

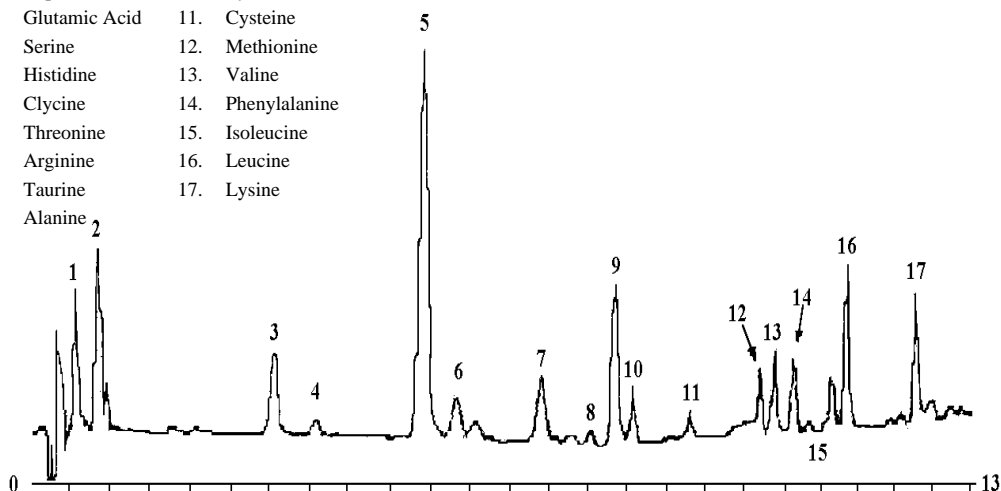
*'...there is a need in the clinical, food, and biotechnological industries for the analysis of different sample matrices containing amino acids...'*

### Amino Acid Determination in Protein Rich Food Sample with Automated Pre-column OPA Derivatisation and UV Detection

#### Sample

- |                  |                   |
|------------------|-------------------|
| 1. Aspartic Acid | 10. Tyrosine      |
| 2. Glutamic Acid | 11. Cysteine      |
| 3. Serine        | 12. Methionine    |
| 4. Histidine     | 13. Valine        |
| 5. Glycine       | 14. Phenylalanine |
| 6. Threonine     | 15. Isoleucine    |
| 7. Arginine      | 16. Leucine       |
| 8. Taurine       | 17. Lysine        |
| 9. Alanine       |                   |

#### Conditions



Protein Rich Food Sample Hydrolysed with 4 M Methansulfonic Acid.

#### Amino Acid Analysis

These notes illustrate the flexibility of the GBC chromatography equipment in performing complicated pre-column chemistries automatically via the LC1650 and data management station. There is a need in the clinical, food, and biotechnological industries for the analysis of different sample matrices containing amino acids. The sample matrix can provide the largest problems for most chromatography equipment. The combination of excellent chromatography, precise flow control and sensitive, selective detection, give GBC the edge over most post column systems and many of the precolumn derivative systems as well.

Spherisorb OD S2 (C18)  
5  $\mu$  Column (150 x 4.6 mm ID)

Mobile Phase: Solvent A: 20 mM Potassium Phosphate (pH 7.0) (89%), Methanol (10%) and THF (1%).  
Solvent B: 20 mM Potassium Phosphate (pH 7.0) (19%), Methanol (80%) and THF (1%).

Gradient: 0.00 to 1.0 min 20% B, to 35% B in 3.30 min, to 55% B in 0.01 min, to 99% B in 5.29 min, at 99% B for 2 min, to 20% B in 0.01 min, at 20% B for 7 min.

Flow Rate: 1.0 ml/min  
Temperature: 40°C  
Sample: Food sample hydrolysed with 4 M methanesulfonic acid.  
Injection Vol: 10  $\mu$ l.  
Setting: 340 nm.



## GBC HPLC Instrumentation

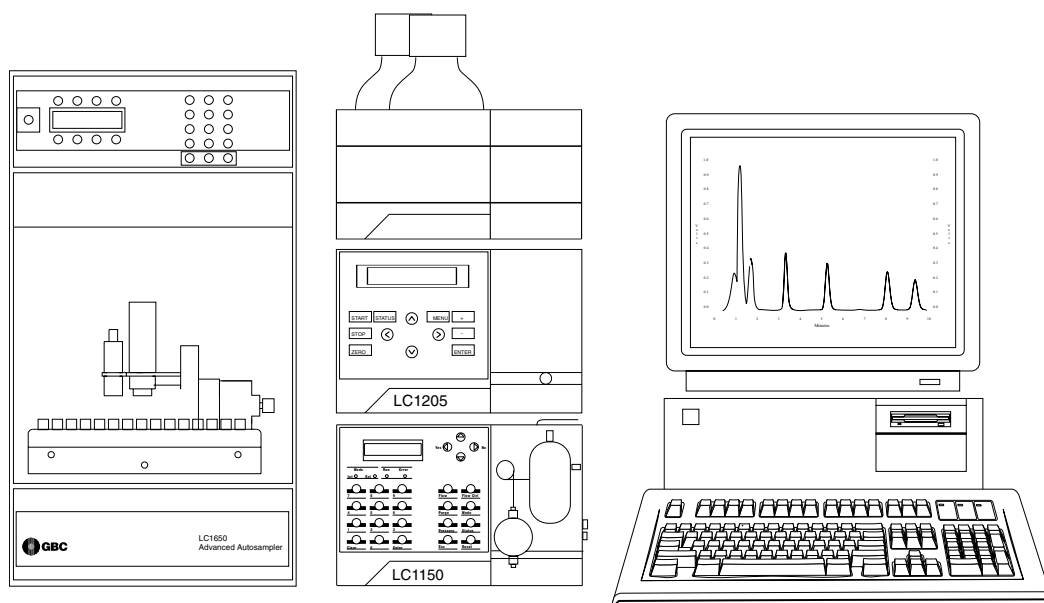
LC1150 Quaternary Gradient HPLC Pump  
LC1205 Programmable UV/Vis Detector  
LC1120/LC1150 HPLC Column Oven Option  
LC1650 Advanced Autosampler  
LC1445 System Organiser  
WinChrom Chromatography Data  
Management System

## Major Features of these Notes

Resolution  
Sensitivity  
Selectivity  
Flexibility  
Precision  
Accuracy

## Relevant Industries

Biotech  
Pharmaceutical  
Academic (Biochemistry)  
Food (Quality Control)



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