## Waters™

Application Note

# Alkaloids in Goldenseal - Commercial Products or Whole Leaf

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

#### **Abstract**

This application brief demonstrates analysis of alkaloids in goldenseal.

## Introduction

The compound analyzed in this study is berberine.

#### **BERBERINE**

## Experimental

#### **HPLC Conditions**

Column: Symmetry  $C_{18}$ , 4.6 x 250 mm, 5  $\mu m$ 

Part number: WAT054275

Mobile phase A: 0.1% phosphoric acid

Mobile phase B: Acetonitrile

Flow rate: 1.5 mL/min

Injection volume: 10  $\mu$ L

Temperature: 35 °C

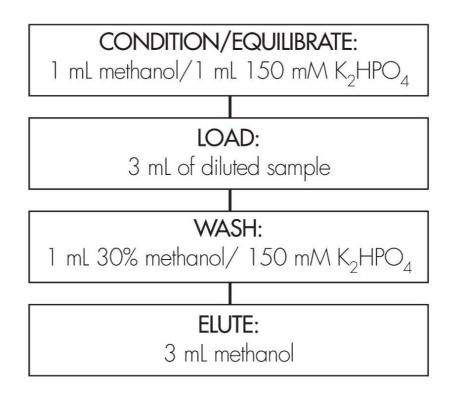
Detection: UV @ 330 nm

## Gradient

Time (min)	Profile	
	%A	%B
0	90	10
13	78	22
40	60	40

## OASIS® HLB METHOD FOR ALKALOIDS IN GOLDENSEAL

Conditions for Oasis® HLB Cartridge, 3 cc/60 mg Part Number WAT094226





#### Sample Pre-preparation

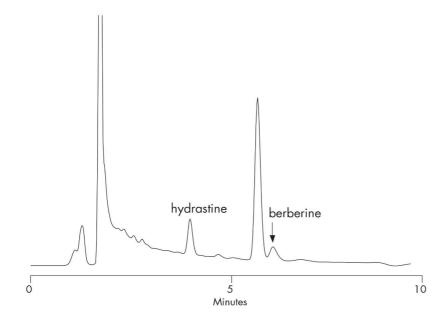
100 mg sample is extracted with 25 mL of ethanol:water (70:30) 1 mL of the ethanolic extract is diluted 1:3 with water (~ pH 7)

· Recovery, measured with certified standards at 100 ppm in reagent water, was greater than 85 % for all

#### compounds

- $\cdot$  All analyses gave results within  $\pm$  35 % of the expected values with the exception of the liquid supplement (see goldenseal analysis)
- · The selective SPE extraction and cleanup procedure provided a convenient analysis of echinacea phenolics in complex matrix such as in herbal tea

## Results and Discussion



#### **Featured Products**

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