

**Automated Stopped-Flow Fluorimetric Sensor for Biologically Active
Adamantane Derivatives Based on Zone Fluidics**

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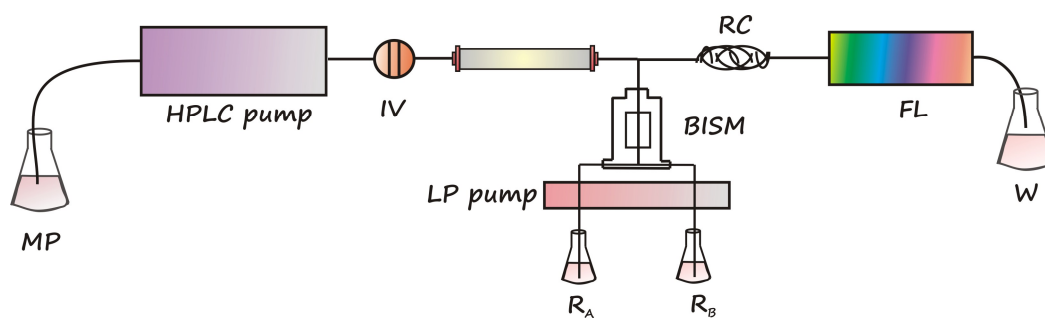


Figure S1. Schematic diagram of the HPLC-PCD setup: MP = mobile phase [50:50 v/v $\text{CH}_3\text{OH}:\text{NaH}_2\text{PO}_4$ (25 mmol L^{-1} , pH = 3.0)]; IV = autosampler ($V = 50 \mu\text{L}$); C = HPLC column (Prevail C18, $100 \times 4.6 \text{ mm i.d.}$); BISM = Binary Inlet Static Mixer; LP pump = low-pressure pump; RC = knotted reaction coil ($100 \text{ cm} / 0.5 \text{ mm i.d.}$); PP = peristaltic pump; R_A = OPA ($c = 20 \text{ mmol L}^{-1}$, $Q_V = 0.2 \text{ mL min}^{-1}$); R_B = NAC (5 mmol L^{-1}) / borate buffer (100 mmol L^{-1} , pH = 11.0, $Q_V = 0.2 \text{ mL min}^{-1}$); FL = Fluorescence detector ($\lambda_{\text{ex}}/\lambda_{\text{em}} = 340 / 455 \text{ nm}$).

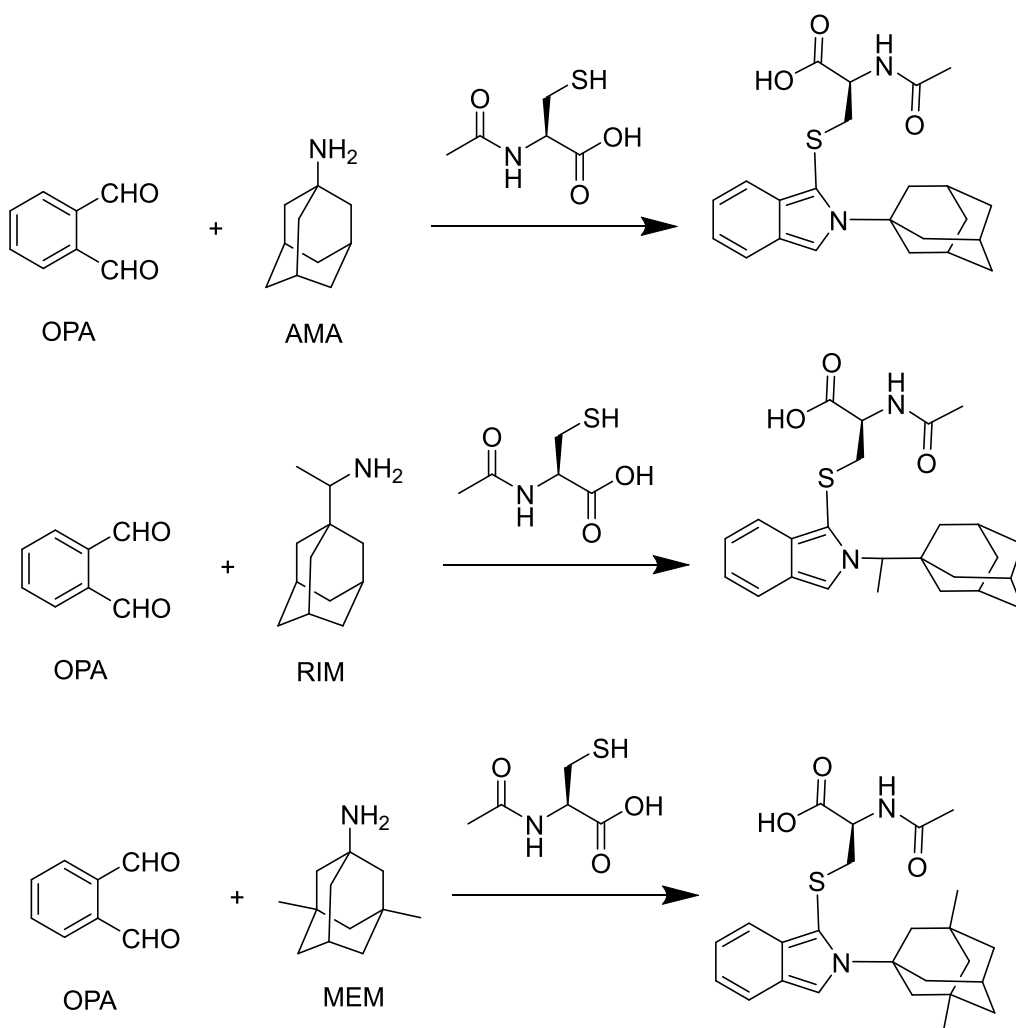


Figure S2. Reaction between OPA and the studied adamantine derivatives using N-acetylcysteine (NAC) as nucleophilic reagent; AMA = amantadine, RIM = rimantadine, MEM = memantine.

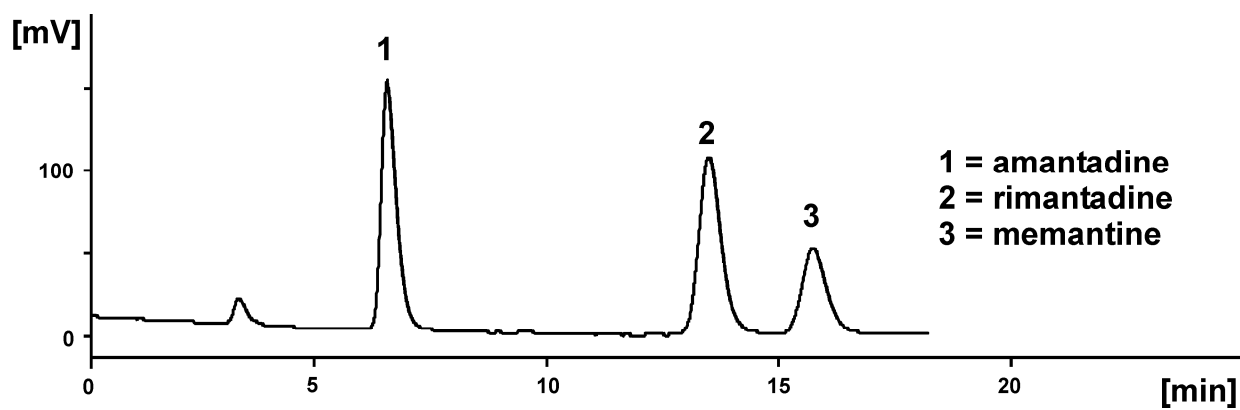


Figure S3. Representative chromatogram from standard mixture of the adamantane derivatives by the corroborative HPLC-PCD method; for experimental details please see sections 2.1 and 2.5.

Table S1. ZF sequence for the automated determination of adamantane derivatives.

a/a	Time (s)	Valve position	Pump action	Flow rate (mL min⁻¹)	Volume (μL)	Action description
1	1	2	Off	–	–	Selection of NAC/Buffer port
2	7.5	2	Aspirate	0.6	75	Aspiration of NAC/Buffer in the HC
3	1	3	Off	–	–	Selection of OPA port
4	5	3	Aspirate	0.6	50	Aspiration of OPA in the HC
5	1	1	Off	–	–	Selection of sample port
6	10	1	Aspirate	0.6	100	Aspiration of sample in the HC
7	1	4	Off	–	–	Selection of FL detector port
8	30	4	Deliver	0.6	300	Deliver of the reaction mixture to the RC
9	60	4	Off	–	–	Stop-flow to proceed the reaction
10	120	4	Deliver	0.6	600	Deliver of the reaction mixture to the FL detector