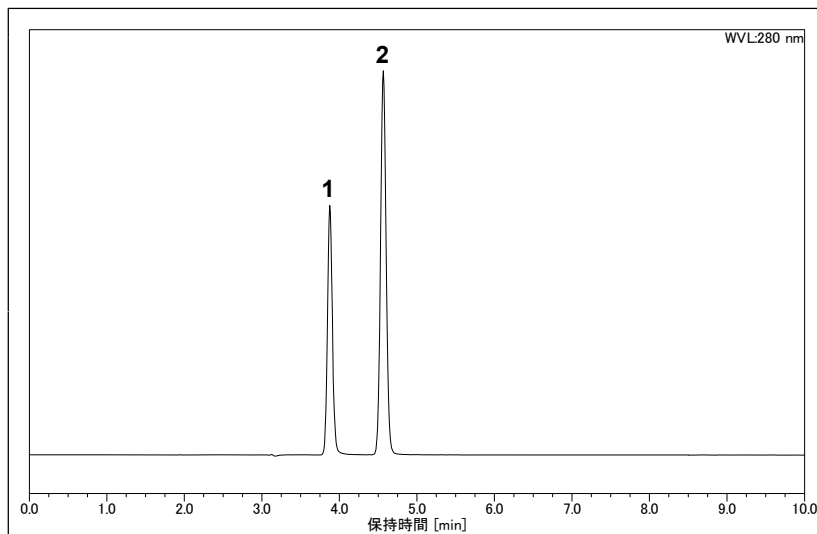


Fig.1 Analysis of Acetaminophen

Conditions;

Column: Develosil RPAQUEOUS-AR-5
(4.6x250mm)
Mobile phase:
ACN/0.1% H₃PO₄=20/80
Flow rate: 1.0ml/min
Temperature: 40°C
Detection: UV280nm
Sample: Acetaminophen (1mg/ml)
Caffeine Anhyd. (0.1mg/ml)
Injection volume: 2uL
System: DIONEX/Ultimate 3000 Series

Commercially available code medicine was analyzed under the same conditions.

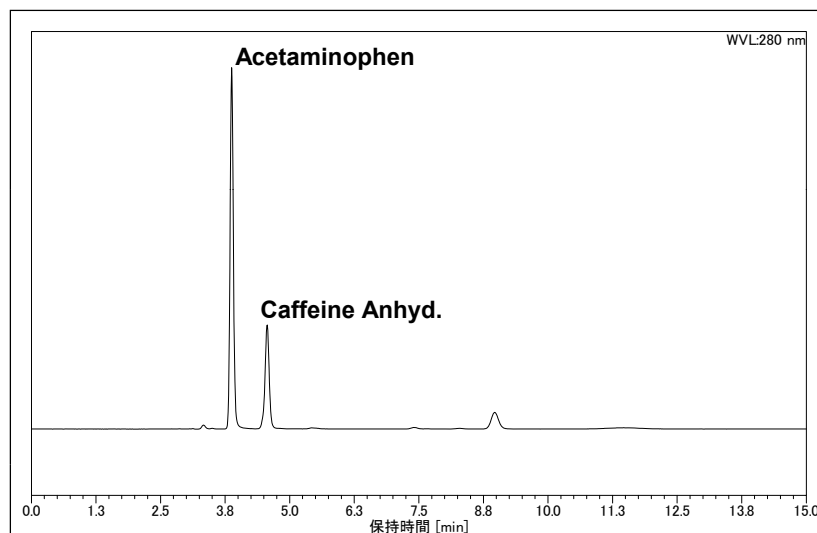


Fig.2 Analysis of Acetaminophen in cold medicine

市販されているかぜ薬を同条件にて分析しました。

Conditions;

Column: Develosil RPAQUEOUS-AR-5
(4.6x250mm)
Mobile phase:
ACN/0.1% H₃PO₄=20/80
Flow rate: 1.0ml/min
Temperature: 40°C
Detection: UV280nm
Sample: Cold medicine
Injection volume: 2uL
System: DIONEX/Ultimate 3000 Series

Develosil Application Data #013

Acetaminophen was too hydrophilic to be separated using a reverse column. The Develosil ANIDIUS was used instead.

親水性の高いアセトアミノフェンは逆相用のカラムでは保持されにくい傾向にあります。そこで、HILICカラムである「Develosil ANIDIUS」を用いて分析を行いました。

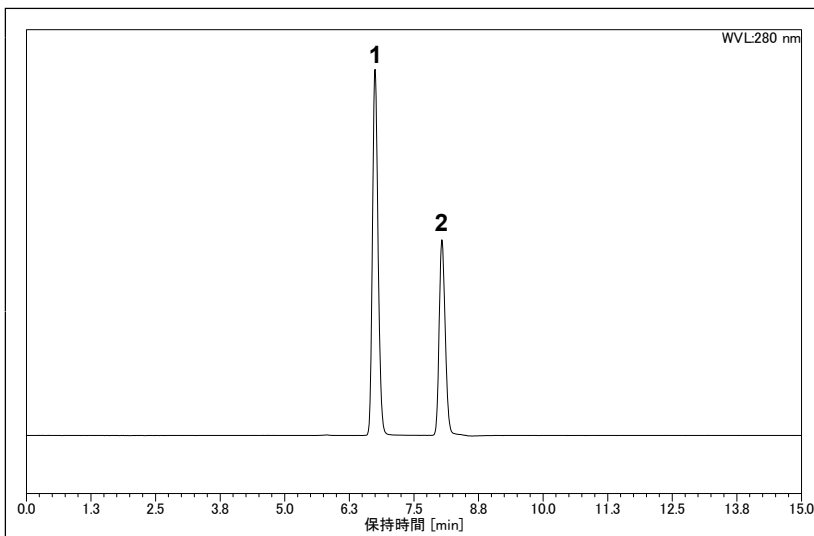


Fig.3 Analysis of Acetaminophen

Conditions;

Column: Develosil ANIDIUS (4.6x250mm)

Mobile phase:

ACN/Water=90/10

Flow rate: 0.5ml/min

Temperature: 40°C

Detection: UV280nm

Sample: Caffeine Anhyd. (0.1mg/ml)

Acetaminophen (1mg/ml)

Injection volume: 2uL

System: DIONEX/Ultimate 3000 Series

In Develosil ANIDIUS, dissolution sequence of acetaminophen and anhydrous caffeine is reversed, unlike reverse phase columns.

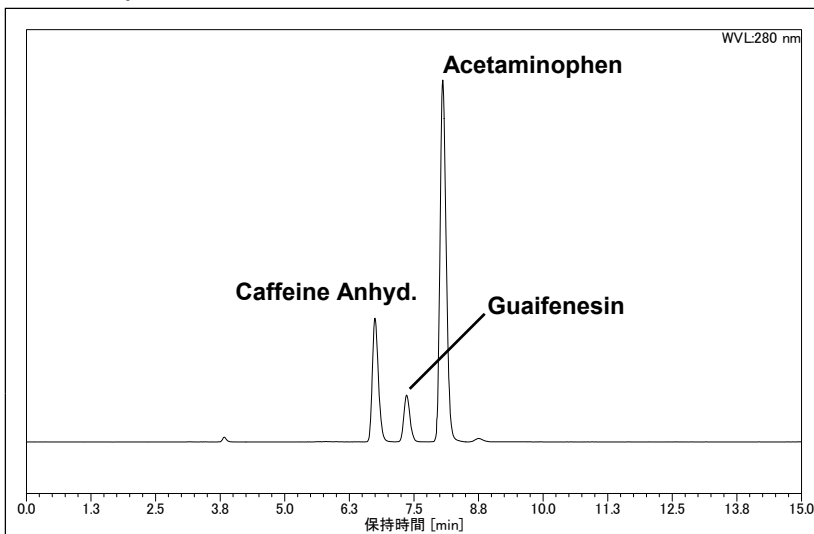


Fig.4 Analysis of Acetaminophen in cold medicine

Conditions;

Column: Develosil ANIDIUS (4.6x250mm)

Mobile phase:

ACN/Water=90/10

Flow rate: 0.5ml/min

Temperature: 40°C

Detection: UV280nm

Sample: Cold medicine

Injection volume: 2uL

System: DIONEX/Ultimate 3000 Series