

Glutamate & Aspartate

Determination of Glutamic and Aspartic acids in microdialysis samples using Capillary Electrophoresis and Laser Induced Fluorescence Detection

Instruments:

CE-LIFD system: IRIS 2000 (first generation of ZETALIF 2000 detector).

Laser: He-Cd laser, 442 nm, 10 mW

Sample:

30 s fraction obtained from a microdialysis probe placed in a 1 μ M standard solution of Aspartate and Glutamate.

Reagents:

Derivatization agent: Naphthalene Dicarboxaldehyde (NDA)

Methods:

Capillary: 50 μ m ID, 43 cm length (23 cm effective length)

Buffer: 100 mM borate pH=9.2

Voltage: 25 kV, 80 μ A

Injection: 545 μ L of microdialysis sample and 545 μ L of phosphoric acid 20 mM

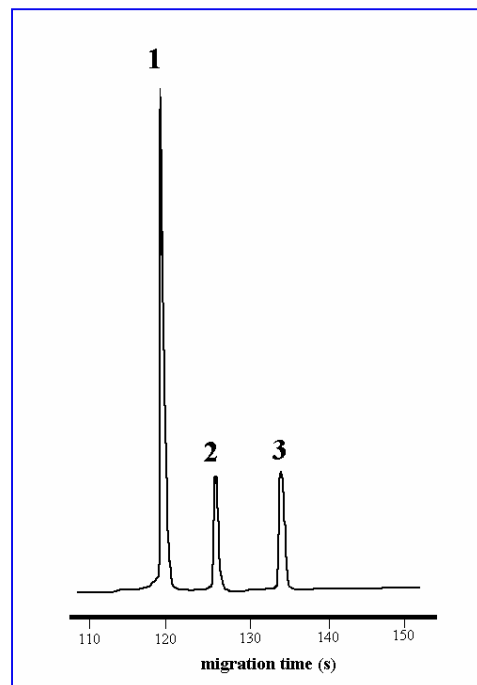
Limit of Detection*:

2.3 nM for Glutamate (840 zmol.)
2.6 nM for Aspartate (950 zmol.)

* Estimated for a S/N of 3

Legend:

1. Alpha-aminoadipic acid (internal standard)
2. Glutamate (330 nM)
3. Aspartate (400 nM)



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