

Coptis Chinensis (Chinese Goldthread)

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Coptis chinensis or Chinese goldthread is one of the 50 fundamental herbs used in traditional Chinese medicine, and is a source for the isoquinoline alkaloids; berberine, palmatine, hydrastine, and coptisine among others. Because of the strong coloring from berberine, it has also been used as a dye, especially for wool and other fibers.

Jatrorrhizine is a protoberberine alkaloid is believed to have antiinflammatory effects, and to improve blood flow, as well as having antimicrobial and antifungal activity.

Berberine is a quaternary ammonium salt from the protoberberine group of isoquinoline alkaloids. It has a strong yellow color and in earlier days it was used to dye wool, leather and wood. It is considered antibiotic and with some activity to fungal infections.

Tetrahydropalmatine (THP) is an alkaloid found in several different plant species, mainly in the Corydalis genus (Yan Hu Suo). The pharmaceutical industry has synthetically produced the more potent enantiomer Levo-tetrahydropalmatine (Levo-THP), which has been marketed worldwide under different brand names as an alternative to anxiolytic and sedative drugs of the benzodiazepine group and analgesics such as opiates. It is also sold as a dietary supplement.

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Chromolith® RP-18 endcapped

Chromatographic Conditions

Column: Chromolith® Performance RP-18 endcapped 100x4.6mm

1.02129.0001

Injection: 5 µL

Detection: UV 280 nm

Flow Rate: 3.0 mL/min

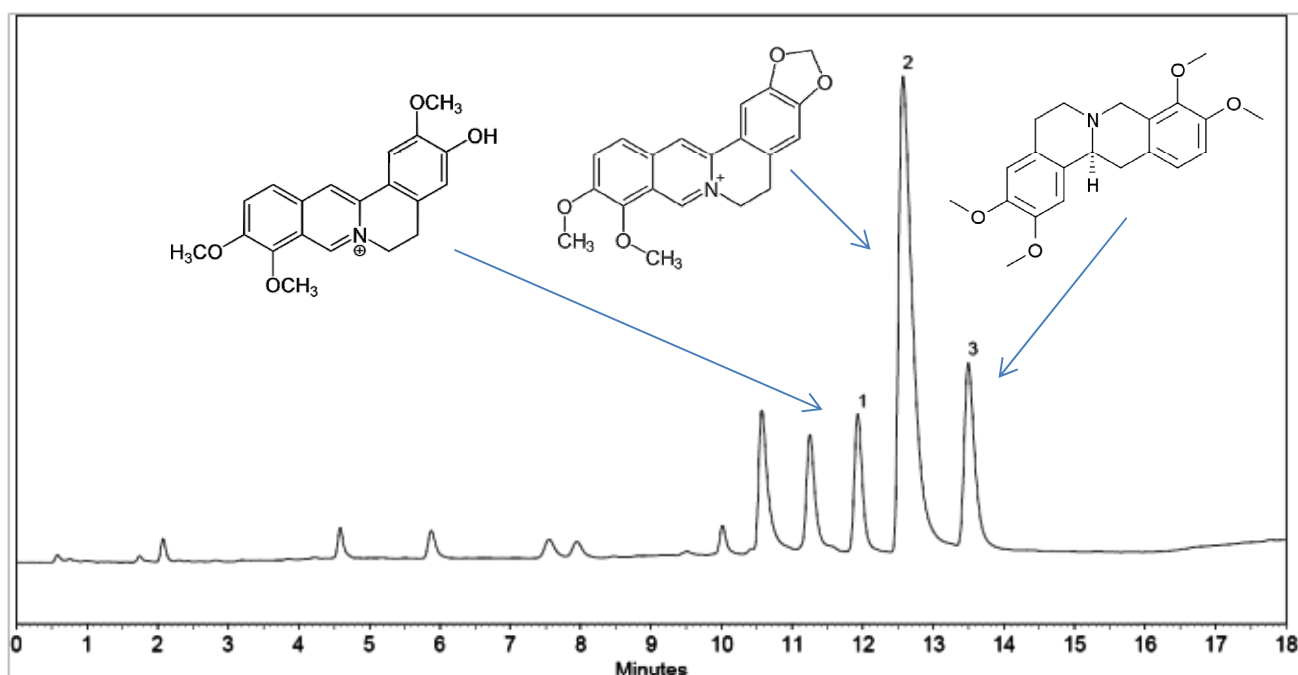
Mobile Phase: A: Acetonitrile
B: 0.1 % phosphoric acid

Temperature: 30°C

Diluent: Mobile phase

Sample: Alcohol extract of roots

| Time (min) | % A | % B |
|------------|-----|-----|
| 0 | 7 | 93 |
| 2 | 10 | 90 |
| 3 | 17 | 83 |
| 7 | 20 | 80 |
| 8 | 27 | 73 |
| 15 | 35 | 65 |



Chromatographic Data

| No. | Compound | Time (min) | T _{USP} | Resolution |
|-----|---------------------------|------------|------------------|------------|
| 1 | Jatrorrhizine | 11.9 | 1.4 | |
| 2 | Berberine | 12.6 | 2.8 | - |
| 3 | Tetrahydropalmatine (THP) | 13.6 | 1.6 | - |