



<b>Reagents</b>		<b>Part Number</b>
Thermo Scientific MSTFA 10 x 1 mL ampules		TS-48910
Thermo Scientific acetonitrile silylation grade solvent		TS-20062
<b>Sample Handling Equipment</b>		<b>Part Number</b>
Thermo Scientific Reacti-Therm III Heating/Stirring Module		TS-18823
Thermo Scientific Reacti-Vap III Evaporator		TS-18826
Thermo Scientific Reacti-Block Q-1 (Holds 8 x 10 mL Reacti-Vials)		TS-18814
Thermo Scientific Reacti-Vial reaction clear glass vials 10 mL		TS-13225
Thermo Scientific 2 mL amber vial and screw tops		60180-565
<b>Separation Conditions</b>		<b>Part Number</b>
Instrumentation:	Thermo Scientific TRACE GC Ultra	
Column:	TRACE TR-5 30 m × 0.25 mm × 0.25 µm	260E142P
Thermo Scientific BTO 17 mm septa		31303211
5 mm ID focus split liner, 105 mm long		453T1905
Graphite liner seal		29033406
10 µL, 50 mm needle length gauge 25 syringe		36500525
Graphite ferrules to fit 0.1-0.25 mm ID columns		29053488
Carrier gas:	Helium	
Split flow:	60 mL/min	
Column flow:	1.2 mL/min, Constant flow	
Split ratio:	90:1	
Oven temperature:	100 °C, 15 °C/min, 300 °C	
Injector type:	Split/Splitless	
Injector mode:	Split	
Injector temperature:	240 °C	
Detector type:	FID	
Detector temperature:	280 °C	
Detector air flow:	35 mL/min	
Detector Hydrogen flow:	350 mL/min	
Detector nitrogen flow:	30 mL/min	
Thermo Scientific TriPlus Autosampler		
Injection Volume:	1 µL	
<b>Data Processing</b>		
Software:	Thermo Scientific XCalibur	

## Results

Separation of derivatized amino acids was achieved using a 5% phenyl methylpolysiloxane (TRACE TR-5) column (Figure 1). The stability of the amino acids and enhanced detection is observed following derivatization with MSTFA.

## Conclusion

MSTFA increases the volatility and stability of amino acids, allowing for enhanced separation and detection using the TRACE TR-5 GC column.

## References

Thermo Scientific reagents, solvents and accessories brochure (Ref: BR20535\_E 06/12S). Available upon request.

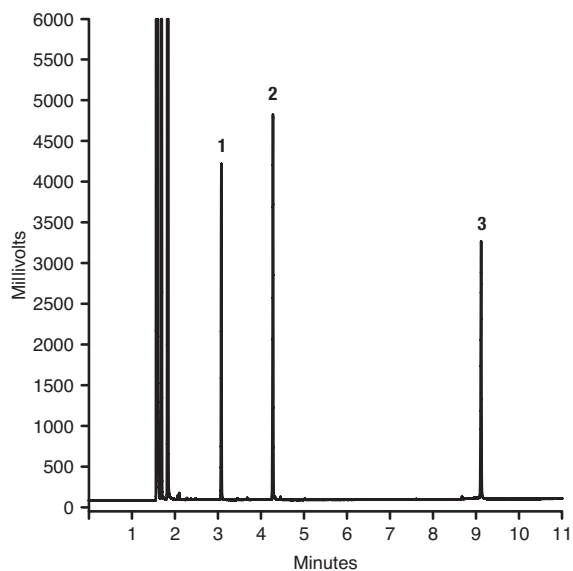
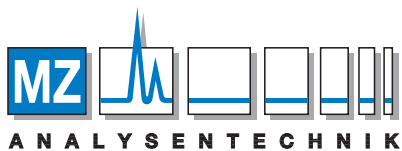


Figure 1: Chromatogram of the separation of the derivatized amino acids

Peak Number	Derivatised Amino acid	$t_r$ (min)
1	L-alanine	3.1
2	L-leucine	4.3
3	L-lysine	9.1



### AUTHORIZED DISTRIBUTOR

MZ-Analysentechnik GmbH, Barcelona-Allee 17 • D-55129 Mainz

Tel +49 6131 880 96-0, Fax +49 6131 880 96-20

e-mail: info@mz-at.de, www.mz-at.de

[thermoscientific.com/chromatography](http://thermoscientific.com/chromatography)

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 +86 20 83145199 800 810 5118  
**India** +91 22 6742 9494 +91 27 1766 2352  
**Australia** 1 300 735 292 (free call domestic)  
**New Zealand** 0800 933 966 (free call domestic)  
**All Other Enquiries** +44 (0) 1928 534 050

**Technical Support**  
**North America** +1 800 332 3331  
**Outside North America** +44 (0) 1928 534 440

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