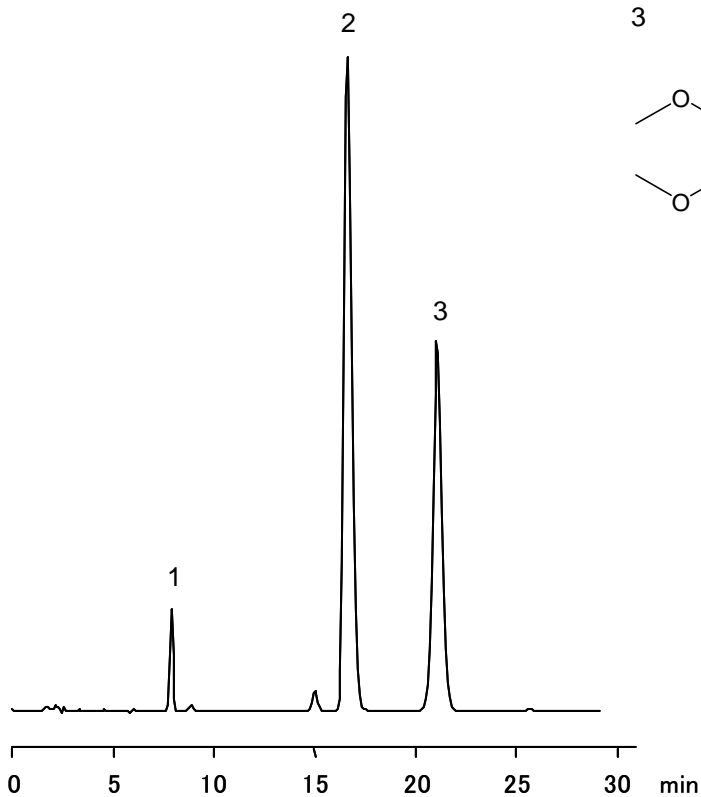
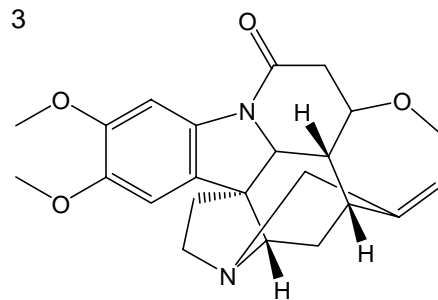
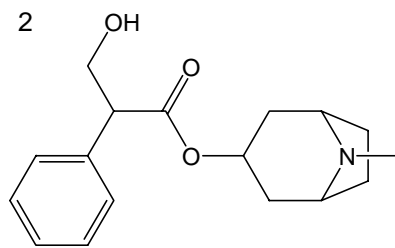
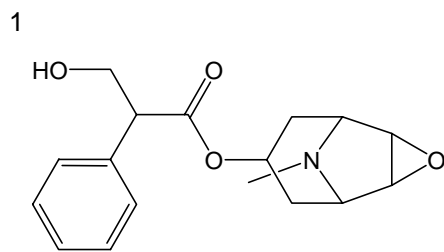


ロートコン中ヒヨスチアミン，スコポラミン Scopolamine, Atropine

ロートコンは日本薬局方収載の生薬で，散瞳，鎮痙，鎮痛，潰瘍治療薬として広く使用され，製薬原料としても利用されています．ベラドンナコンと同様に副交感神経遮断効果（抗コリン作用）を持ちます．

Scopolia rhizome is one of the crude medicines listed in The Japanese Pharmacopoeia. It has been extensively used as remedies for pupillary dilation, spasmlysis, sore, and ulcer. Similar to belladonna root, scopolia rhizome shows a parasympatholytic property.



1. スコポラミン
Scopolamine (M.W. 303.4)
2. アトロピン
Atropine (M.W. 289.4)
3. ブルシン (I.S.)
Brucine (I.S.) (M.W. 394.5)

【HPLC Conditions】

Column : CAPCELL PAK C₁₈ AQ S5 ; 4.6 mm i.d. x 250 mm

Mobile phase : 6.8g of K₂PO₄, and 10 mL of triethylamine were dissolved into 900 mL of water, and then adjusted at pH 3.5 with phosphoric acid. The volume was adjusted to 1000 mL with water. The solution and acetonitrile were mixed at 9 / 1.

Flow rate : 1 mL/min

Temperature : 20 °C

Detection : UV 210 nm

Inj. vol. : 20 µL

Pretreatment : Scopolia rhizome was cut into pieces, and ground in a mortar with a pestle. 0.8 g of the ground scopolia rhizome was dispersed in a mixed solution (14mL, 28 vol% ammonium hydroxide / water = 2 / 3). 24 mL of diethyl ether was added to the dispersion. After shaking for 30 min, the dispersion was centrifuged (15000 rpm, 10 min). The supernatant was collected. Another 24 mL of diethyl ether added to the precipitation. Shaking and centrifugation were repeated. Both supernatants were added together, and heated on a water bath to remove diethyl ether. Then, 3 mL of an internal standard solution (2 mg of burcine dehydrate / 5 mL of the mobile phase) and 22 mL of the mobile phase were added to the residue. After sonicating the mixture (5 min), a small amount was filtered with a 0.2-µm filter, and introduced to HPLC.

※ 1 µg/mL = 1 ppm

【References】

1) The Japanese Pharmacopoeia, (14th ~ 15th Edition) 第 14 ~ 15 改正, 日本薬局方