

## Analysis of $\gamma$ -Amino-n-butyric acid Standard (GABA short analysis method)

Post-column amino acid analysis methods using ninhydrin reagents are used in many fields such as food, pharmaceuticals, and chemistry because of their advantages such as good reproducibility and high reagent stability. However, this analysis method using a cation exchange column still has a problem to speed up due to the low-pressure resins in the column, and it takes long analysis time.

In this report, we will introduce GABA short analysis method that shortens the analysis time by focusing on  $\gamma$ -Amino-n-butyric acid (GABA) which is attracting attention as a component of functional foods, using LA8080 HIGH SPEED AMINO ACID ANALYZER (AminoSAAYA).

GABA short analysis method optimizes parameters such as column temperature and reagent gradient and reduces the analysis time from 110 minutes for simultaneous analysis (Physiological Fluid Analysis Method, 40-component free amino acids analysis) to only 10 minutes. In addition, since GABA short analysis method uses the same column and reagents as Physiological fluid analysis method, it can be used without changing columns or reagents. By using Physiological Fluid Analysis Method and GABA short analysis method together, the total analysis time can be shortened.



**LA8080 HIGH SPEED  
AMINO ACID ANALYZER  
(AminoSAAYA)**

### Analysis of Amino Acid Standard Solution

- ✓ GABA can be analyzed in a short time (10 minutes).
- ✓ Since the same columns and reagents as the simultaneous analysis method are used, it can be used without changing columns or reagents.

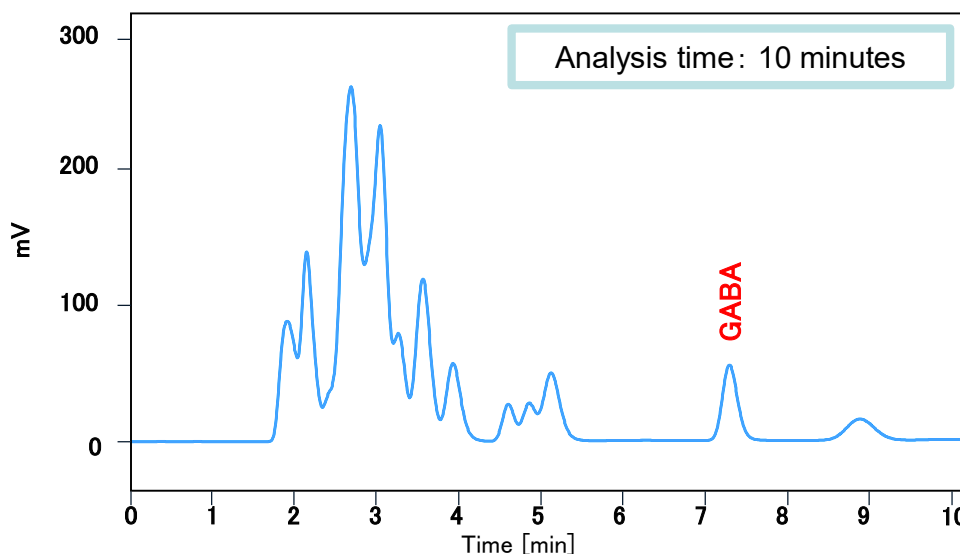


Fig.1 Analysis of Amino Acid Standard Solution

Table 1. Analytical Conditions for GABA short analysis method

Column	#2622PF 4.6 mm I.D. × 60 mm	Reaction reagent	Ninhydrin Reagent Wako Amino Acid Automated Analyzer Kit (ID code: For Hitachi) (*)
Ammonia filter column	#2650L 4.6 mm I.D. × 40 mm	Reaction reagent flow rate	0.35 mL/min
Eluent	MCI buffer PF-Kit (*)	Reaction temperature	135 °C
Flow rate	0.4 mL/min	Detection wavelength	VIS 440 nm, 570 nm
Column temperature	90 °C	Injection volume	20 $\mu$ L

(\*) FUJIFILM Wako Pure Chemical Corporation

**NOTE: All data on this report are examples of measurement; the individual values are NOT guaranteed.**