

# GABA, Aspartate, Glutamate

Determination of Gamma-Amino-n Butyric, Aspartic and Glutamic acids by μHPLC and Laser Induced Fluorescence Detection

## Instruments:

HPLC pump: Agilent 1100 series + LC Packings  
Acurate™ Flow Splitter  
Injector: manual  
Detector: Picometrics ZETALIF 2000 detector  
Laser: He-Cd laser, 442 nm, 30 mW

## Sample:

Standard solution of Gamma-Amino-n Butyric, Aspartic and Glutamic acids, derivatized with NDA.

## Reagents:

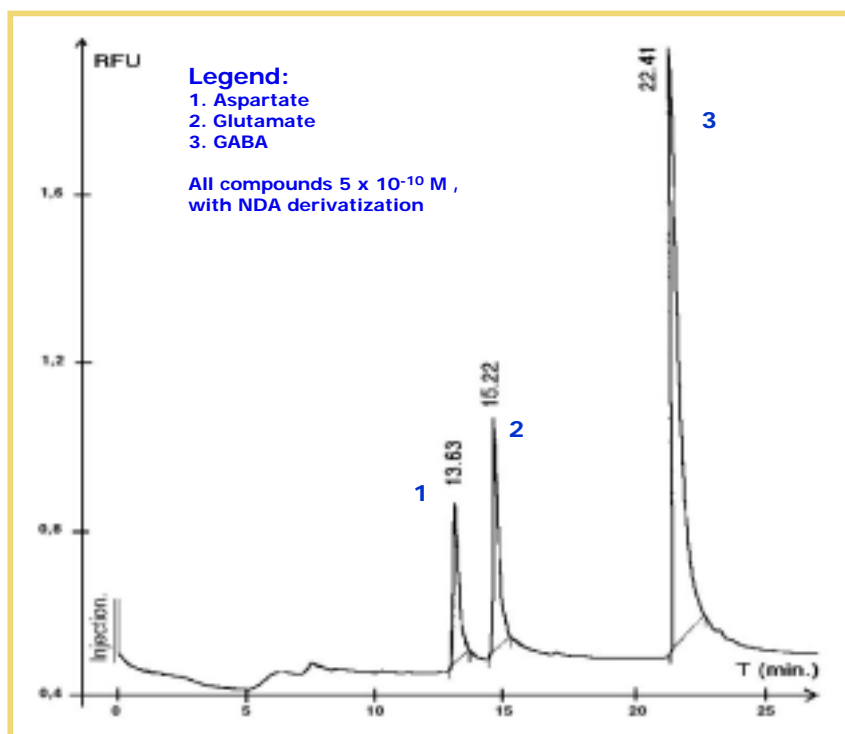
Derivatization agent: Naphthalene Dicarboxaldehyde (NDA)

## Methods:

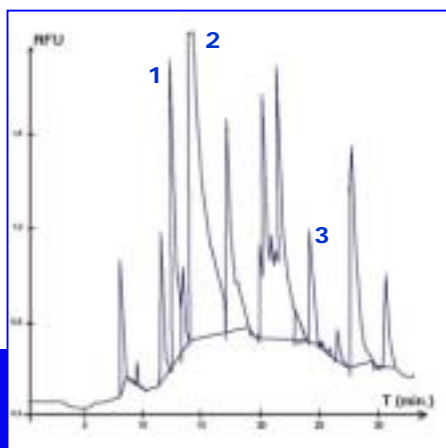
Mobile Phase: gradients, 20 mM sodium citrate, pH 2.8 / acetonitrile  
Flow rate: 4 μL/min  
Injection volume: 1 μL  
Column: micro column LC Packings PepMap™, C18, 3 μm, 300 μm ID  
Detector Capillary: 75 μm ID, total length 40 cm

**Limit of Detection\*:**  
 $5 \times 10^{-12} \text{ M}$  (5 μl injected)

\* Estimated for a S/N of 3



Source: Courtesy of Dr P. Devoto, Dept of Neuroscience, U. of Cagliari, Italy. 08/2001.



Example: microdialysate from rat prefrontal cortex