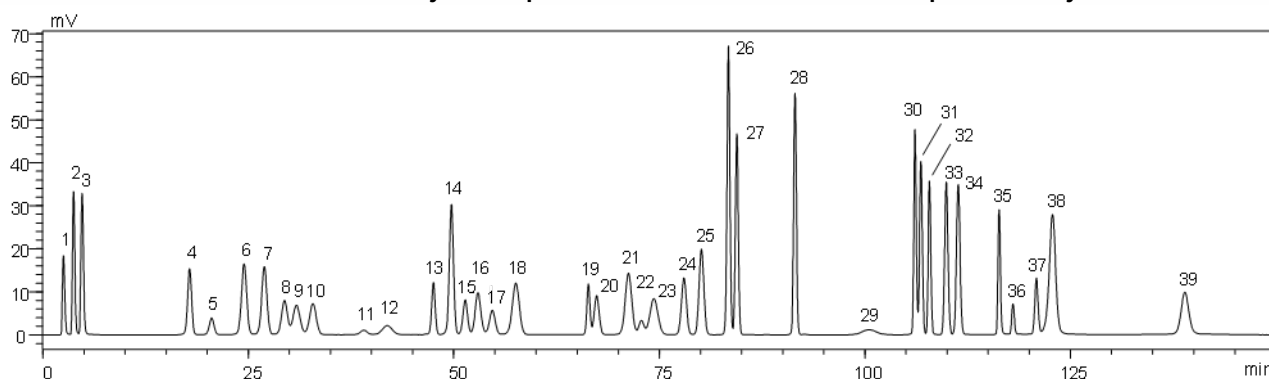


**CoreFocus**  
**Report**  
**No.161A**

LC Ion-exchange Shim-pack Series

**Shim-pack™ Amino-Li**  
**Analysis of Free Amino Acids under Li Type Condition**

**Keywords: post-column derivatization, OPA,  $\alpha$ -phthalaldehyde**



- |                                  |                                    |  |                       |
|----------------------------------|------------------------------------|--|-----------------------|
| 1. $\alpha$ -Phosphoserine       | 11. Sarcosine                      | 21. Isoleucine                         | 30. Histidine         |
| 2. Taurine                       | 12. $\alpha$ -Amino adipic acid    | 22. Cystathionine                      | 31. 3-Methylhistidine |
| 3. $\alpha$ -Phosphoethanolamine | 13. Proline                        | 23. Leucine                            | 32. 1-Methylhistidine |
| 4. Aspartic acid                 | 14. Glycine                        | 24. Tyrosine                           | 33. Carnosine         |
| 5. Hydroxyproline                | 15. Alanine                        | 25. Phenylalanine                      | 34. Anserine          |
| 6. Threonine                     | 16. Citrulline                     | 26. $\beta$ -Alanine                   | 35. Hydroxylysine     |
| 7. Serine                        | 17. $\alpha$ -Amino-n-butyric acid | 27. $\beta$ -Aminoisobutyric acid      | 36. Ornithine         |
| 8. Asparagine                    | 18. Valine                         | 28. $\gamma$ -Aminobutyric acid (GABA) | 37. Lysine            |
| 9. Glutamic acid                 | 19. Cystine                        | 29. Tryptophan                         | 38. Ammonia           |
| 10. Glutamine                    | 20. Methionine                     |  | 39. Arginine          |

1-3, 12, 17 and 22 : 0.05 mmol/L  
11 : 0.25 mmol/L  
29 : 0.026 mmol/L  
The others : 0.1 mmol/L

System	: Nexera™ Post-Column Amino Acid Analysis System
Column	: Shim-pack Amino-Li (100 mm x 6.0 mm I.D., 5 $\mu$ m), P/N : 228-18837-92
Ammonia trap column	: Shim-pack ISC-30/S0504Li (50 mm x 4.0 mm I.D.), P/N : 228-00821-91
Mobile phase	: Amino Acid Mobile Phase Kits (Li type), P/N : 228-21195-95 Gradient elution
Flow rate	: 0.6 mL/min
Column temp.	: 39 °C
Injection vol.	: 10 $\mu$ L
Vial	: Shimadzu vials, LC, 1.5 mL, glass
Reaction reagent	: Amino Acid Reagent Kits
Flow rate of reagent	: 0.2 mL/min for each
Reaction temp.	: 39 °C
Detection	: Fluorescence, Ex. 350 nm Em. 450 nm

Source : Application News L568A ([JP](#), [ENG](#))

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