

# D-Amino Acid (D-Serine, L-Serine)

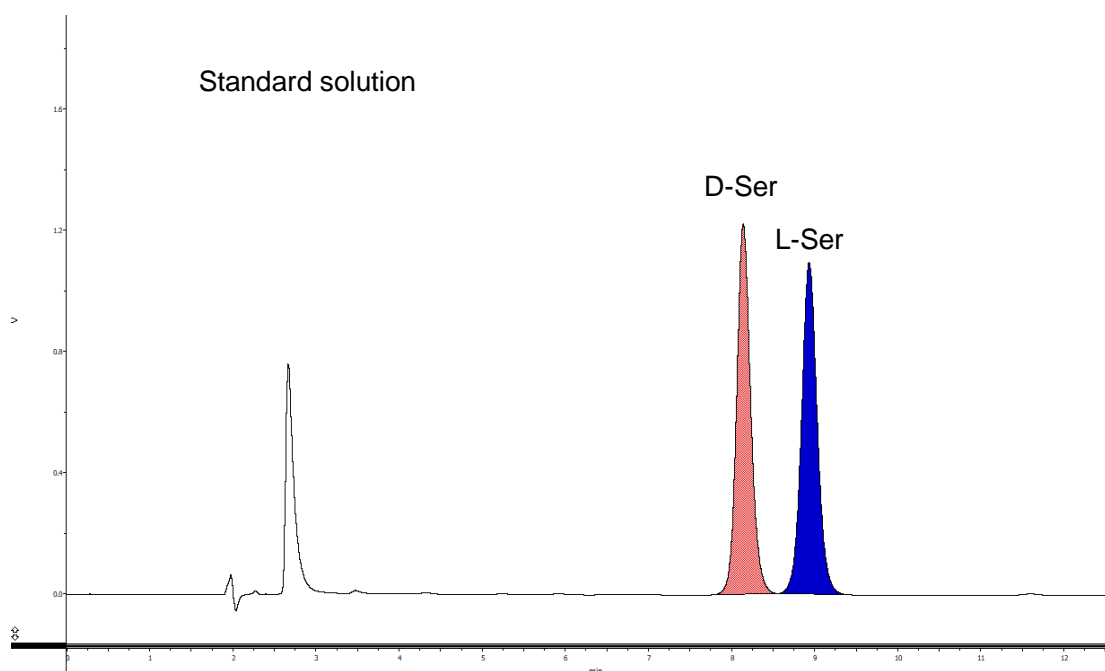
## < HPLC Conditions >

HPLC-ECD system	HTEC-510
Separation Column	Eicompak EX-3ODS ( 4.6 × 100 mm)
Precolumn for sample	PC-03-CA ( 3.0 × 4.0 mm)
Precolumn for Mobile Phase	PC-04-CA ( 4.0 × 5.0 mm)
Mobile Phase A	100 mM phosphate buffer (pH 6.0) . Methanol (82 : 18, v/v) 5 mg/L EDTA·2Na
Mobile Phase B	100 mM phosphate buffer (pH 6.0) . Methanol (40 : 60, v/v) 5 mg/L EDTA·2Na
Flow rate	500 µL/min
Column Temp.	30°C
Working Electrode	WE-GC (Glassy carbon) or WE-PG (Pure graphite)
Gasket	GS-25
Applied potential	+600 mV vs. Ag/AgCl
Time Constant	3.0 sec

## < OPA/NAC Derivatization >

Ratio	Sample : 4 mM OPA/NAC = 4 : 1
Reaction Time	150 sec

## < Chromatogram >



< Mobile Phase >

Mobile Phase A 1000 mL

100 mM phosphate buffer (pH 6.0)	Methanol	EDTA-2Na
820 mL	180 mL	5 mg

Mobile Phase B 1000 mL

100 mM phosphate buffer (pH 6.0)	Methanol	EDTA-2Na
400 mL	600 mL	5 mg

100 mM phosphate buffer (pH 6.0) 1000 mL

NaH <sub>2</sub> PO <sub>4</sub> ·2H <sub>2</sub> O	Na <sub>2</sub> HPO <sub>4</sub> ·12H <sub>2</sub> O	H <sub>2</sub> O
13.45 g	4.94 g	1000 mL

< Derivatization Reagent >

0.5 M carbonate buffer (pH10)

6.9 g K<sub>2</sub>CO<sub>3</sub> + 10 mL 2 M HCl in a total of 100 mL MilliQ water.

20 mM OPA/NAC Solution

27 mg OPA dissolved in 1 mL ethanol, + 32.7 mg NAC, fill up to 10 mL with 0.5 M carbonate buffer.

4 mM OPA/NAC Solution

Dilute 20 mM OPA/NAC Solution 5-fold with 0.5 M carbonate buffer.

Eicom Corporation HQ

113 Kita Enmenden-cho Shimotoba, Fushimi-ku Kyoto, Japan 612-8497

<https://www.eicom.co.jp/>