

# Dopamine & Noradrenaline

Determination of Dopamine and Noradrenaline 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:

0,5 nM standard solution of Noradrenaline and Dopamine, derivatized with NDA.

## Reagents:

Derivatization agent: Naphthalene Dicarboxaldehyde (NDA)

## Methods:

Capillary: 25 µm ID, 43 cm length (23 cm effective length)  
Buffer: 200 mM phosphate, pH=7.02  
Voltage: 29 kV, -90 µA  
Injection: 2.5 nL of derivatized sample followed by 60 µL of 200 mM orthophosphoric acid (stacking).

## Limit of Detection\*:

0.14 nM for Noradrenaline  
0.25 nM for Dopamine

\* Estimated for a S/N of 3

## Legend:

1. Dopamine ( $3.33 \times 10^{-10}$  M)
2. Noradrenaline ( « » )
3. Dihydroxybenzylamine DHBA (internal standard,  $7,4 \times 10^{-9}$  M)

With NDA derivatization



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L. Bert, F. Robert, L. Denoroy, L. Stoppini, B. Renaud