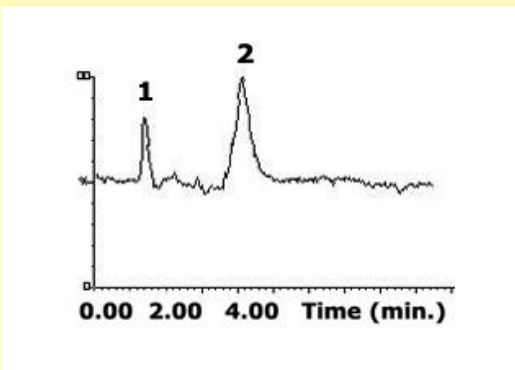


Metanephrine & Normetanephrine: Intermediate Standards Simple Isocratic LC-MS



Note: Single ion monitoring (SIM) was used. Mass transition of m/z 310.2 to m/z 166.2 (triacetyl-normetanephrine) and m/z 324.2 to m/z 180.2 (triacetylmetanephrine) that correspond to the fragmentation of the (M+H+) ions were monitored.

Method Conditions

Column: Cogent Bidentate C18™, 4µm, 100A
Catalog No.: 40018-75P
Dimensions: 4.6 x 75 mm
Mobile phase: 90:10 Acetonitrile/DI Water + 0.5% formic acid
Flow rate: 0.5 mL/minute
Injection Volume: 10 µL
Samples: 1. Triacetylnormetanephrine (m/z 166.2)
 2. Triacetylmetanephrine (m/z 180.2)
 200 ng of each sample was dissolved in 1 mL of reverse osmosis water
Detection: Atmospheric Pressure Chemical Ionization in positive mode: APCI+ Single Ion Monitoring

Discussion

Epinephrine (EPI) is used as a pharmacological agent to acutely treat patients in cardiac arrest. Unfortunately, there have been several homicide cases where hospitalized patients died due to a purposeful overdose of epinephrine. The plasma ratio of epinephrine metabolites (metanephrine (MET), and normetanephrine, (NMET)) can be used to distinguish exogenous epinephrine from endogenous epinephrine concentrations.

The measurement of plasma NMET and MET is used for the detection of tumors. For example patients with MEN-2 have high plasma concentrations of MET, whereas the patients with von Hippel-Lindau disease have almost exclusively high plasma concentrations of only NMET. The high sensitivity of measurements of plasma NMET and MET is accompanied by a high level of specificity (96 percent). This LC-MS method offers excellent separation of intermediate standards of normetanephrine and metanephrine with a simple isocratic method without ion pairing reagents using the **Aqueous-Normal Phase mode**.

For more information visit www.MTC-USA.com

Cat. No.	Description
40018-75P	Cogent Bidentate C18 HPLC Column, 100Å, 4µm, 4.6 x 75 mm, Standard End Fittings.