



**Amino Acid Analyzer**

**Application Sheets**

# 1. Determinations amino acids using sodium-citrate buffer

## Determination of amino acid hydrolysates, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG ANB OSTION  
3.6x340 12µm

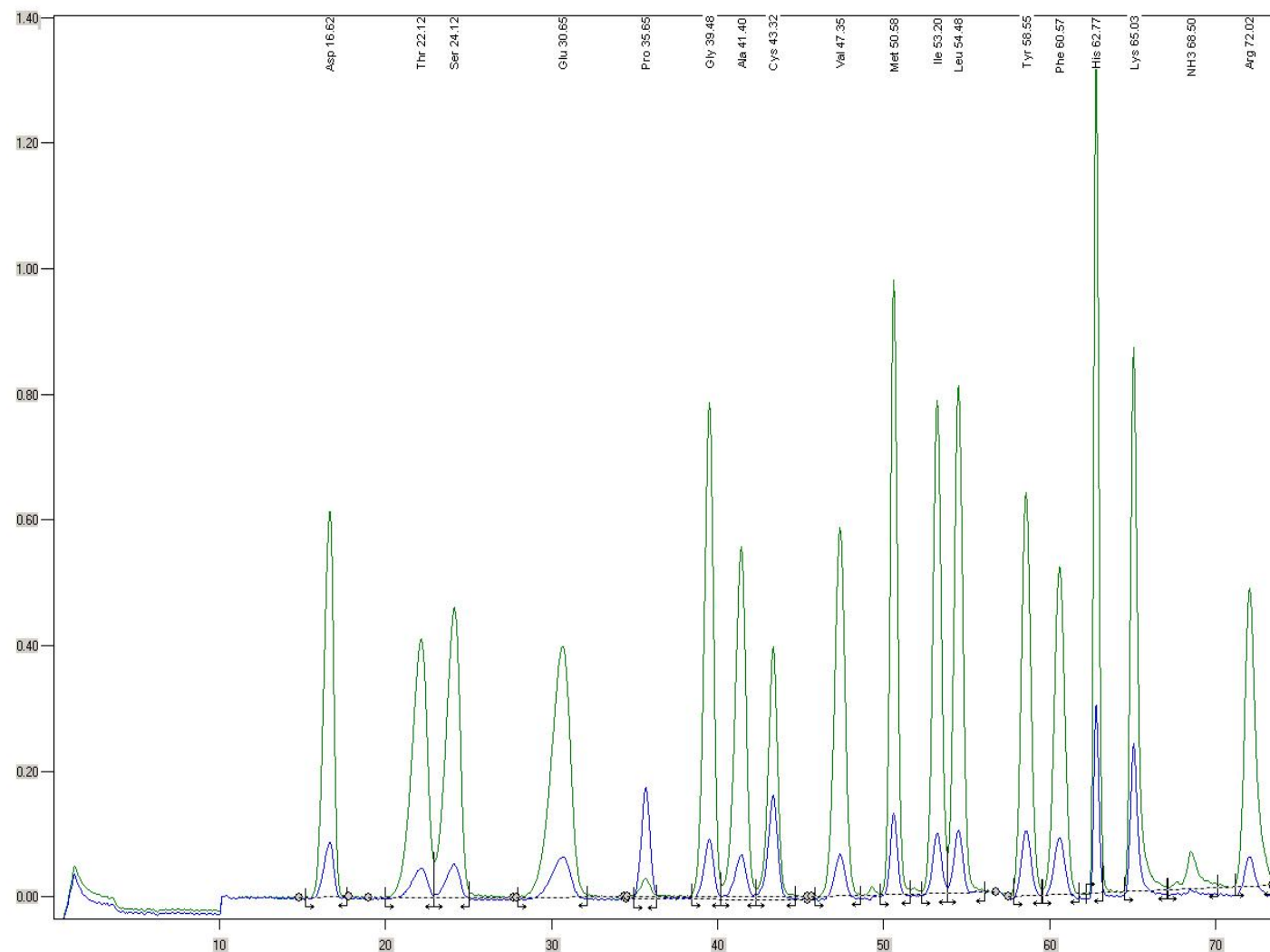
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Amino acid standard  
contains:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG ANB OSTION  
3.6x340 12 $\mu$ m

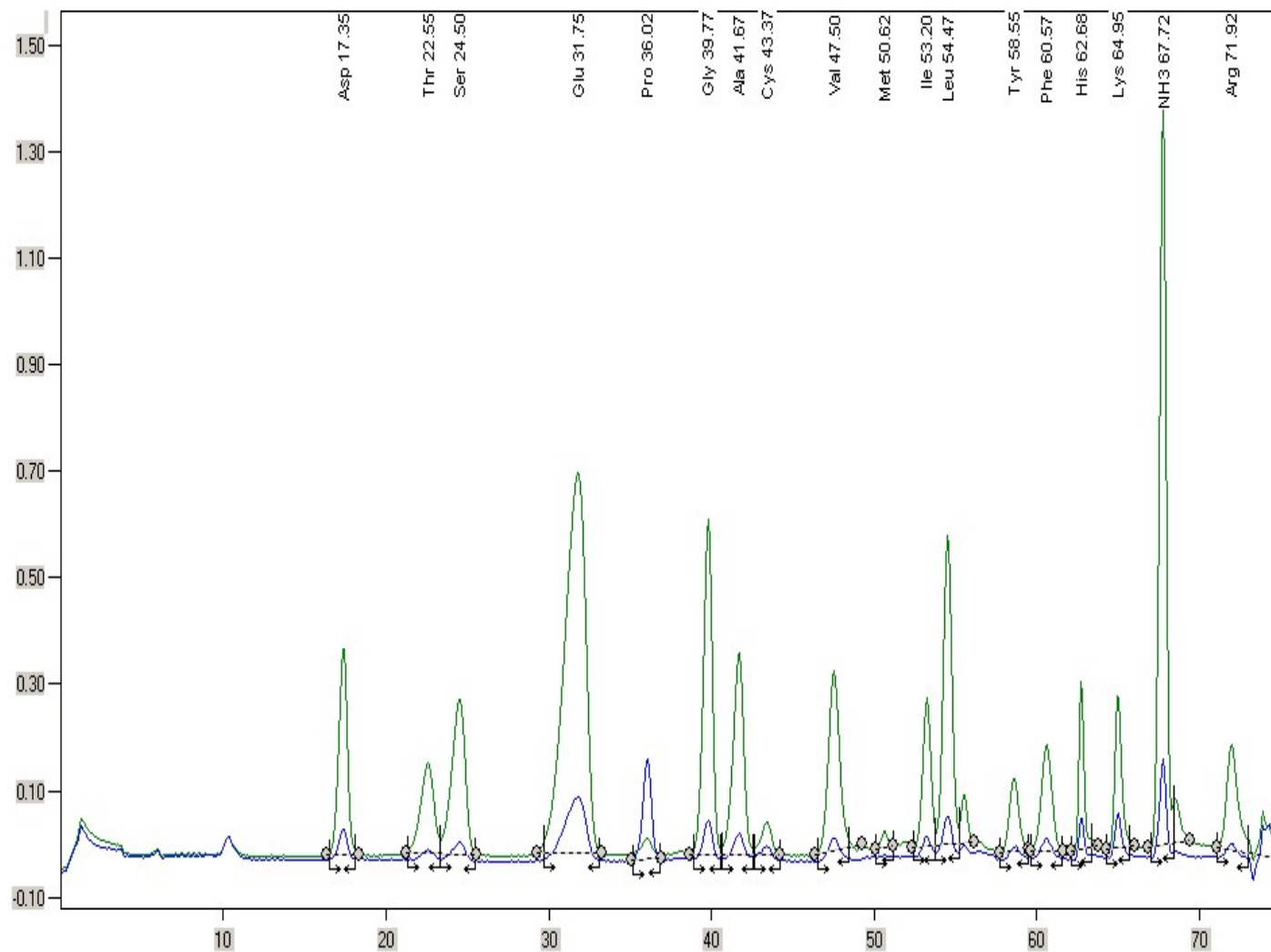
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ l

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass B  
LG ANB OSTION  
3.6x340 12 $\mu$ m

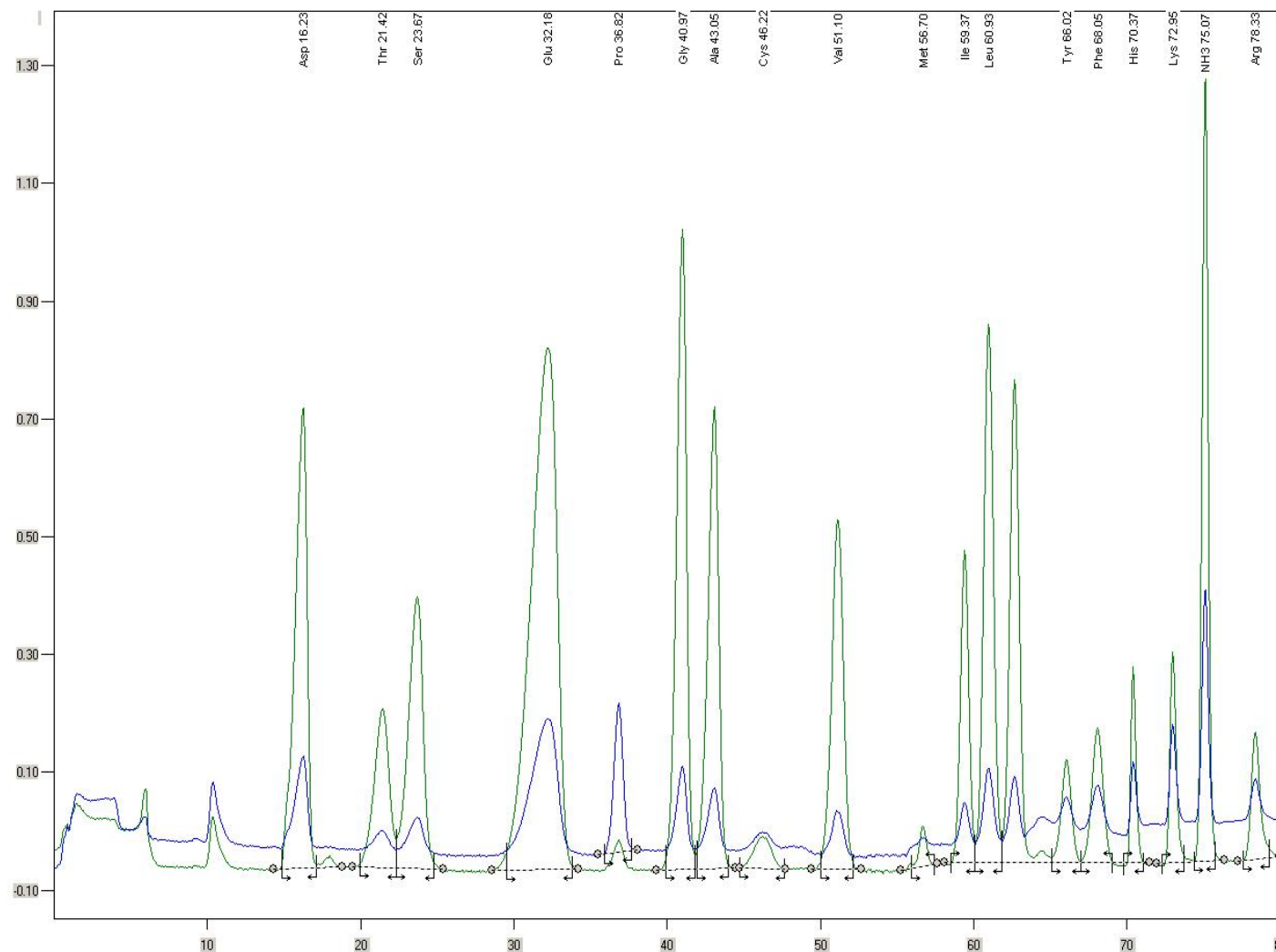
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass D  
LG ANB OSTION  
3.6x340 12 $\mu$ m

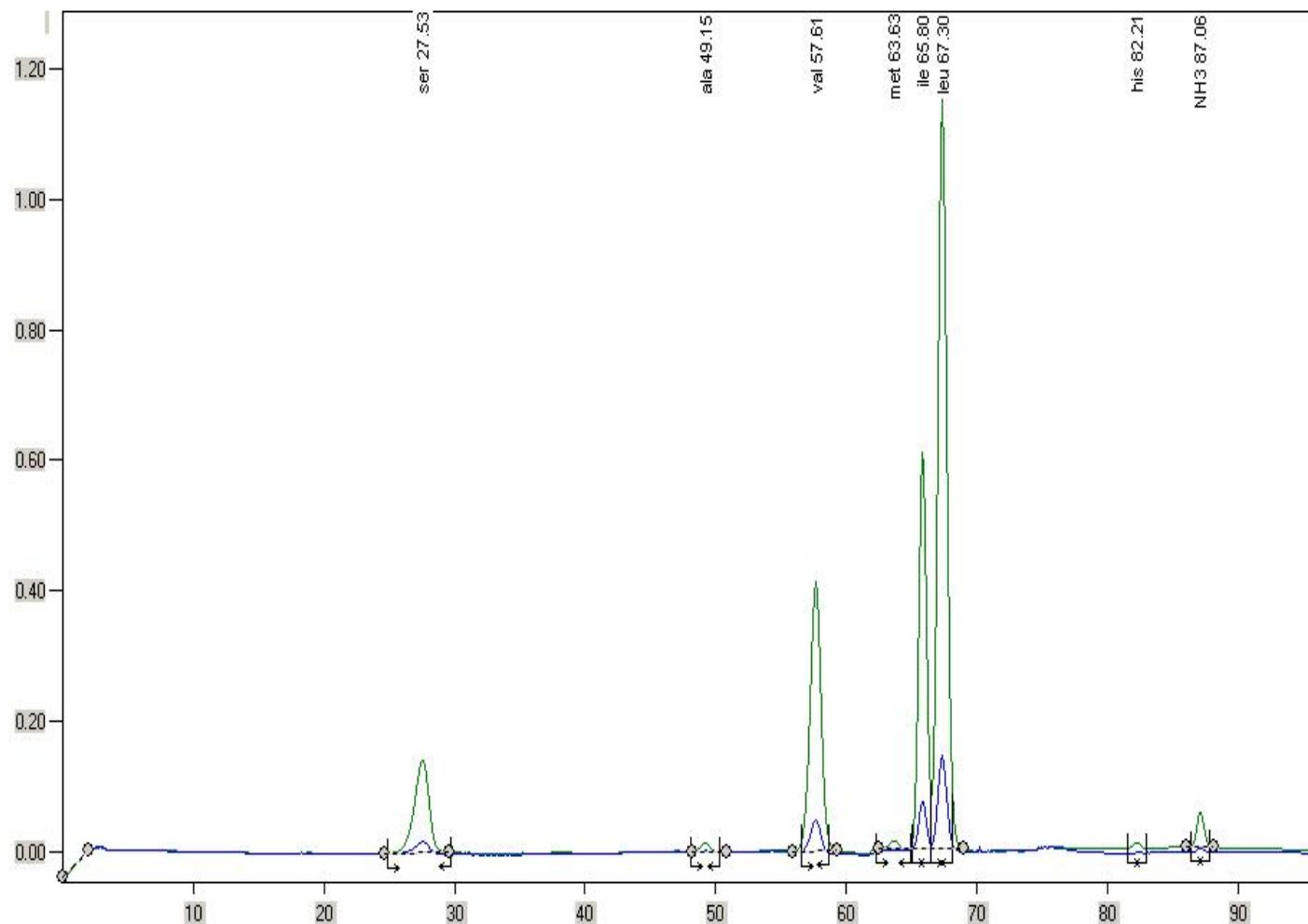
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Detected amino acids:  
Serine, Alanine, Valine,  
Methionine, Isoleucine,  
Leucine, Histidine, NH3



## Determination of amino acid hydrolysates, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal A  
AA 8  
3.6x340 12 $\mu$ m

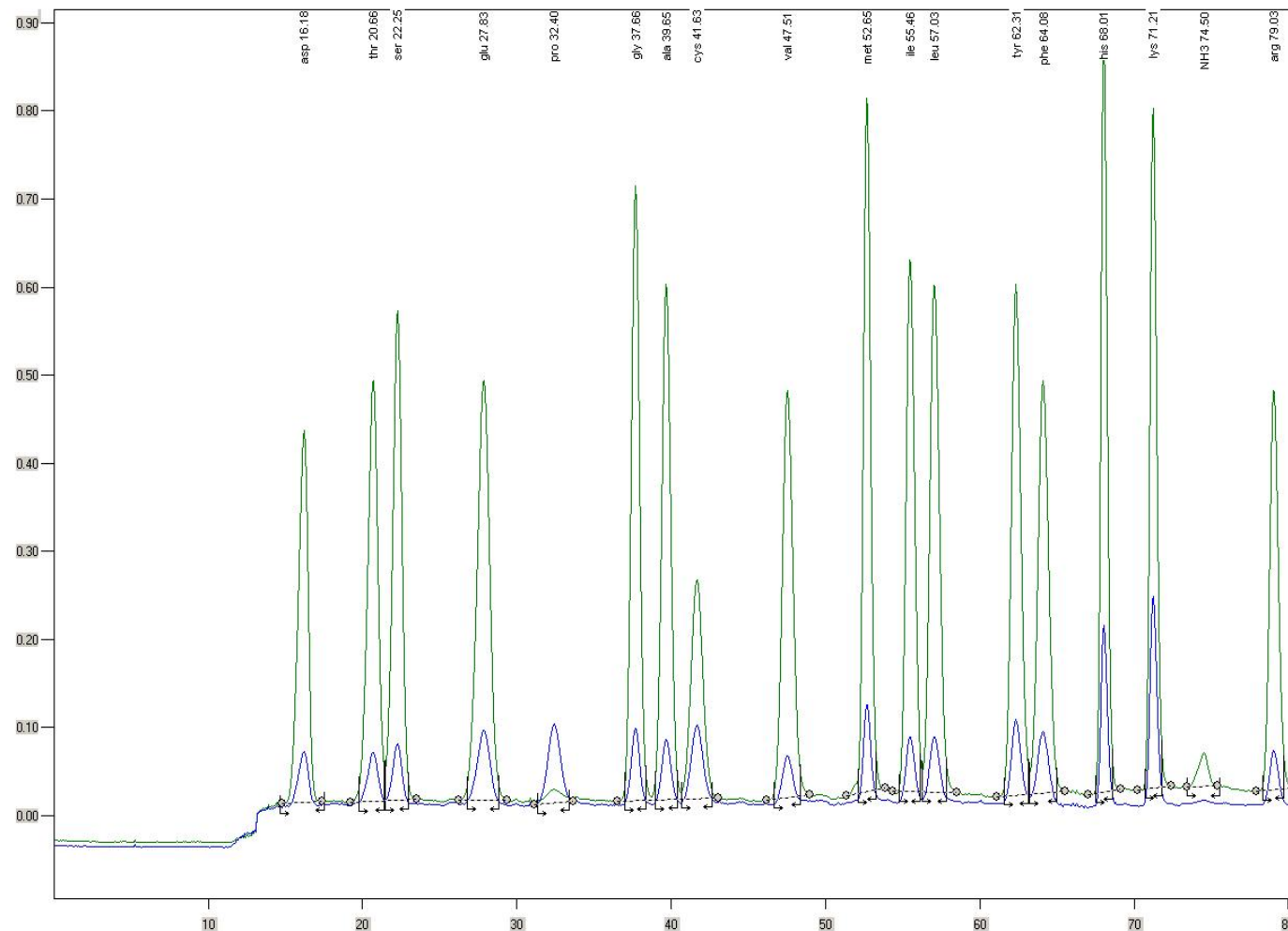
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Amino acid standard  
contains:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Feed hydrolyzate for pigs

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal A  
AA 8  
3.6x340 12 $\mu$ m

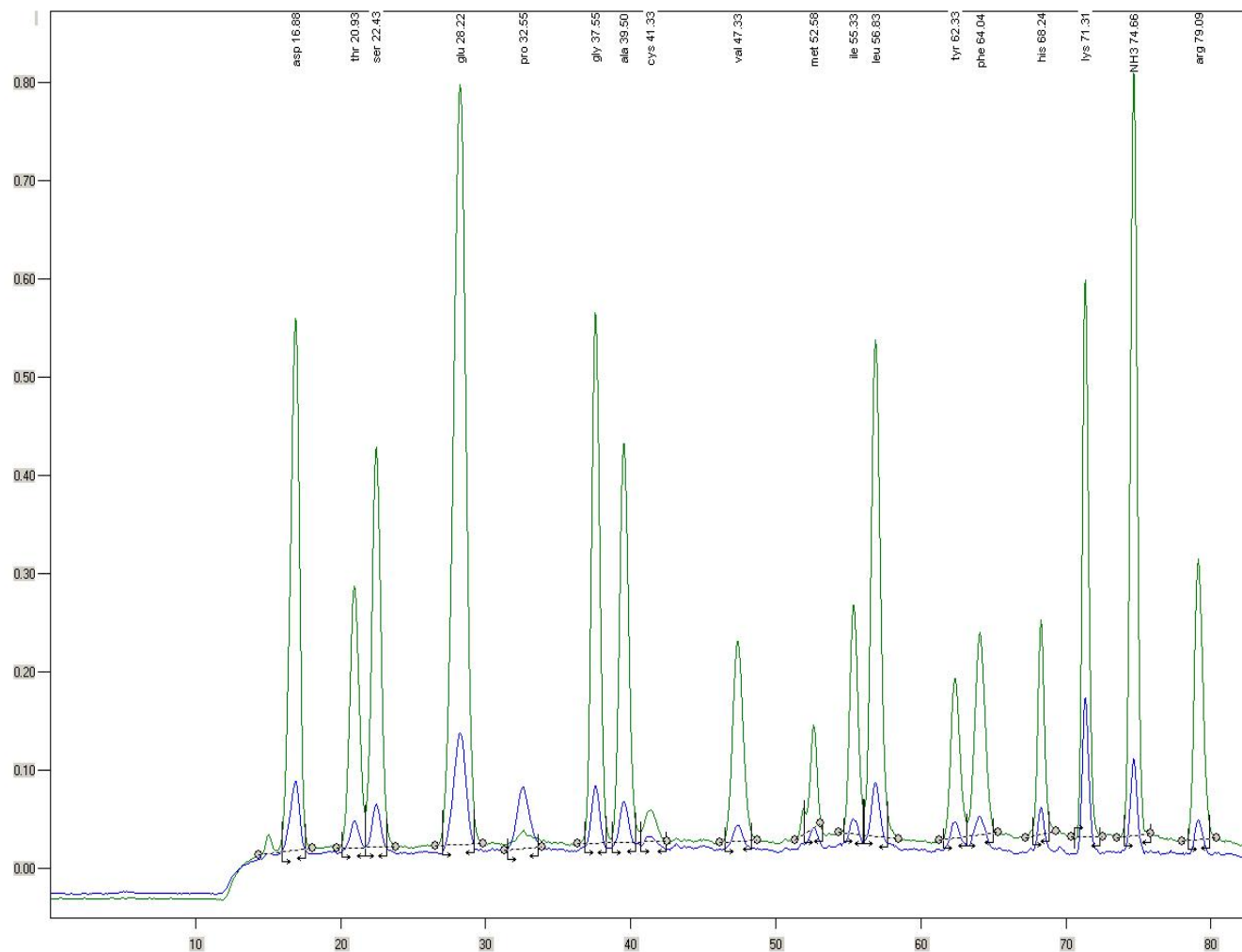
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine





Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal A  
AA 8  
3.6x340 12µm

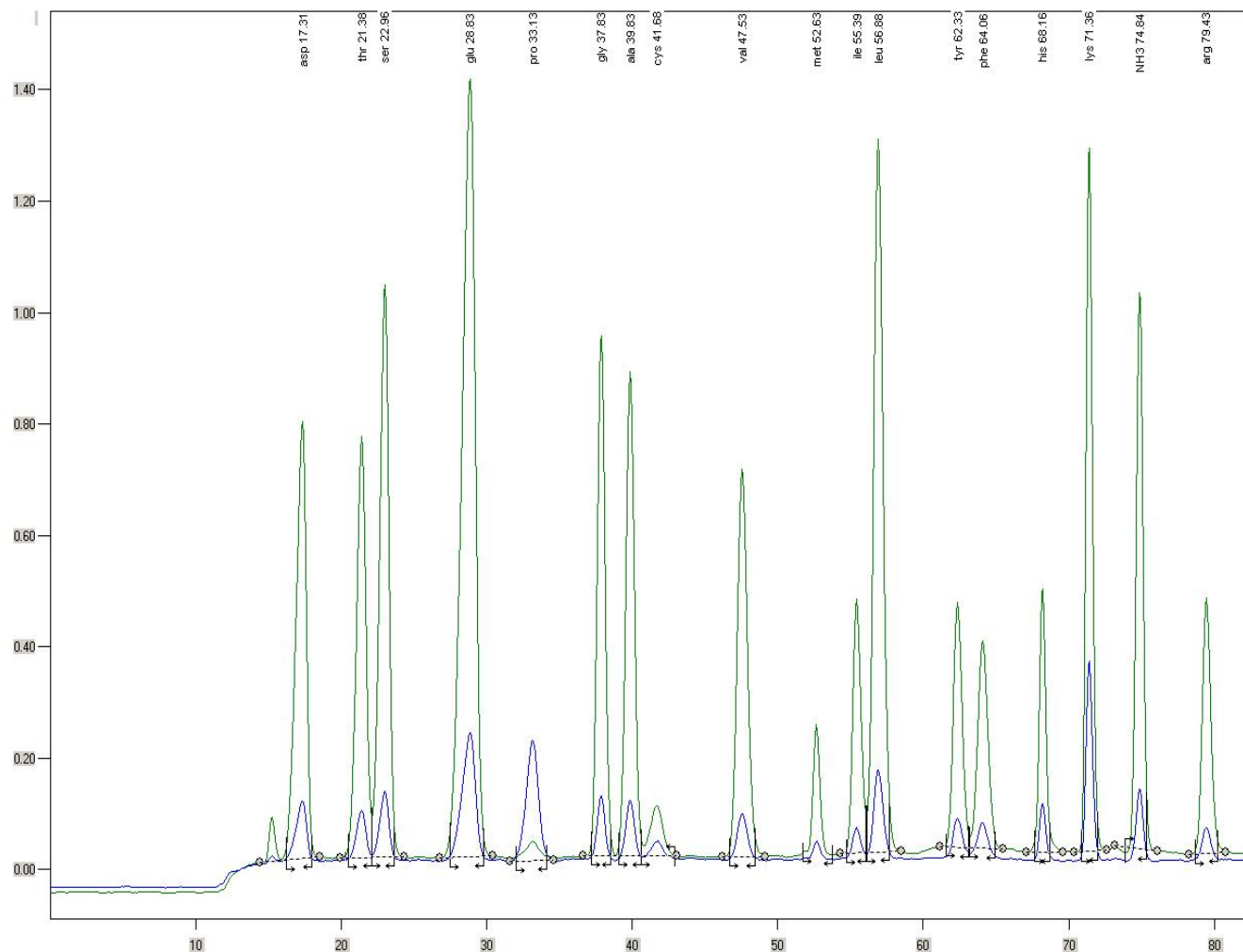
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Veal hydrolyzate

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal A  
AA 8  
3.6x340 12 $\mu$ m

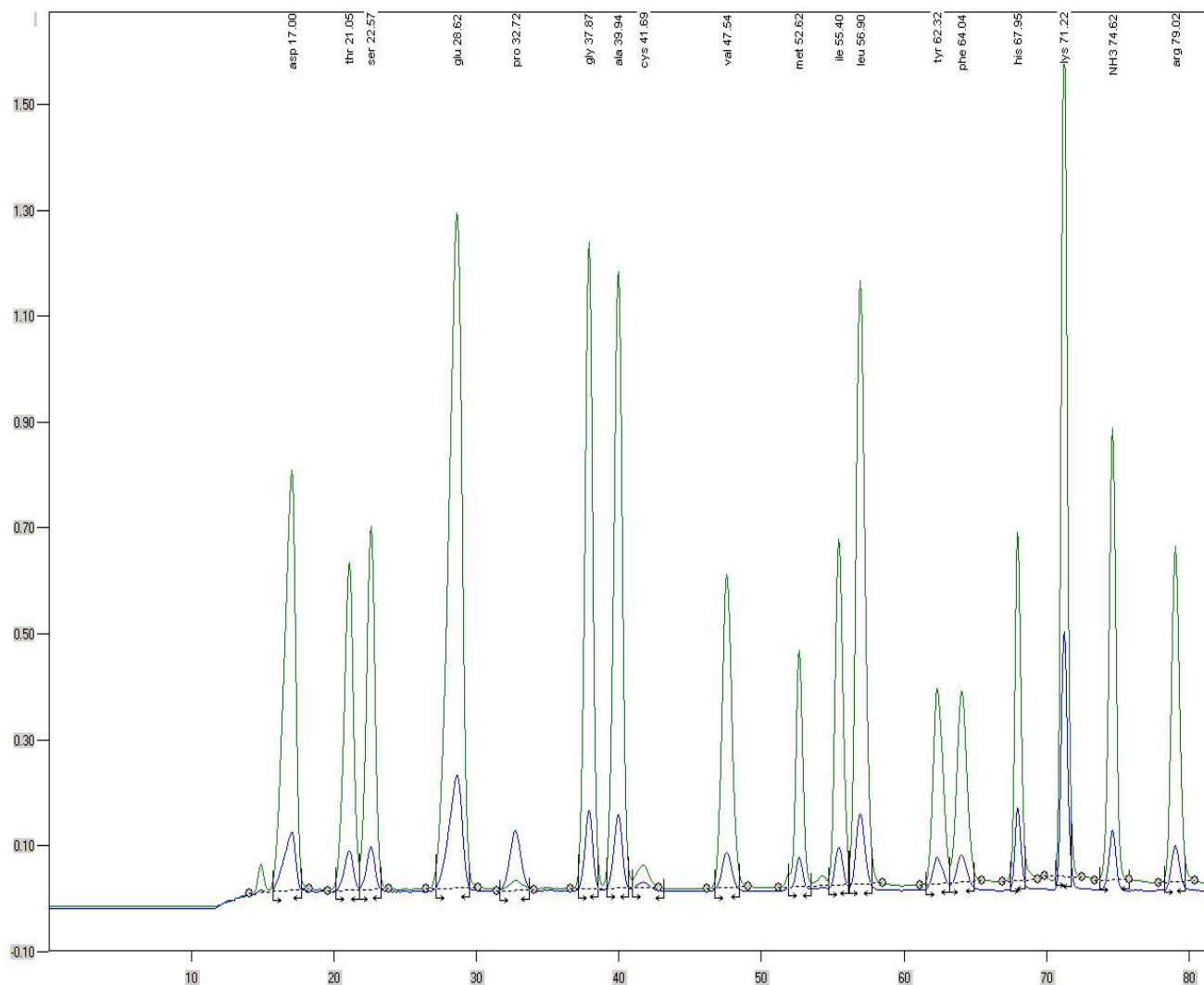
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Feed mixture for poultry hydrolyzate

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal B  
AA 8  
3.6x340 12µm

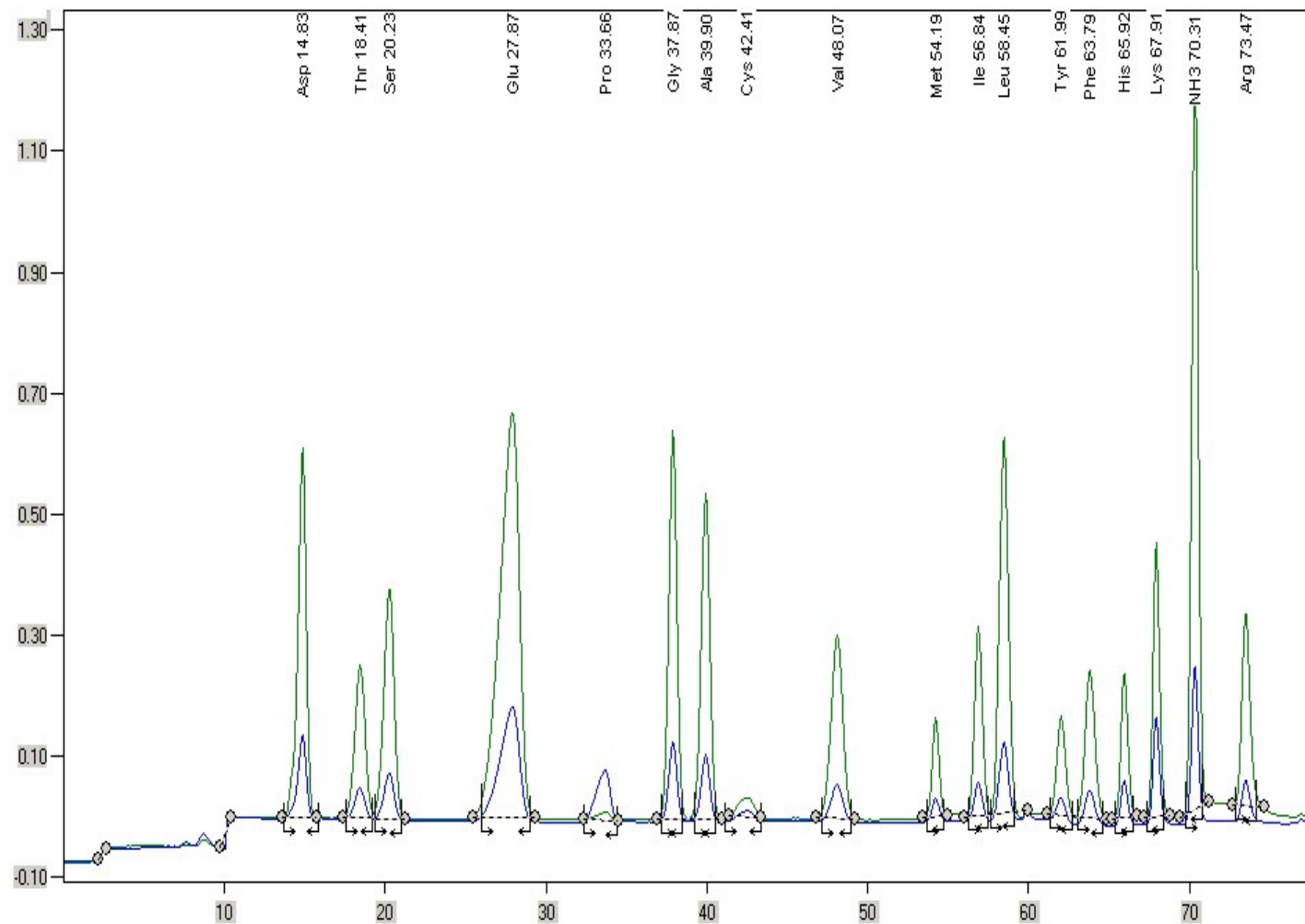
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Product from pudding produce hydrolyzate

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal B  
AA 8  
3.6x340 12µm

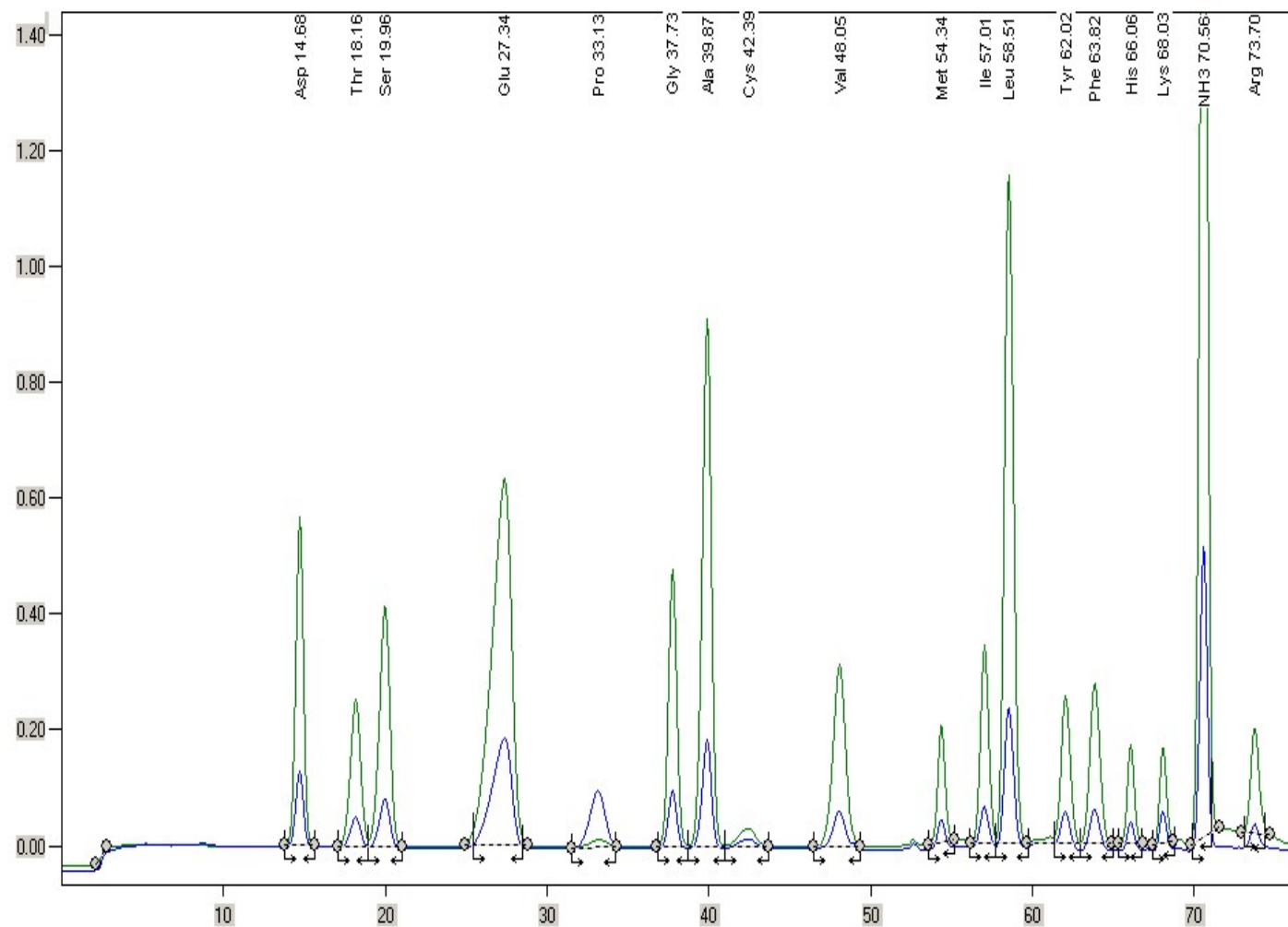
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal B  
AA 8  
3.6x340 12µm

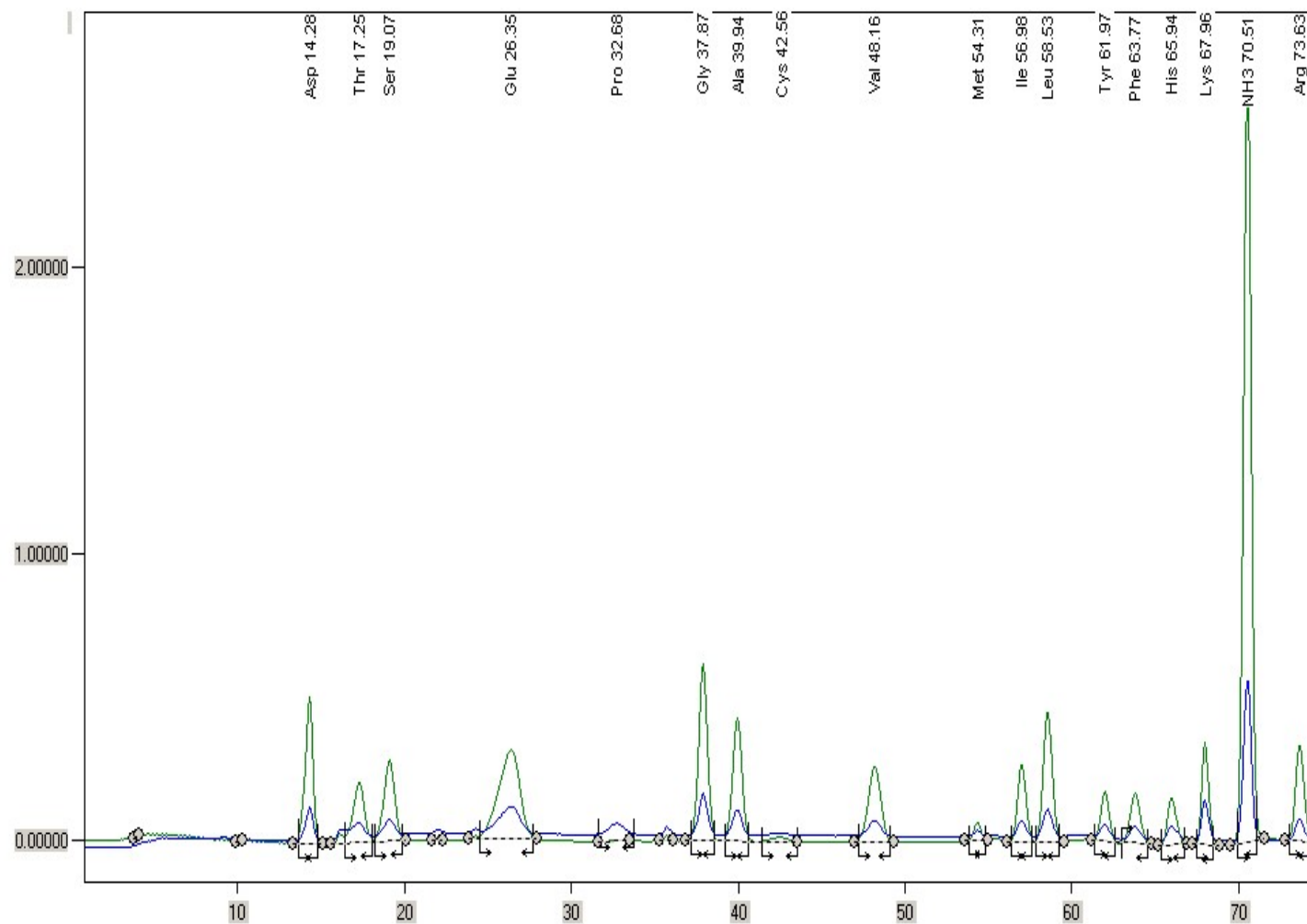
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µl

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Green legumes hydrolyzate

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal B  
AA 8  
3.6x340 12 $\mu$ m

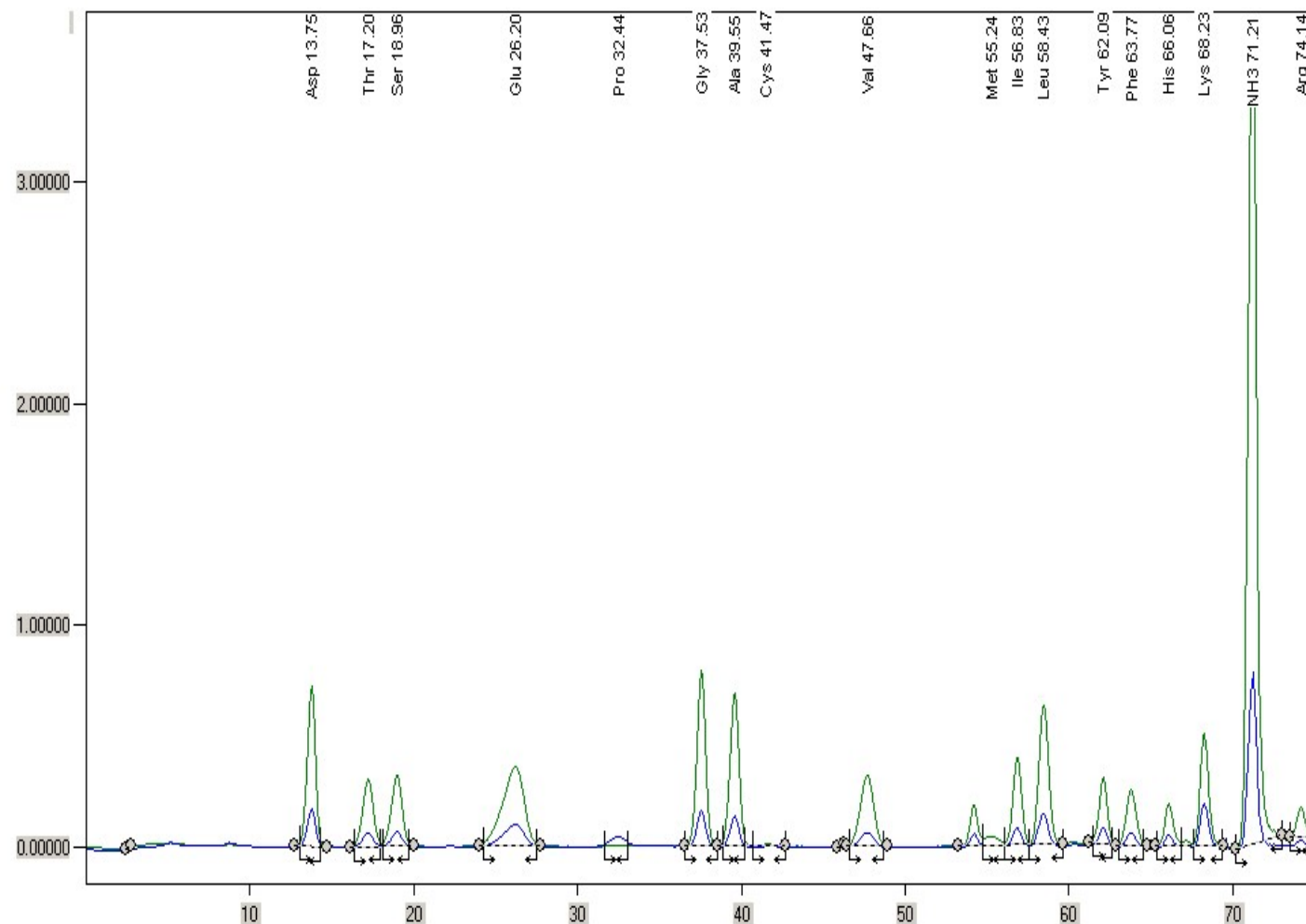
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ l

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal B  
AA 8  
3.6x340 12µm

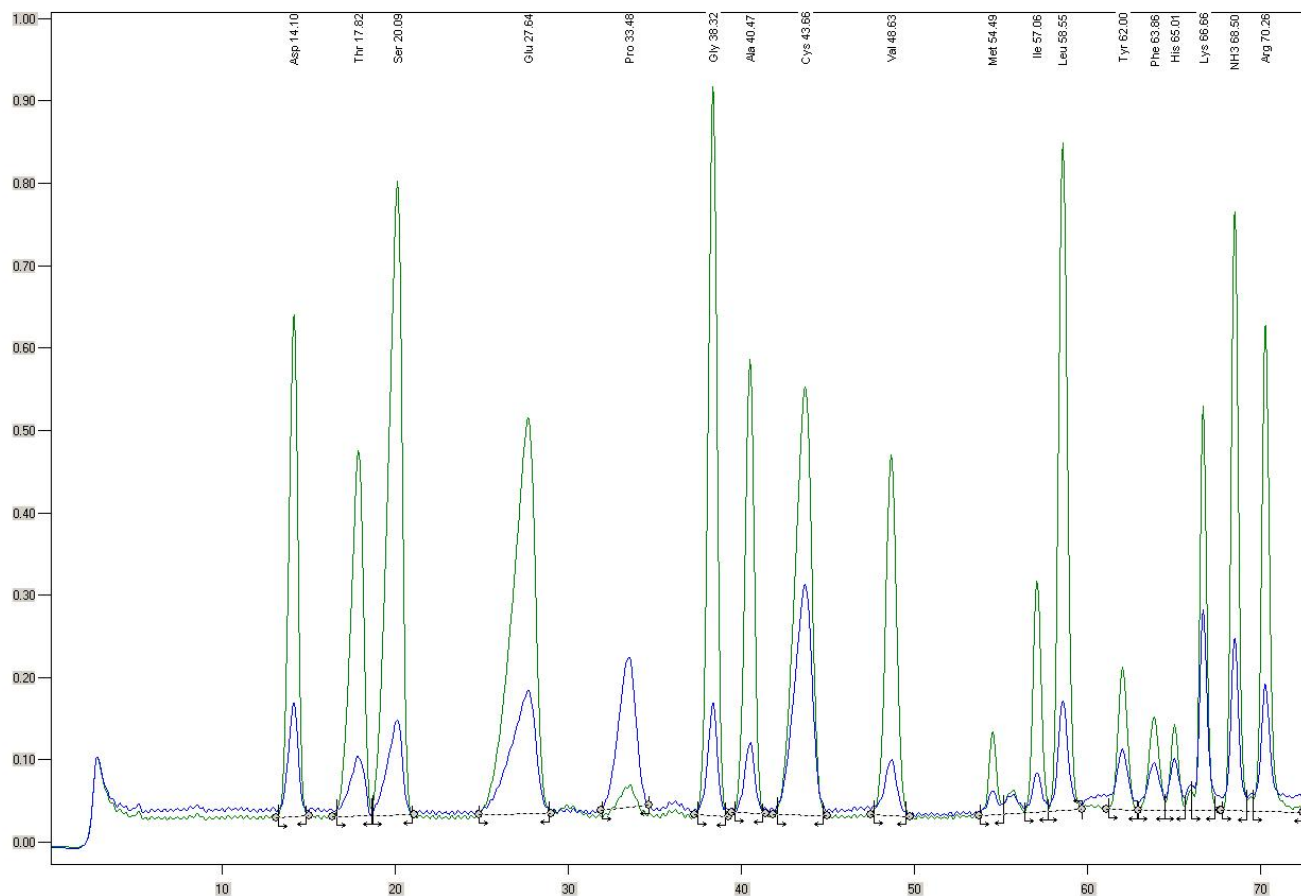
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal C  
AA 8  
3.6x340 12 $\mu$ m

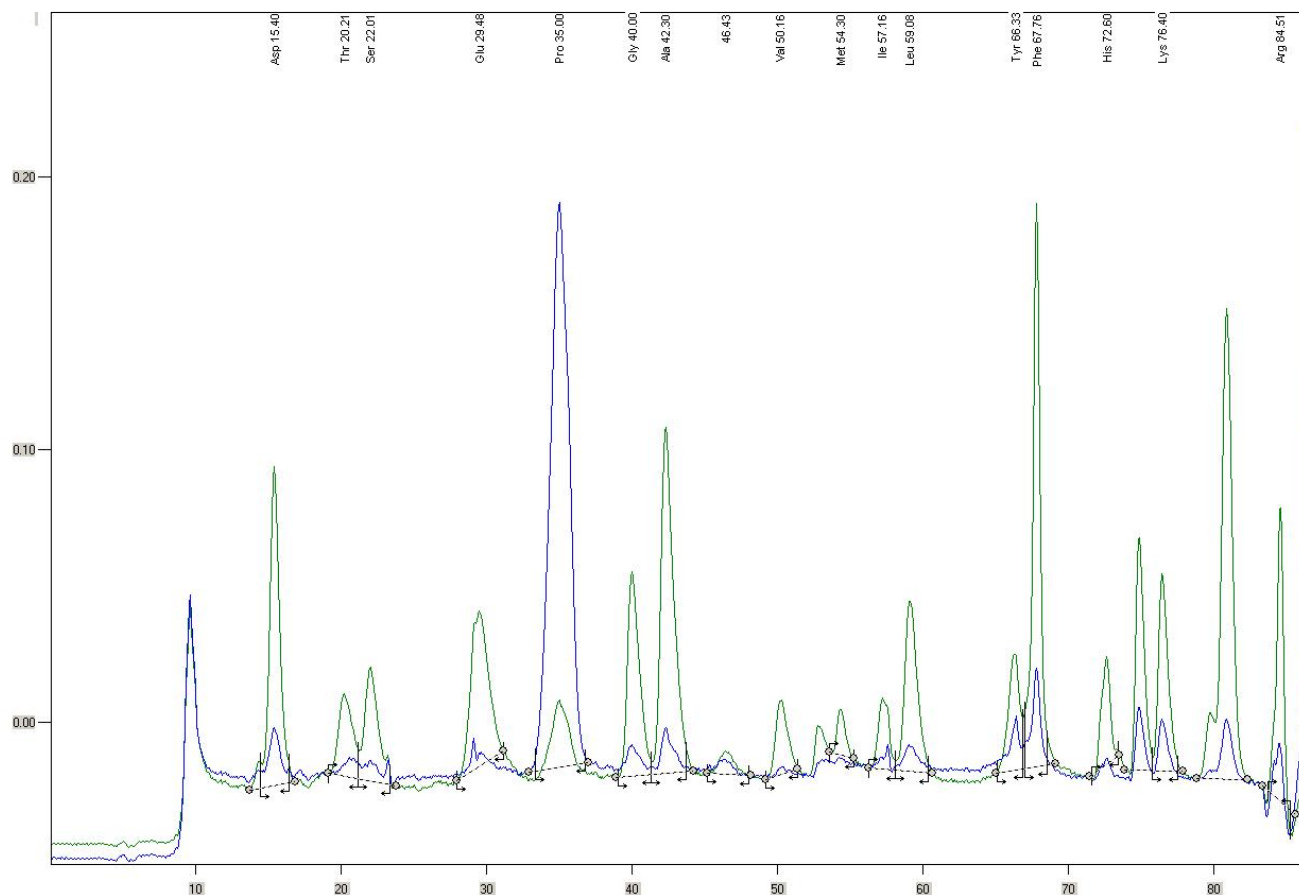
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ l

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine





Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal C  
AA 8  
3.6x340 12µm

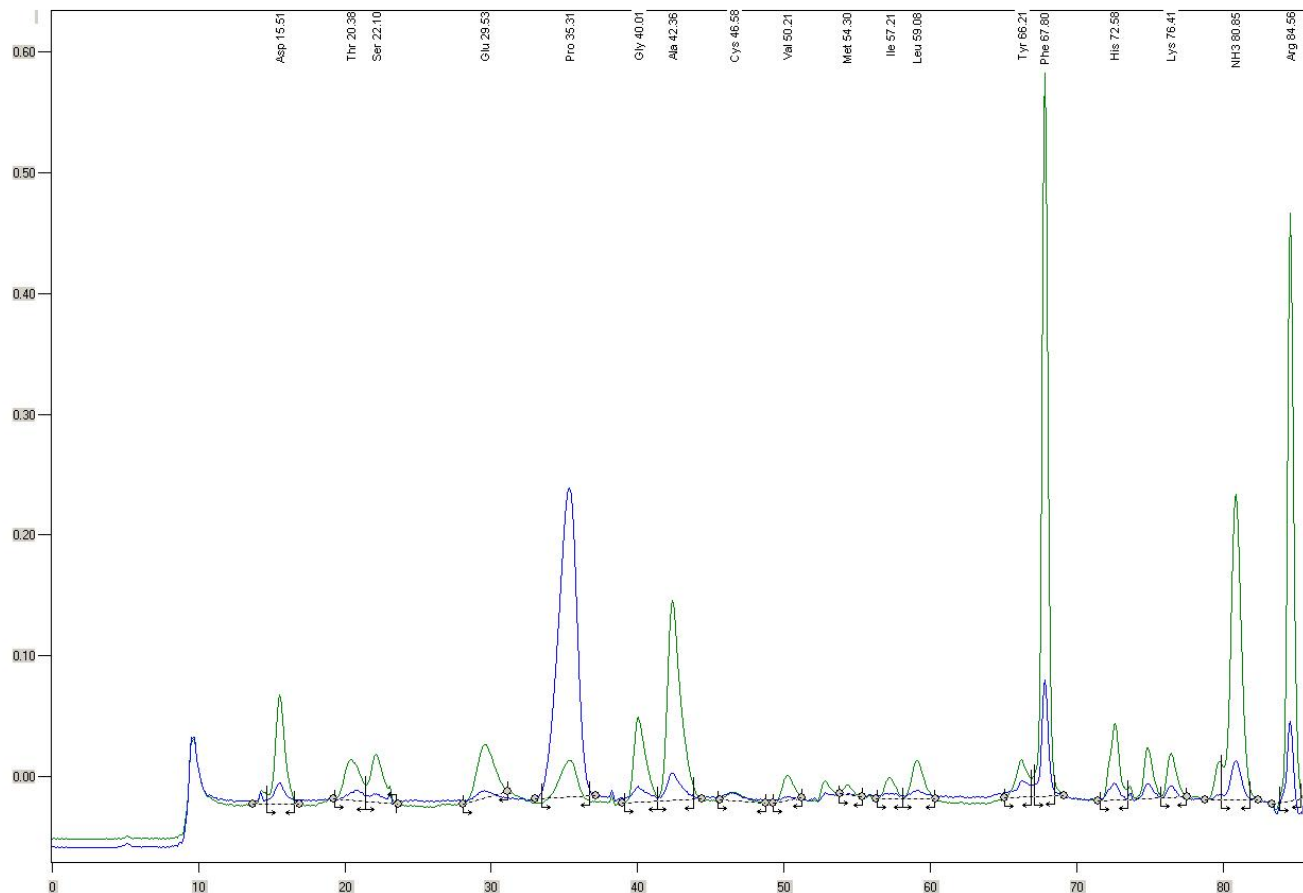
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Shortened analysis for lysine determination, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass B  
LG ANB OSTION  
3.6x340 12 $\mu$ m

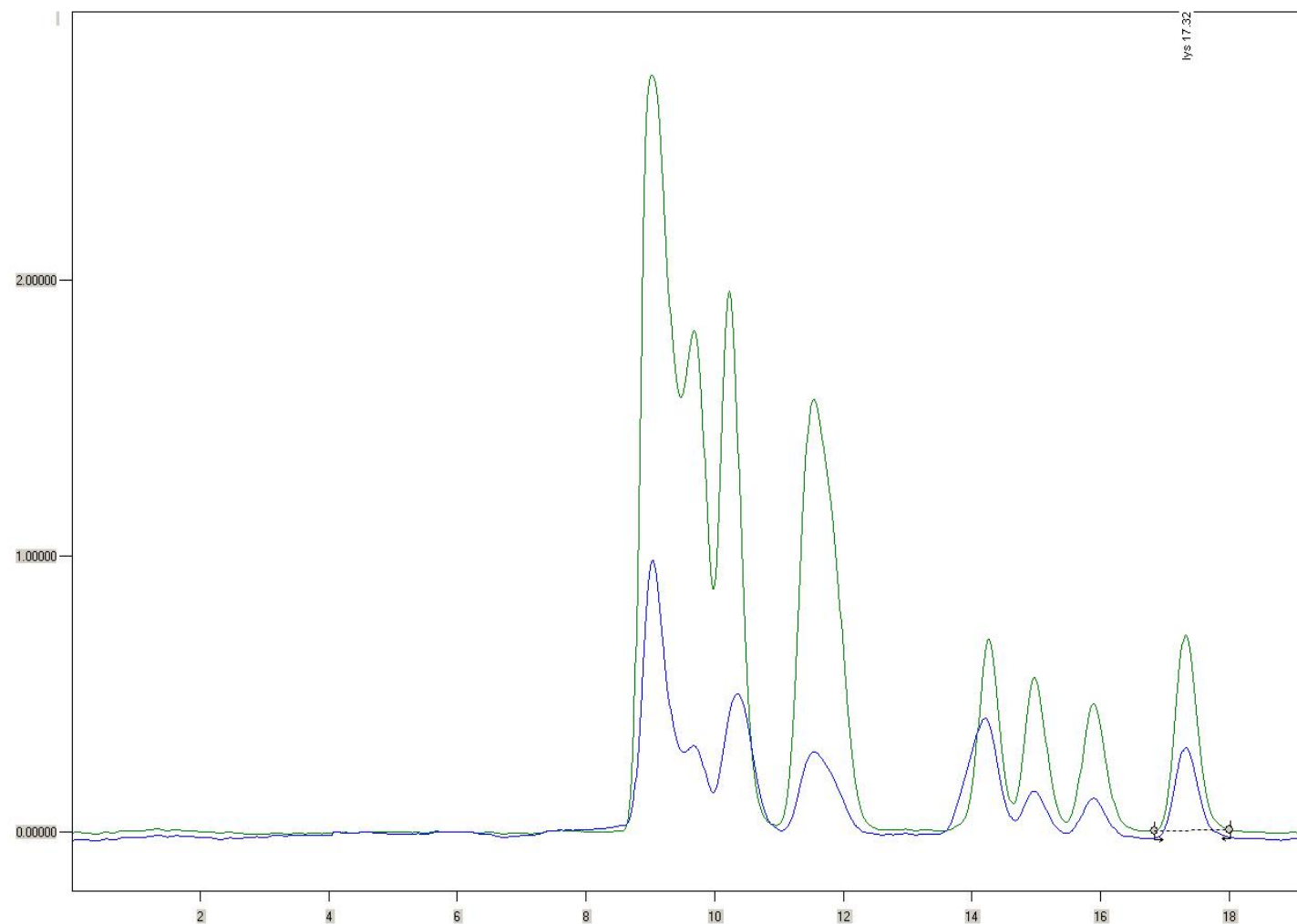
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ l

Amino acid standard  
contains:  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Shortened analysis for Lysine determination in pig feed

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass B  
LG ANB OSTION  
3.6x340 12 $\mu$ m

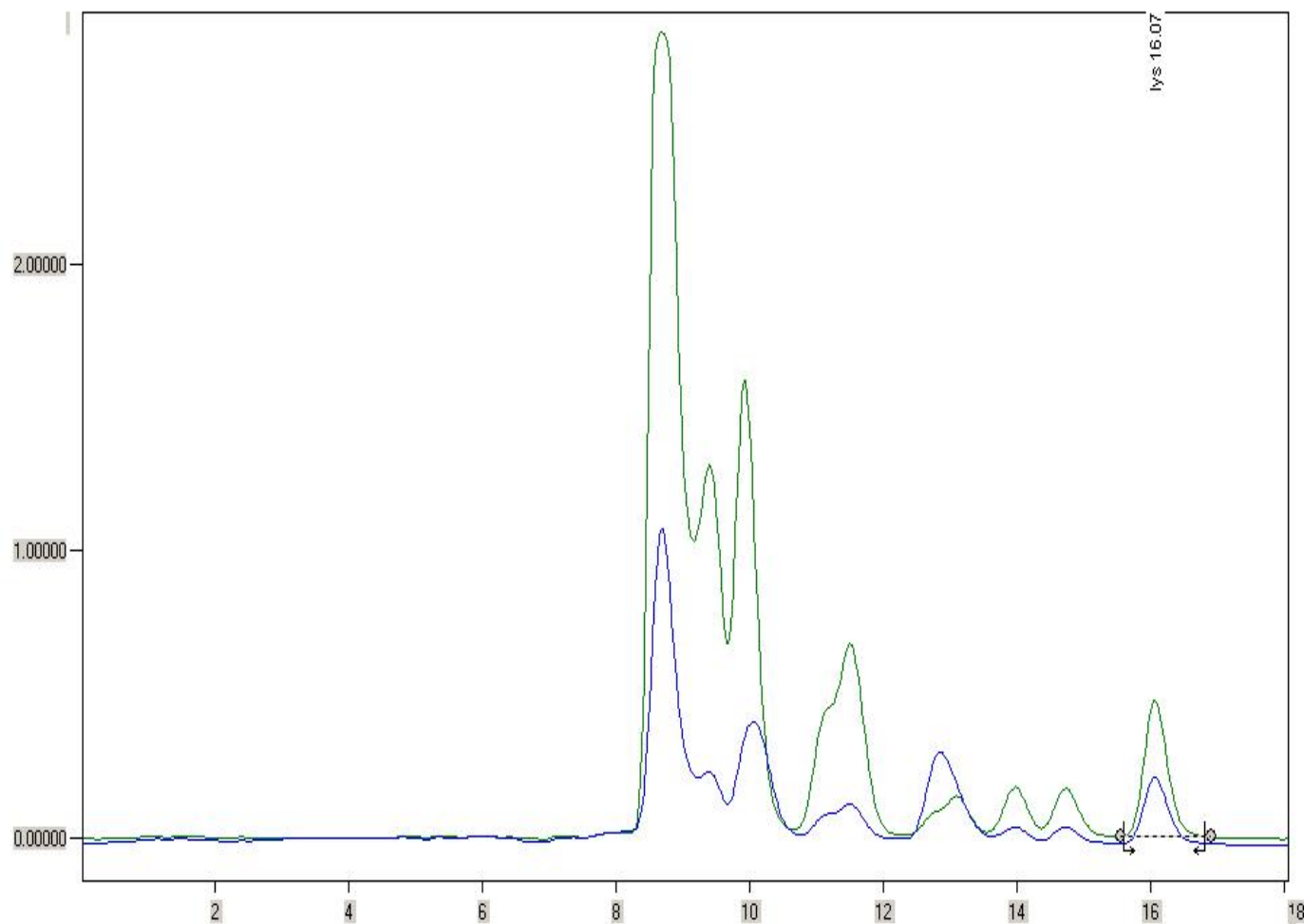
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

detected amino acid:  
Lysine



## Shortened analysis for DAPA determination, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass B  
LG ANB OSTION  
3.6x340 12 $\mu$ m

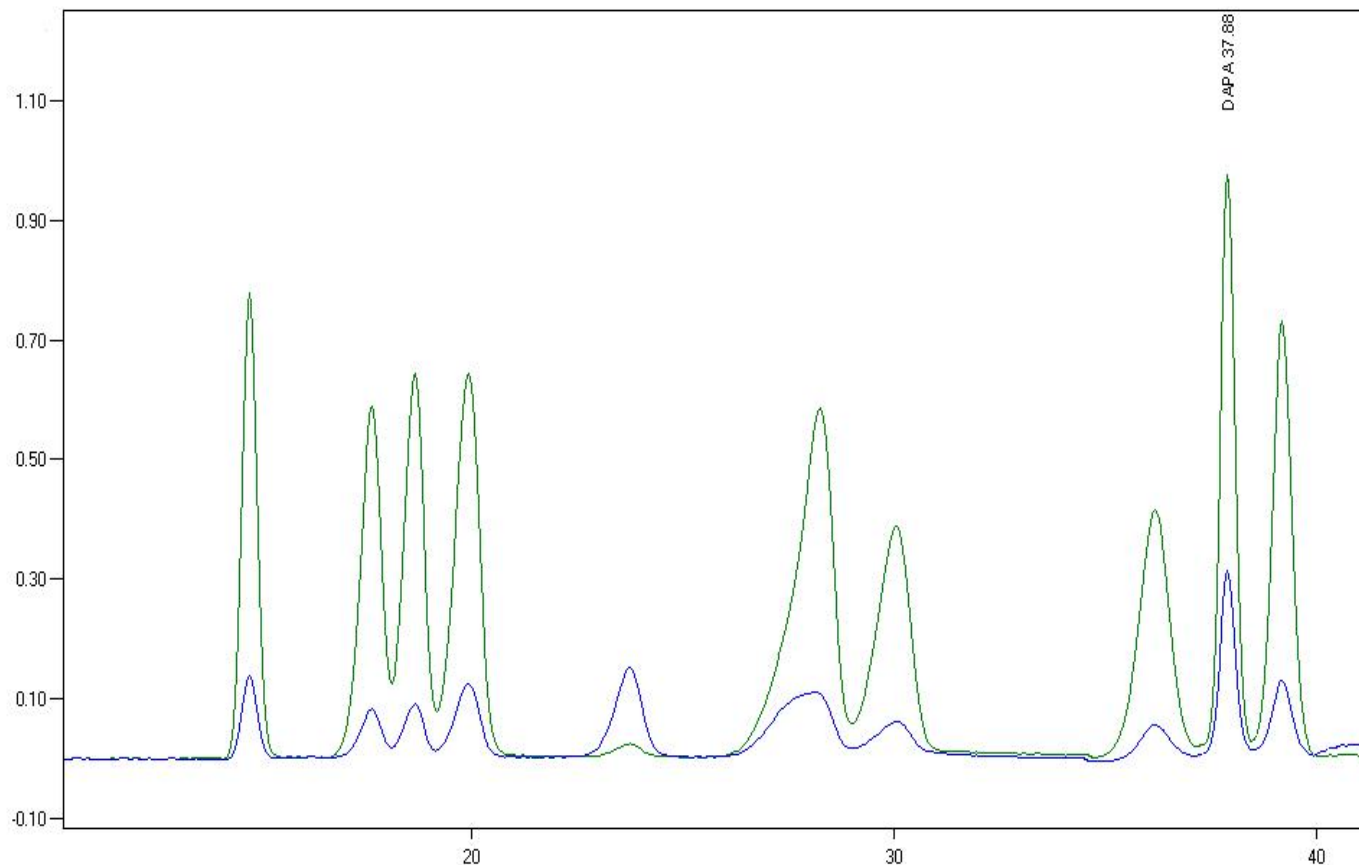
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Amino acid standard  
contains:  
DAPA, Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine



## Additional amino acids: Threonine, Methionine a Lysine, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal B  
LG ANB OSTION  
3.6x340 12 $\mu$ m

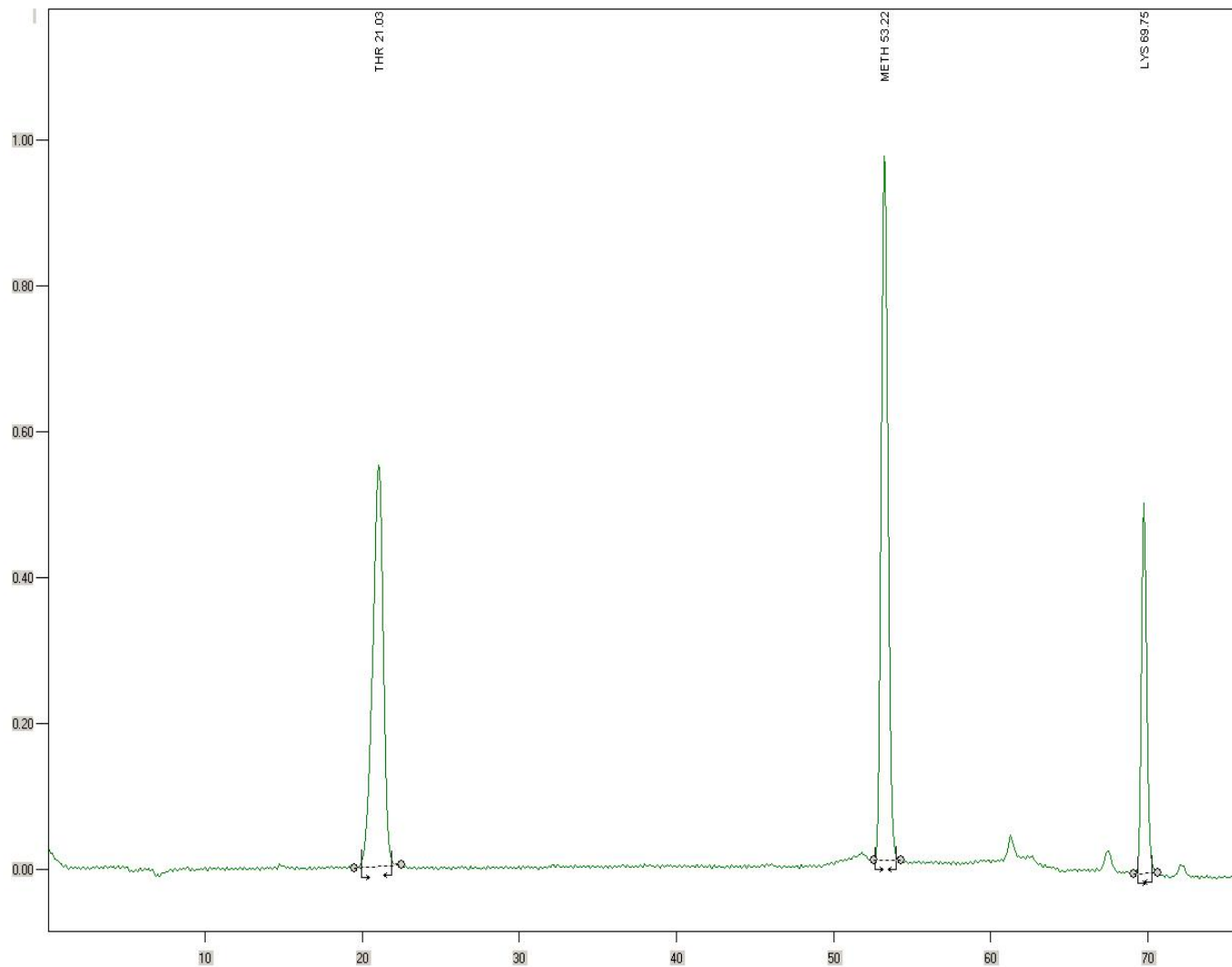
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Amino acid standard  
contains:  
Threonine, Methionine, Lysine



## Additional amino acids: mineral feed

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: metal B  
LG ANB OSTION  
3.6x340 12 $\mu$ m

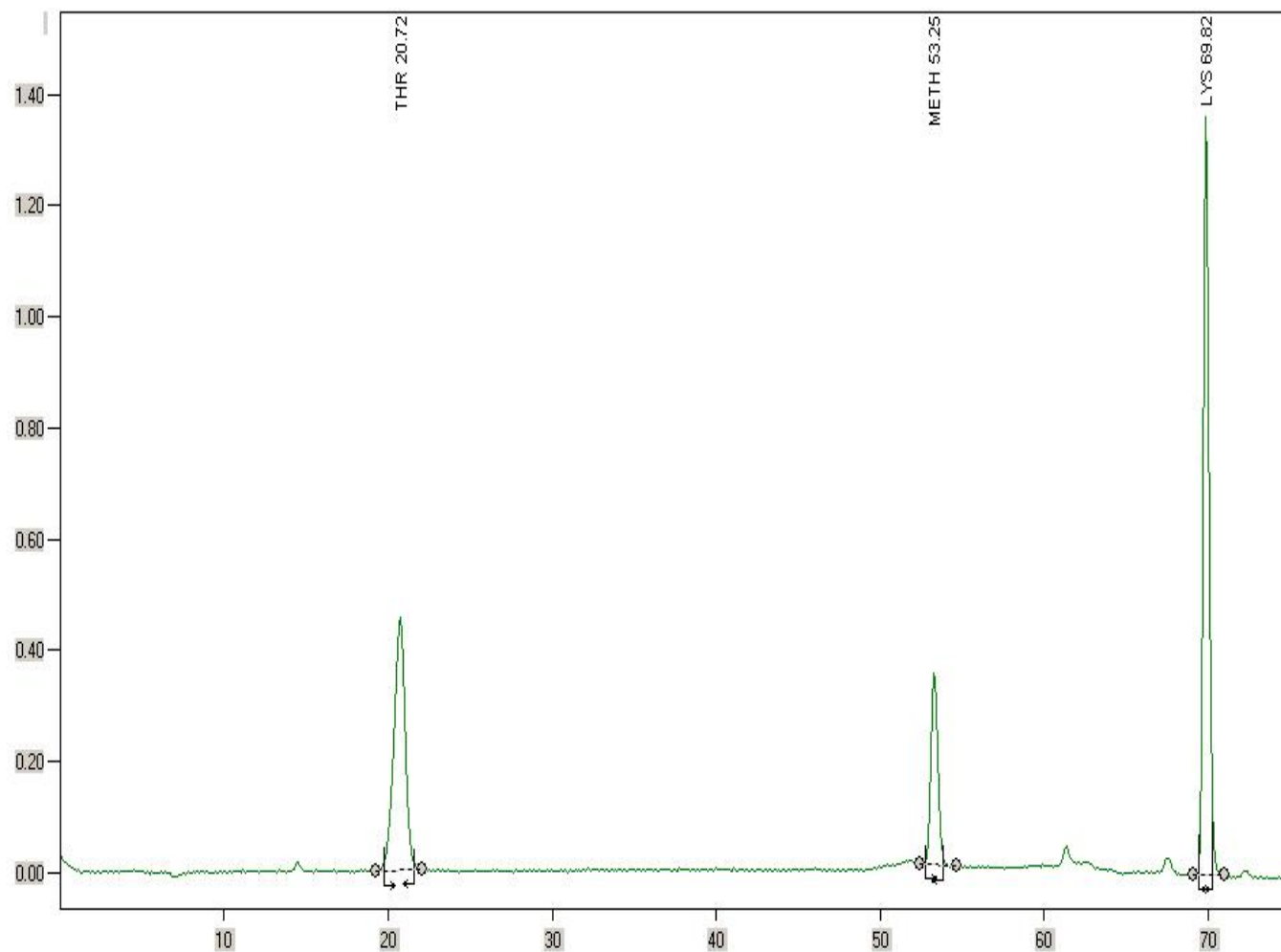
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Detected amino acids:  
Threonine, Methionine, Lysine



## Shortened analysis for Taurine, Threonine, Methionine a Lysine, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG ANB OSTION  
3.6x340 12 $\mu$ m

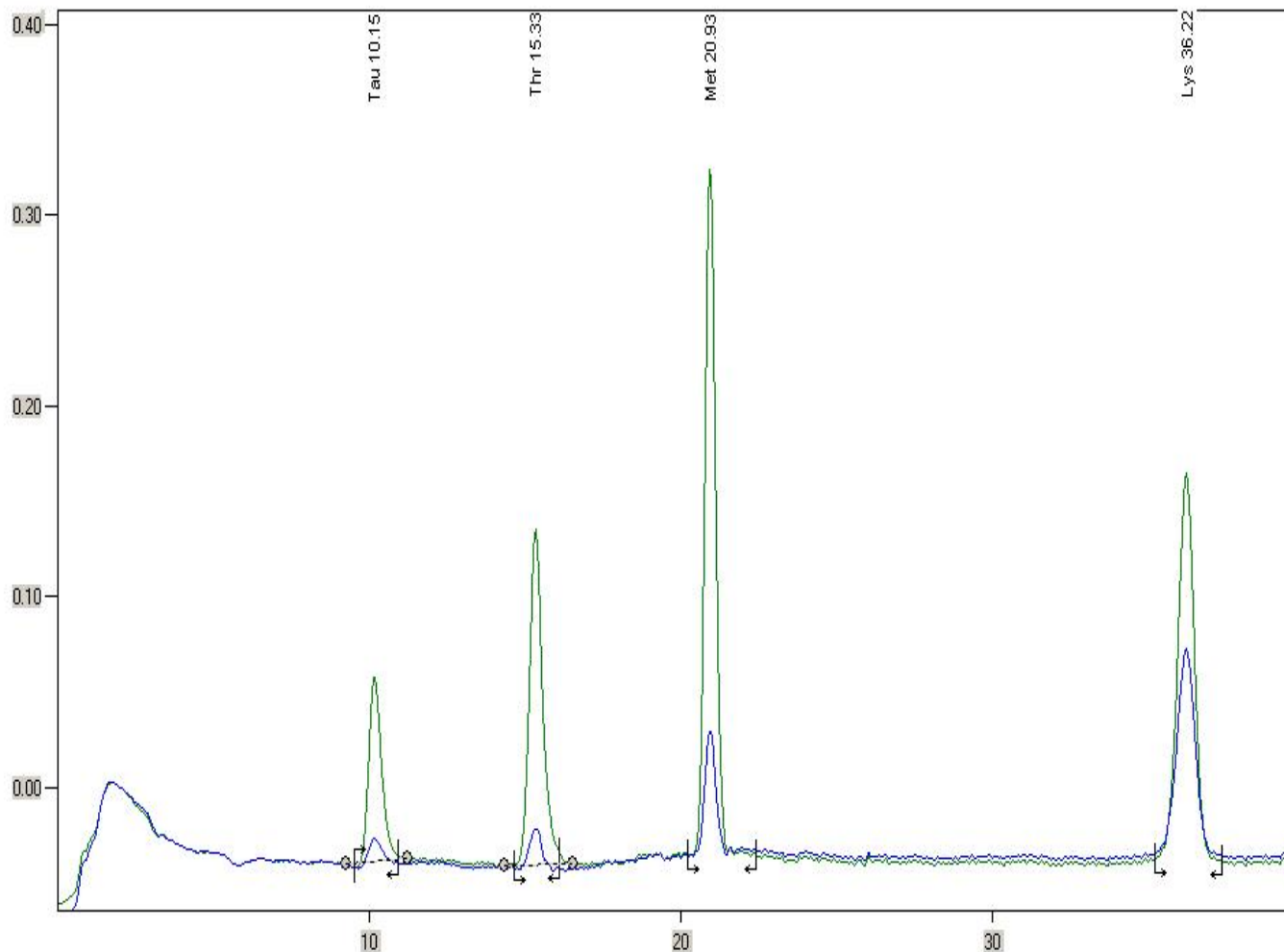
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Amino acid standard  
contains:  
Taurine, Threonine, Methionine, Lysine



## Shortened analysis for sulfur amino acids determination, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG ANB OSTION  
3.6x340 12µm

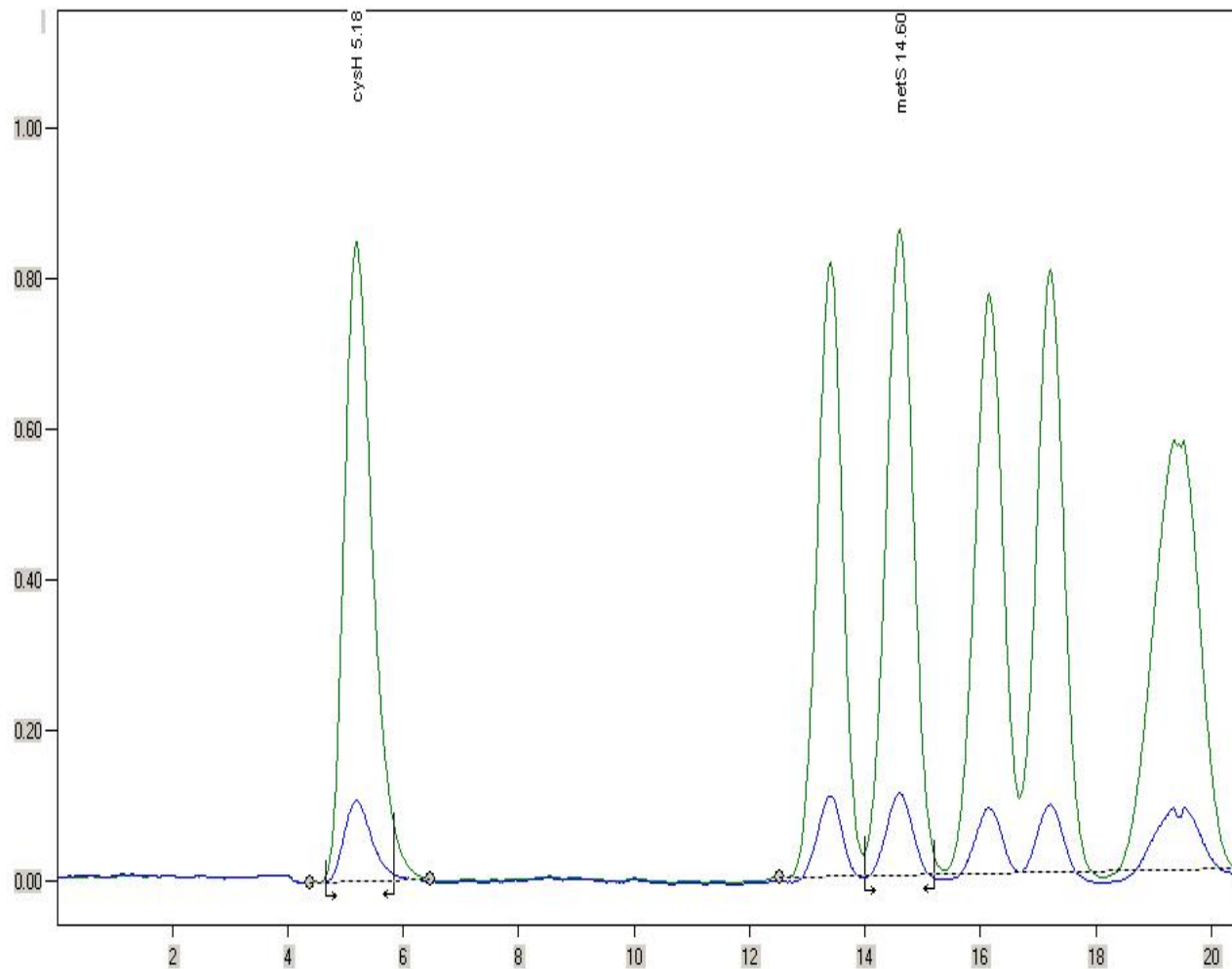
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Amino acid standard  
contains:  
Cysteic acid, Methionine sulphone,  
Aspartic acid, Threonine,  
Serine, Glutamic acid,  
Proline, Glycine, Alanine, Cysteine,  
Valine, Methionine, Isoleucine,  
Leucine, Tyrosine, Phenylalanine,  
Histidine, Lysine, NH<sub>3</sub>, Arginine





Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG ANB OSTION  
3.6x340 12µm

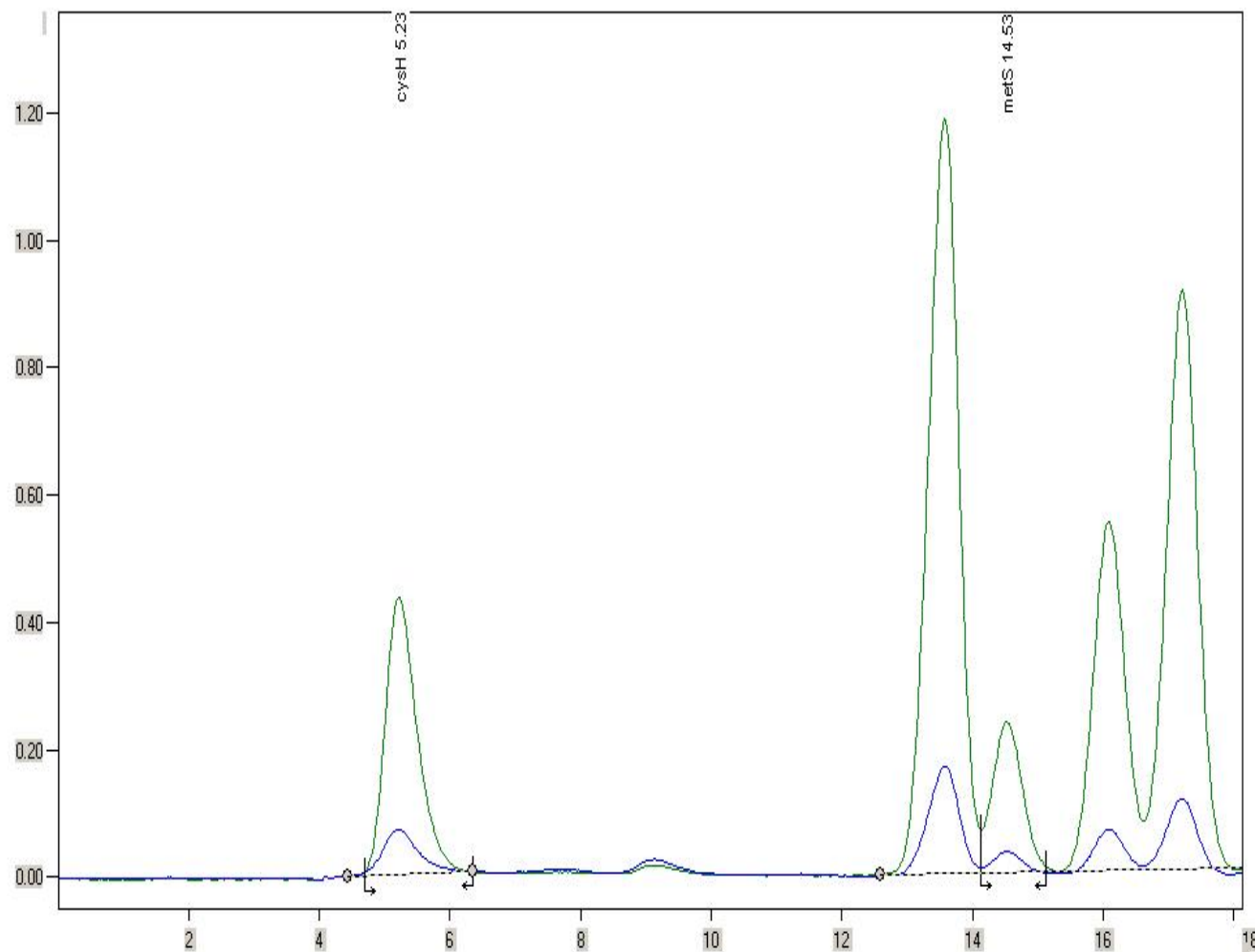
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Cysteic acid, Methionine sulphone



## Pig colostrum hydrolyzate

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG ANB OSTION  
3.6x340 12 $\mu$ m

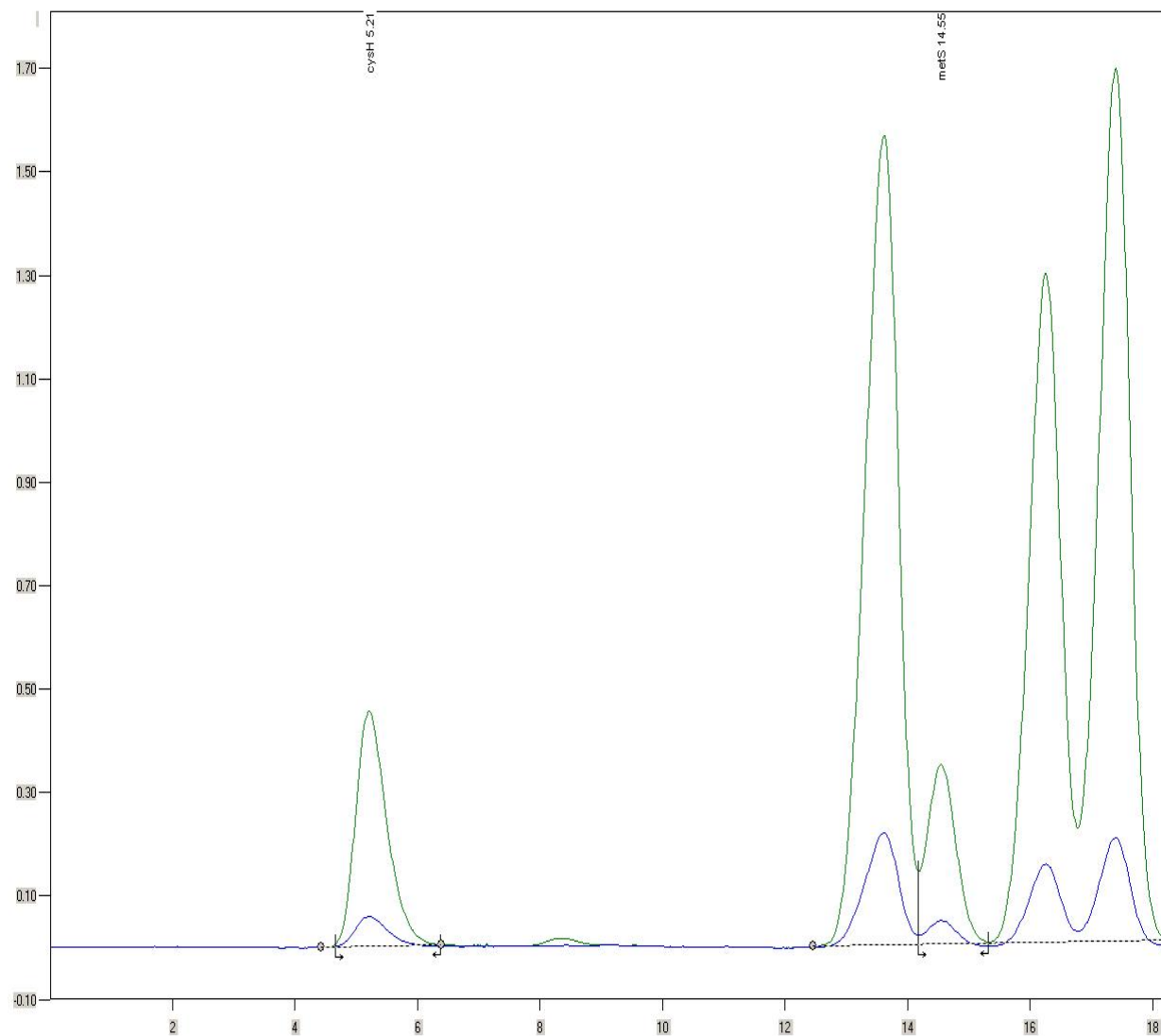
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Detected amino acids:  
Cysteic acid, Methionine sulphone



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG ANB OSTION  
3.6x340 12µm

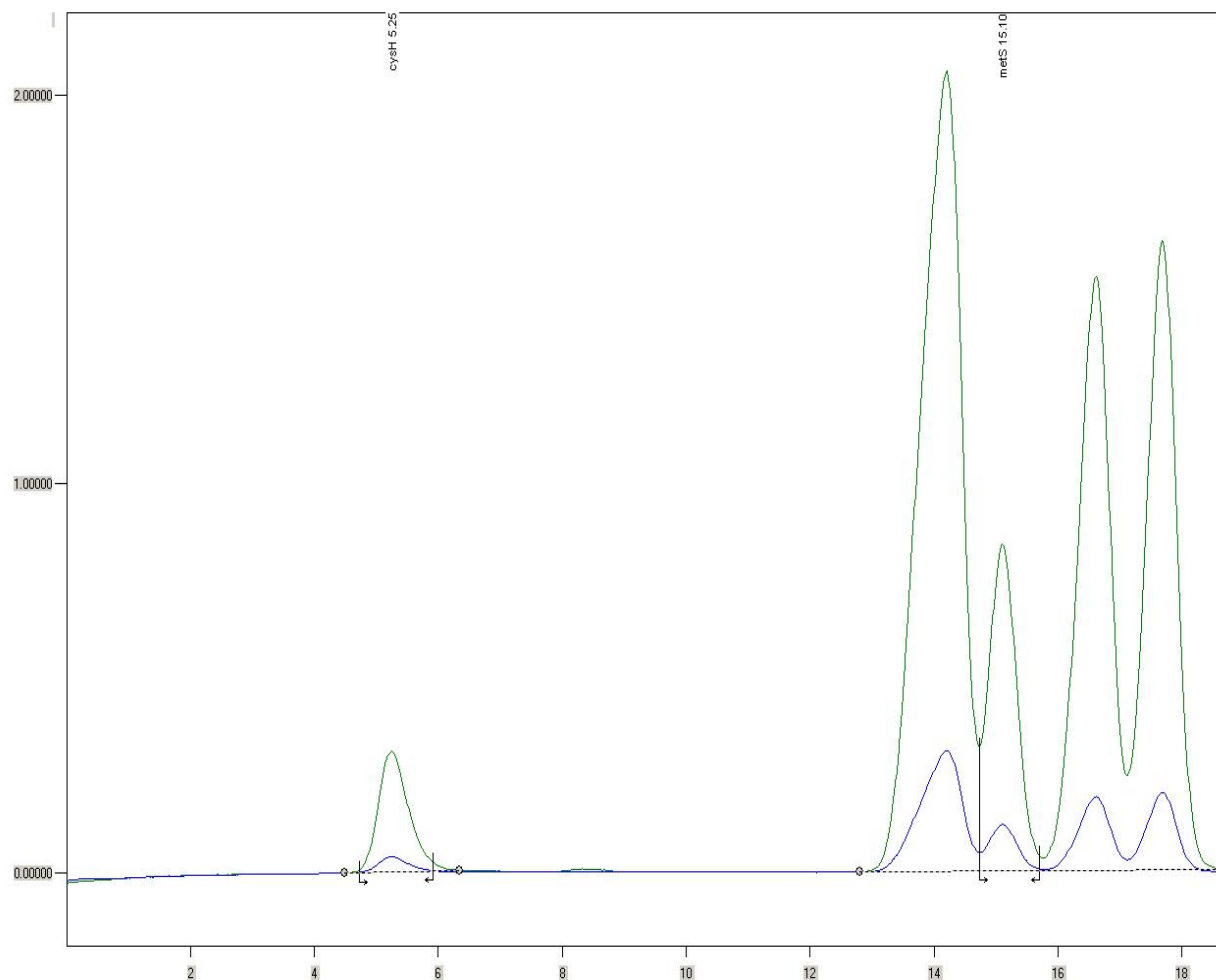
Buffers:  
sodium-citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Cysteic acid, Methionine sulphone



## 2. Determinations amino acids using lithium-citrate buffer

## Physiological amino acids determination, Standard 250 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG FA OSTION  
3.6x220 12µm

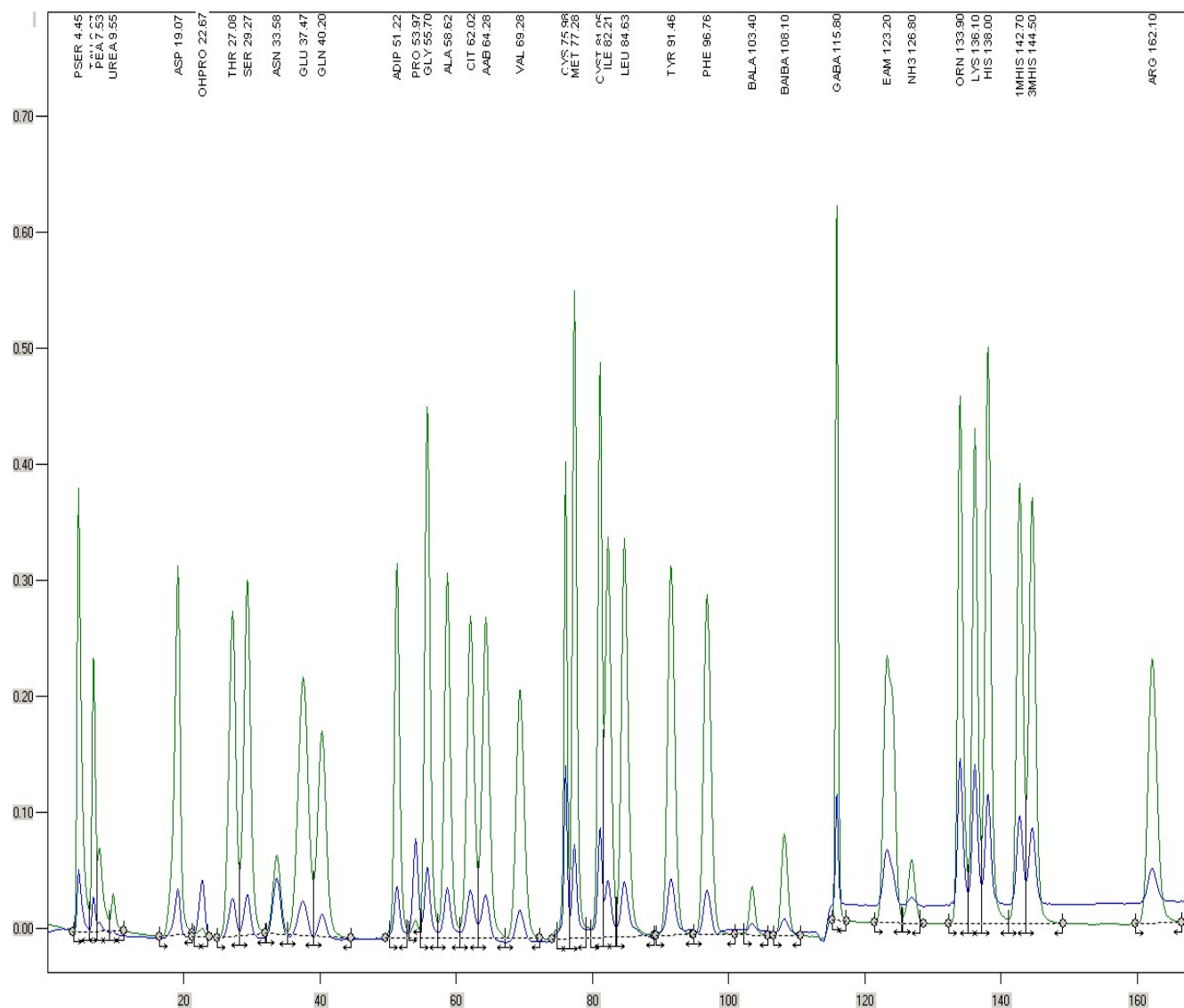
Buffers:  
Lithium-citrate buffer,  
0.3 M LiOH

Flow:  
Pump 1: 0.3 ml/min, Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µl

Amino acid standard contains:  
PhosphoSerinee, Taurine, PhosphoEthanolaminee, Urea,  
Aspartic acid, HydroxyProlinee,  
Threonine, Serine, Asparagine, Glutamic acid,  
Glutamine, Proline, Glycine, Alanine, Citruline,  
α-Aminobutyric acid, Valine, Cysteine,  
Methionine, Cystathionine, Isoleucine, Leucine,  
Tyrosine, Phenylalanine, β-Alanine, β-  
Aminoisomáselná  
kyselina, γ-Aminobutyric acid, Ethanolamine,  
Ornithine, Lysine, Histidine, 1-Methyl Histidine,  
3-Methyl Histidine, NH3, Arginine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG FA OSTION  
3.6x220 12 $\mu$ m

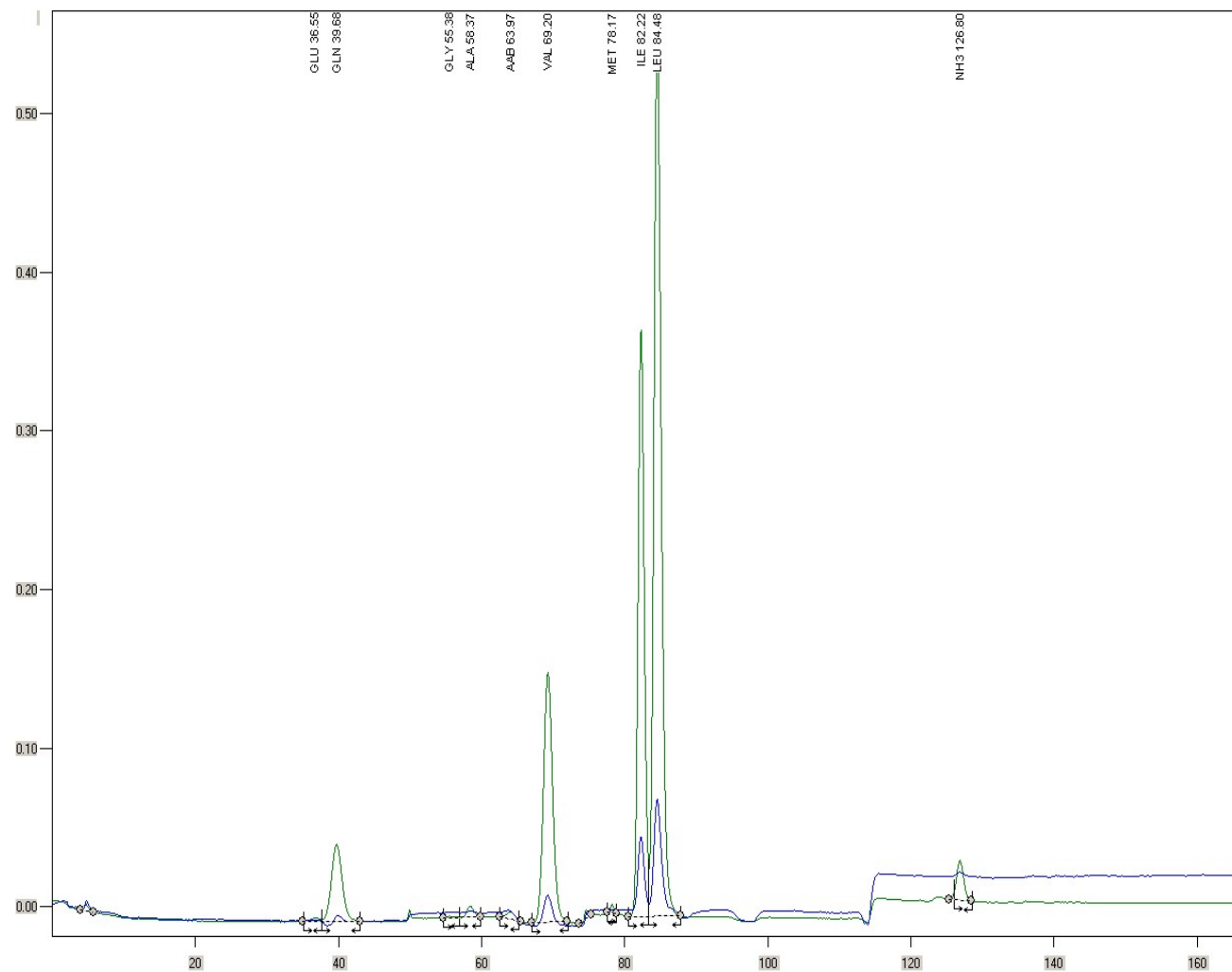
Buffers:  
Lithium-citrate buffer,  
0.3 M LiOH

Flow:  
Pump 1: 0.3 ml/min, Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100  $\mu$ l

Detected amino acids:  
Glutamic acid, Glycine, Alanine,  
 $\alpha$ -Aminobutyric acid, Valine, Methionine,  
Isoleucine, Leucine, NH<sub>3</sub>



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Pre-column:  
OSTION KS 0804

Column: glass A  
LG FA OSTION  
3.6x220 12µm

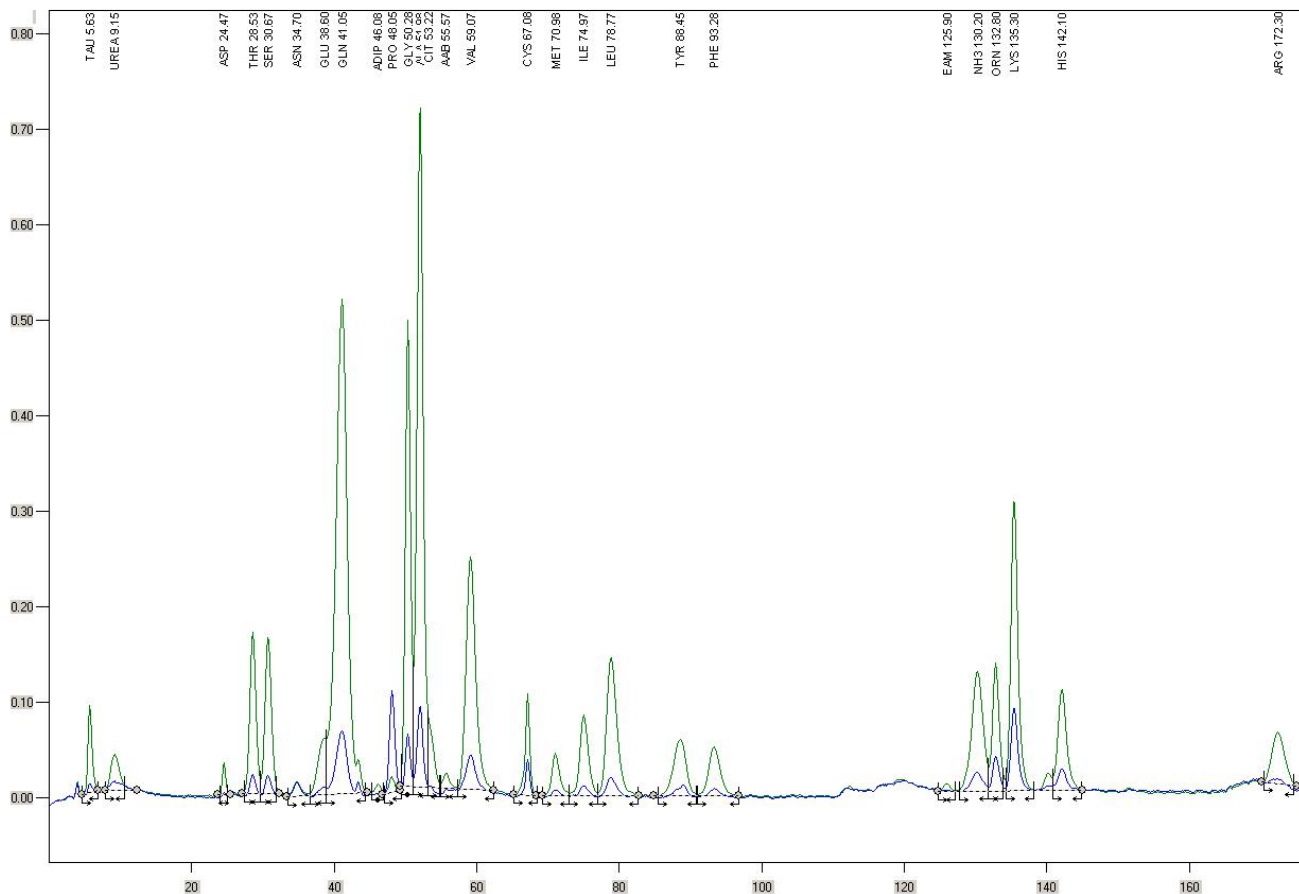
Buffers:  
Lithium-citrate buffer,  
0.3 M LiOH

Flow:  
Pump 1: 0.3 ml/min, Pump 2: 0.2 ml/min,

Detection:  
VIS 440 nm / 570 nm ,

Injection Quantity:  
100 µml

Detected amino acids:  
Taurine, Urea,  
Aspartic acid,  
Threonine, Serine, Asparagine, Glutamic acid,  
Glutamine, Proline, Glycine, Alanine, Citruline,  
α-Aminobutyric acid, Valine, Cysteine,  
Methionine, Isoleucine, Leucine,  
Tyrosine, Phenylalanine, Ethanolamine, NH<sub>3</sub>,  
Ornithine, Lysine, Histidine, Arginine



### 3. Determination of biogenic amines



## Biogenic amines determination, Standard 357 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Column: glass A  
LG ANB OSTION  
3.6x340 12 $\mu$ m

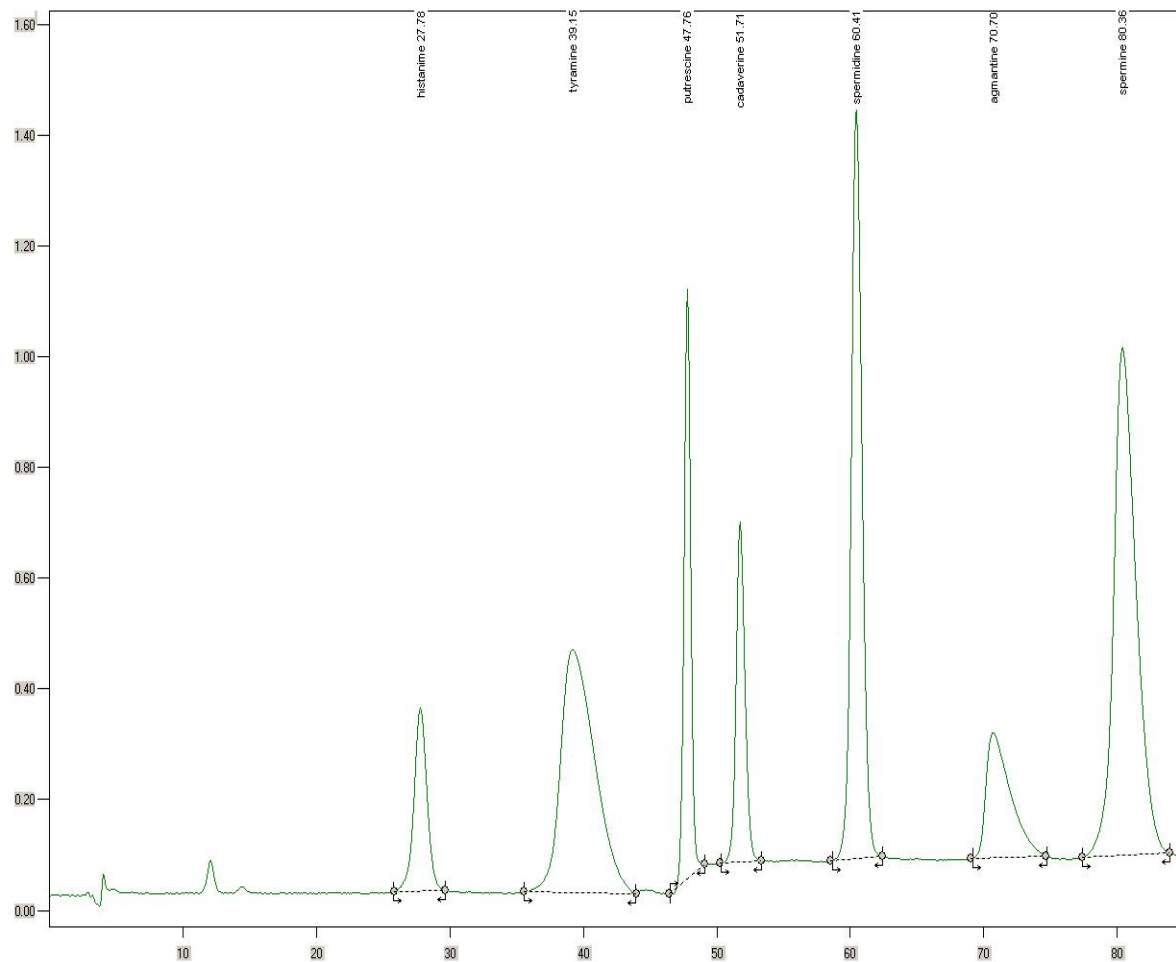
Buffers:  
sodium-potassium citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Biogenic amines standard contains obsahuje:  
Histamine, Tyramine, Putrescine, Cadaverine,  
Spermidine, Agmatine, Spermine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Column: glass A  
LG ANB OSTION  
3.6x340 12 $\mu$ m

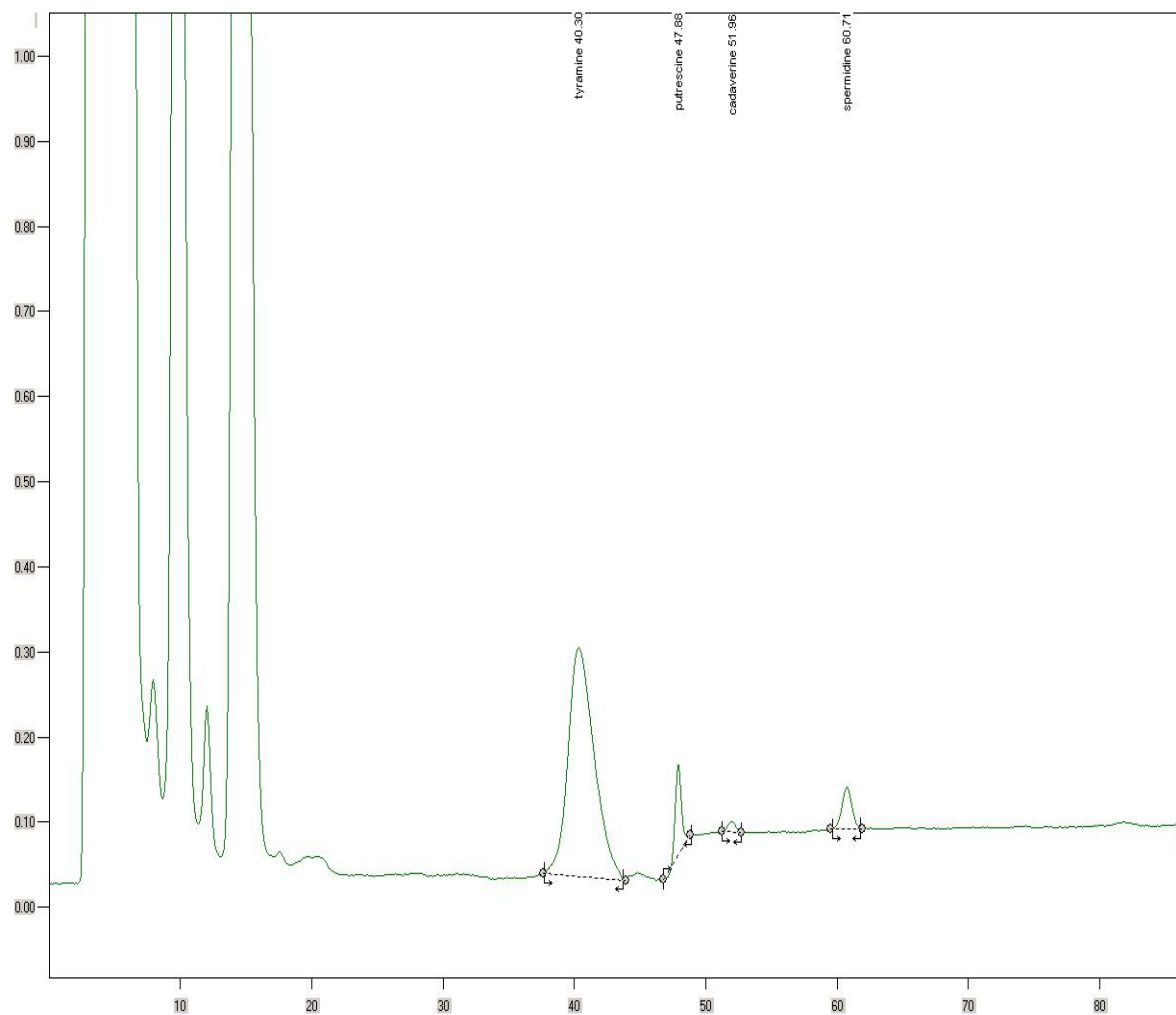
Buffers:  
sodium-potassium citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 570 nm ,

Injection Quantity:  
100  $\mu$ l

Detected biogenic amines:  
Tyramine, Putrescine, Cadaverine,  
Spermidine



Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Column: glass A  
LG ANB OSTION  
3.6x340 12µm

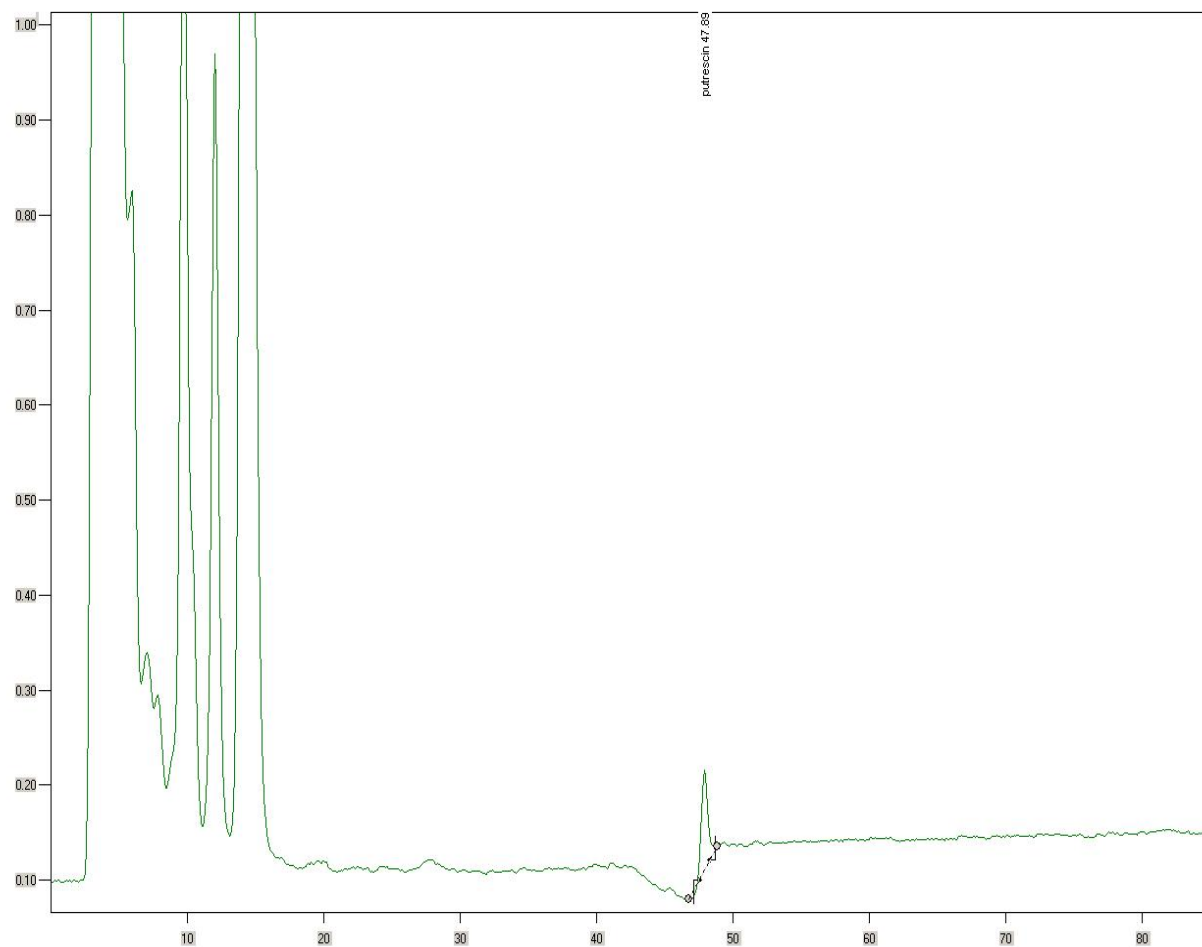
Buffers:  
sodium-potassium citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.3 ml/min,  
Pump 2: 0.2 ml/min,

Detection:  
VIS 570 nm ,

Injection Quantity:  
100 µml

Detected biogenic amine:  
Putrescine



## Biogenic amines determination, Standard 357 nmol/ml

Chromatographic conditions:  
Ion-exchange chromatography  
with post-column ninhydrin  
derivatization

Column: glass A  
LG ANB OSTION  
3.6x340 12 $\mu$ m

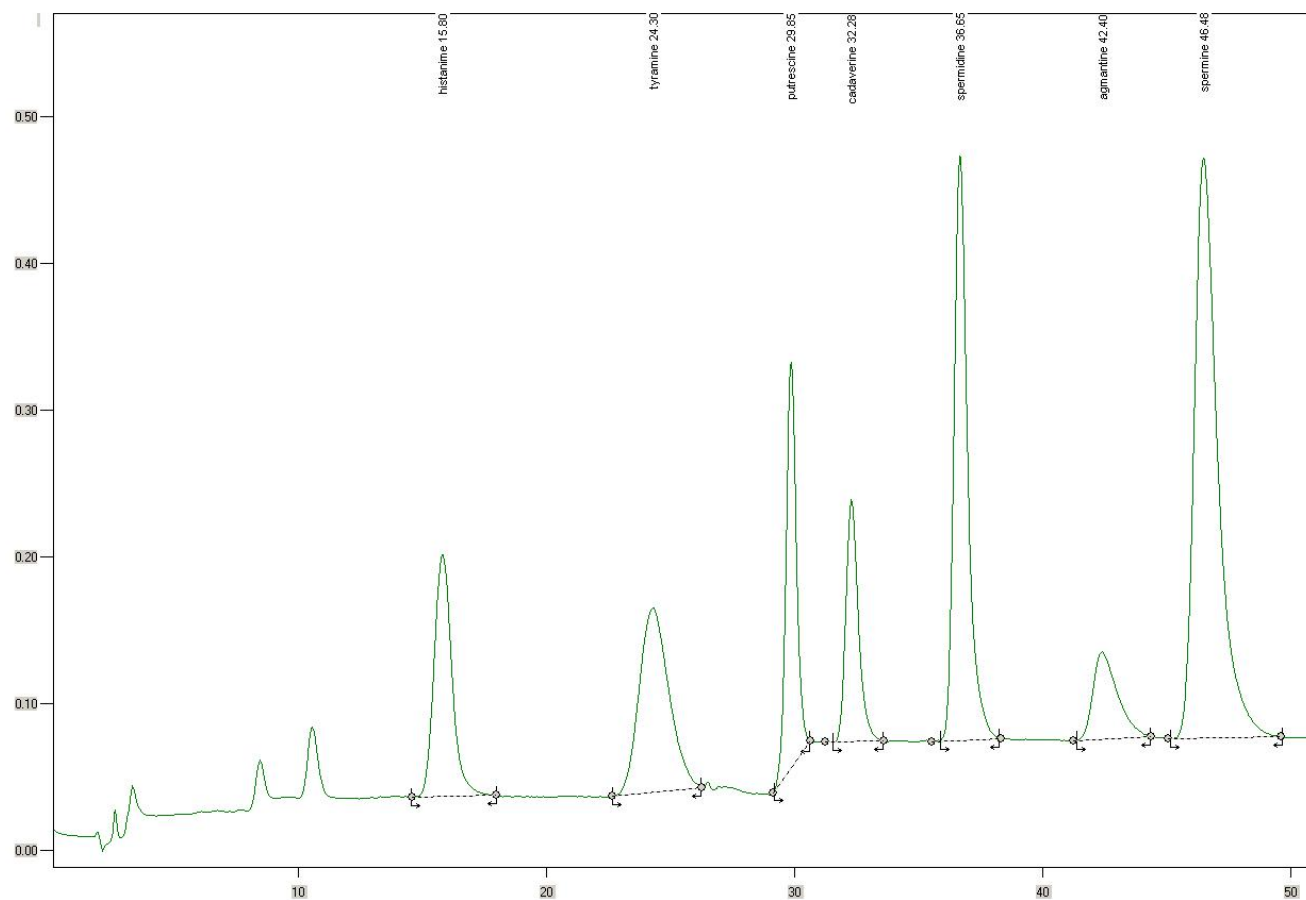
Buffers:  
sodium-potassium citrate bufferbuffers,  
0.2 M NaOH

Flow:  
Pump 1: 0.5 ml/min,  
Pump 2: 0.26 ml/min,

Detection:  
VIS 570 nm ,

Injection Quantity:  
100  $\mu$ ml

Biogenic amines standard contains obsahuje:  
Histamine, Tyramine, Putrescine, Cadaverine,  
Spermidine, Apmantine, Spermine



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