

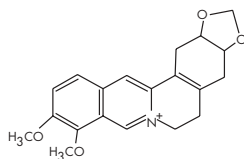
ALKALOIDS IN GOLDENSEAL, COMMERCIAL PRODUCTS OR WHOLE LEAF

HPLC METHOD

COLUMN: Symmetry® C18, 4.6 x 250 mm, 5 µm
PART NUMBER: WAT054275
MOBILE PHASE A: 0.1% phosphoric acid
MOBILE PHASE B: Acetonitrile
GRADIENT:

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

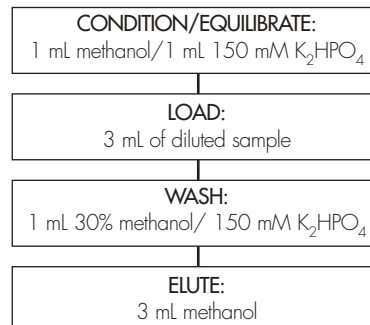
FLOW RATE: 1.5 mL/min
INJECTION VOLUME: 10 µL
TEMPERATURE: 35 °C
DETECTION: UV @ 330 nm



BERBERINE

OASIS® HLB METHOD FOR ALKALOIDS IN GOLDENSEAL

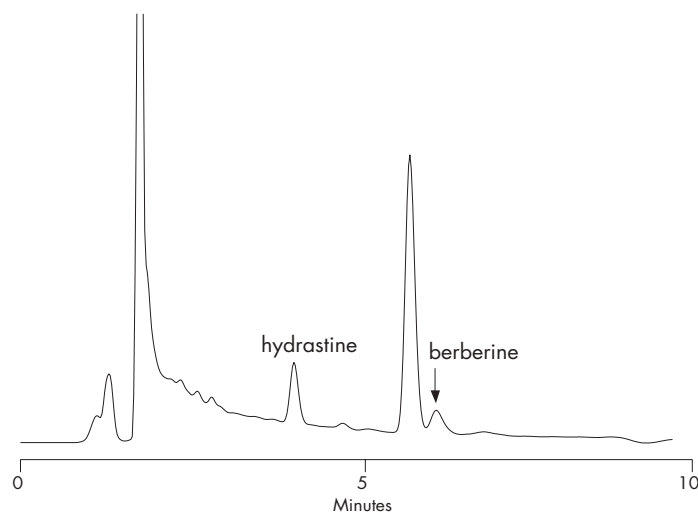
Conditions for Oasis® HLB Cartridge, 3 cc/60 mg
 Part Number WAT094226



Herbal tea extract
before SPE cleanup



Herbal tea extract after SPE cleanup using
Oasis® MAX



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
- All analyses gave results within ± 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