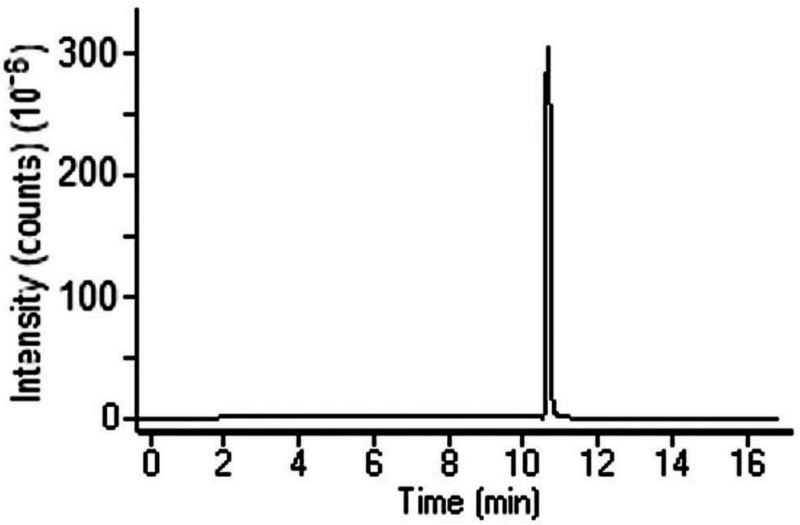
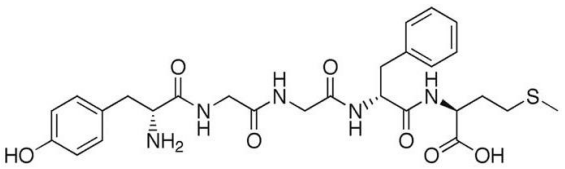
Methionine Enkephalin Analyzed with LCMS - AppNote

Selective Method for an Opiate like Peptide

In this AppNote, the developed Method was used to analyze Methionine-Enkephalin *(MEK),* the resulting Peak shape was Symmetrical. and the Retention time was more than adequate. In addition to the intact peptide, the Gradient method was also designed to analyze its metabolites and enzyme inhibitors.

This Gradient Method with MS detection is Selective for MEK Determination with detection limits in the Pico mole range.





Peak:

Met-Enkephalin: Tyr-Gly-Gly-Phe-Met, 574.66 m/z

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å
Catalog No.: 70000-15P-2
Dimensions: 2.1 x 150mm
Mobile Phase:
A: DI Water with 0.1% Formic Acid (v/v)
B: Acetonitrile with 0.1% Formic Acid (v/v)
Gradient:

Time ***(minutes)***	**%B**

0	90
5	90
10	90
20	60
20.1	30
30	30
30.1	90

Post Time: 3 minutes
Injection vol.: 2µL
Flow rate: 0.4mL / minute
Detection: LC–ESI/MS was performed using a Thermo Finnigan SpectraSystem HPLC
t_0 : 0.9 minutes

Note: *MEK is a naturally occurring opiate-like Peptide which could be used as an analgesic agent. In recent years, there has been growing interest in using Peptides as therapeutic drugs. Excellent analytical methods are needed in pharmacokinetic studies of these new drugs, since samples need to be analyzed in a biological matrix and the concentration of the compounds is low.*

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