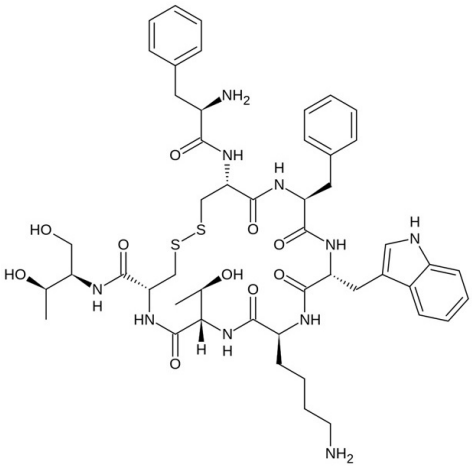
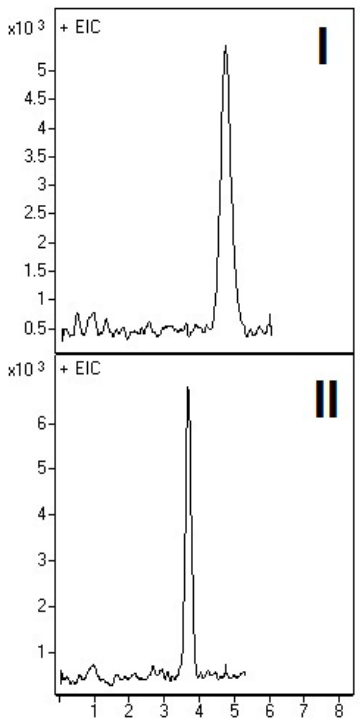
Octreotide

Retain isocratically or with a gradient





Notes: Octreotide mimics the naturally occurring hormone somatostatin. It is used for the treatment of growth hormone producing tumors and other related medical applications.

Method Conditions

Column: **Cogent Diamond Hydride™**, 4µm, 100Å

Catalog No.: 70000-15P-2

Dimensions: 2.1 x 150 mm

Solvents: A: DI H_2O/ 0.1% formic acid (v/v)
B: Acetonitrile/ 0.1% formic acid (v/v)

Gradient:

time (min.)	%B
0	50
3	20
6	20
7	50

Injection vol.: 1µL

Flow rate: 0.4 mL/min

Detection: ESI – POS - Agilent 6210 MSD TOF mass spectrometer

Sample: Reference standard solution of octreotide

Peaks: 1. Octreotide

Discussion

This cyclic octapeptide can be retained with simple isocratic mobile phase conditions of 50% solvent A/ 50% solvent B (see Figure I). In addition, use of a gradient produces a sharper peak if desired (Figure II). Note that the gradient starts at an unusually high percent of water (50%) for an aqueous normal phase (ANP) application, due to the highly polar nature of the molecule. With its two basic amino acid residues, the octapeptide may lead to tailing due to silanolic interactions on some conventional silica-based HPLC stationary phases, but here the peak shape is very symmetrical. This is due to the unique nature of the Cogent Diamond Hydride material.

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