•red®
analytical

DR-5MS SA

SINE AEQUALIS

GC-MS ANALYSIS WITHOUT EQUAL

Grob Test

The new DR-5MS SA is a new low-bleeding stationary phase ideal for GC-MS applications.

The DR-5MS SA is a low polarity phase with a selectivity equivalent to a 5% diphenyl - 95% methylpolysiloxane, developed to assure minimal bleeding at high temperatures.

Extremely low-bleeding, outstanding inertness, high long-term performances are the main features of this new column.

.red® columns have excellent performance and guaranteed reproducibility. All columns produced are individually tested using the original Grob Test mix to assure quality.

The new DR-5MS SA is available in the most commonly used GC-MS column dimensions. In addition, the column is offered in a new configuration using 0.15mm I.D. tubing. This offers one of the best compromises between resolution power and faster GC analysis.

As with all our other .red® capillary products, we can make a column to your custom dimensions. Please contact us for further details on sales@stratlab.co.uk.

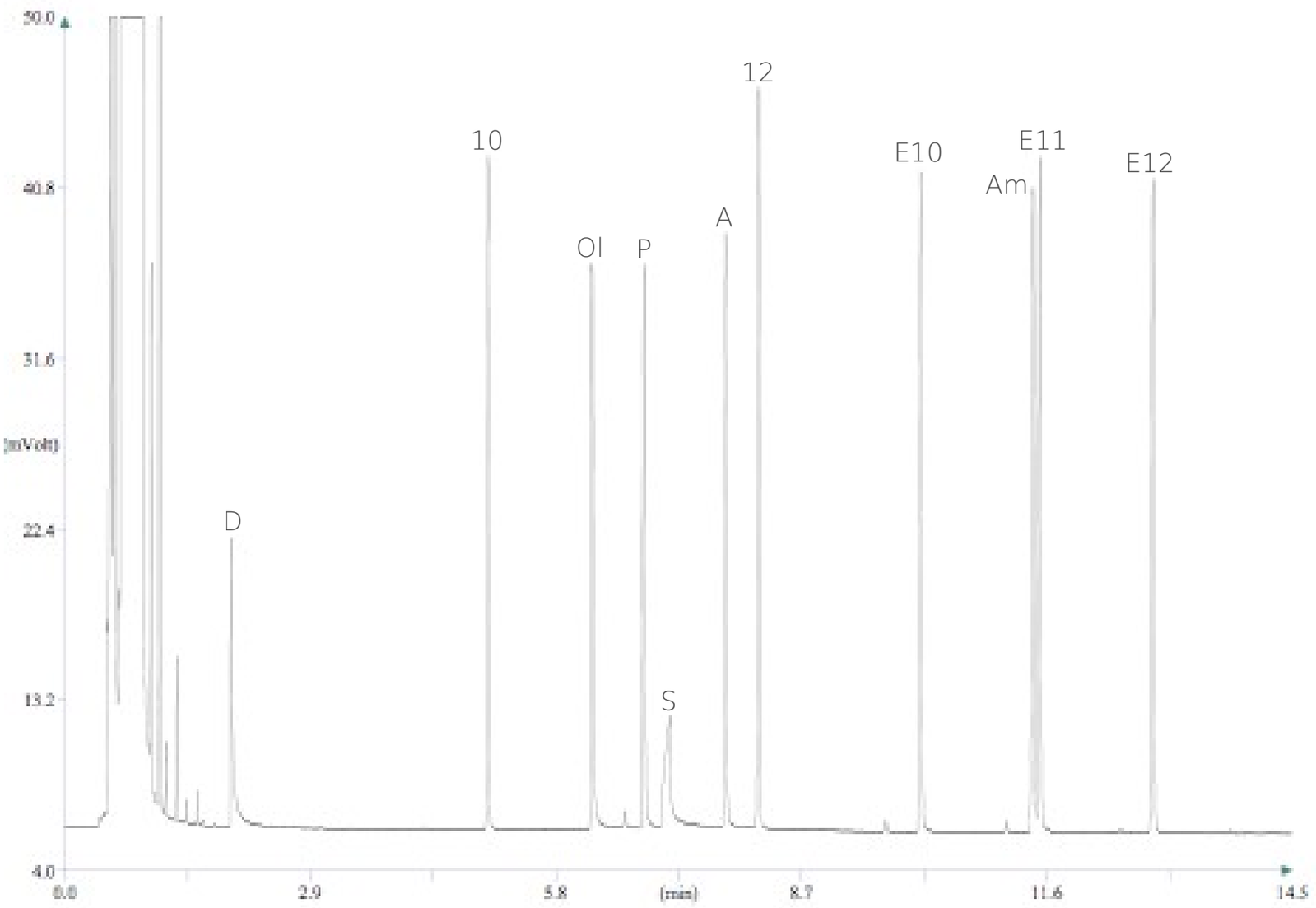


Figure 1. Grob Test chromatogram performed with the new DR-5MS SA 0.25mm, 0.25µm, 30m.
The test conditions were: 40°C - 200°C @ 10°C/min, Hydrogen carrier gas @ 80kPa (constant pressure), Split injector (250°C) with split ratio 1:20, 1µL injection volume, FID detector (250°C).
Grob Test Mix (Fluka cat. # 86501) composition: 2,3-Butanediol (D), Decane (10), 1-Octanol (Ol), 2,6-Dimethylphenol (P), 2-Ethylcaproic acid (S), 2,6-Dimethylaniline (A), Dodecane (12), methyl Decanoate (E10), Dicyclohexylamine (Am), methyl Undecanoate (E11), methyl Laurate (E12).

Bleeding

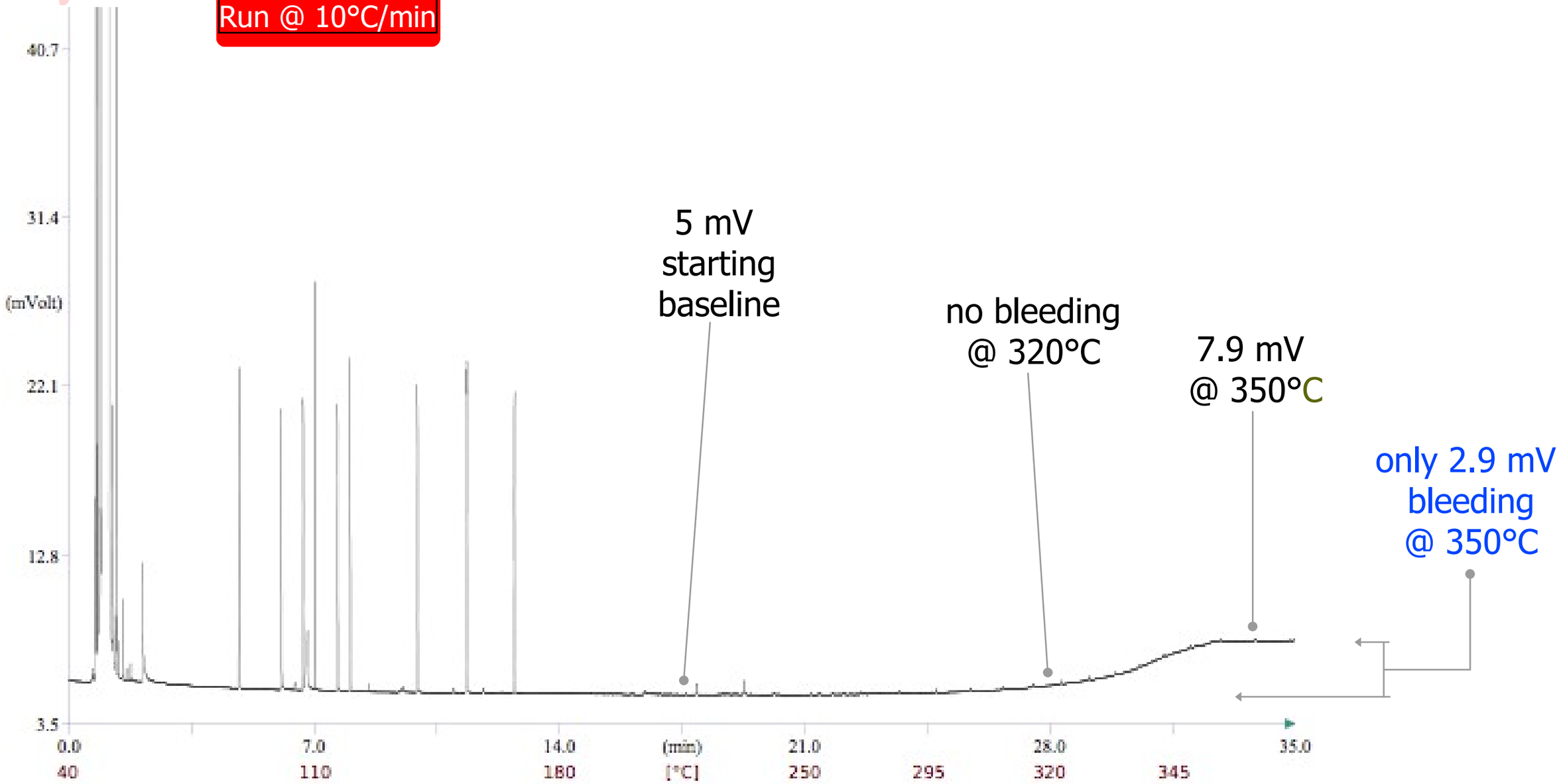


Figure 2. A Grob Test run performed on the new DR-5MS SA 0.25mm, 0.25µm, 30m is shown to highlight the bleeding level. Even with a temperature rate of 10°C/min (from 40°C to 350°C) the bleeding remains extremely low. The chromatogram shows a very flat baseline with no bleeding at 320°C and a minimal growth of the signal at the end of the analysis at high temperature (350°C).

POCs

1. Etridiaziole
2. Chloroneb
3. Propachlor
4. Trifluralin
5. *alpha*-HCH
6. HCB
7. Dicloran
8. Quintozene
9. *beta*-HCH
10. *gamma*-HCH
11. Chlorotalonil
12. *delta*-HCH
13. Heptachlor
14. DCPA
15. Aldrin
16. Isodrin
17. Heptachlor-epoxide
18. Captan
19. *gamma*-Chlordane
20. *alpha*-Chlordane
21. Endosulfan-I
22. *t*-Nonachlor
23. pp-DDE
24. Dieldrin
25. Endrin
26. Perthane
27. Chlorobenzilate
28. Endosulfan-II
29. cis-Nonachlor
30. pp-DDD
31. Endrin aldehyde
32. Carbophenothion
33. Endosulfan sulfate
34. pp-DDT
35. Endrin ketone
36. Methoxychlor
37. Mirex
38. *c*-Permethrin
39. *t*-Permethrin

Accustandard mix M-680P, M508P-B-R and M-617-2 (1ng/µL each compound).

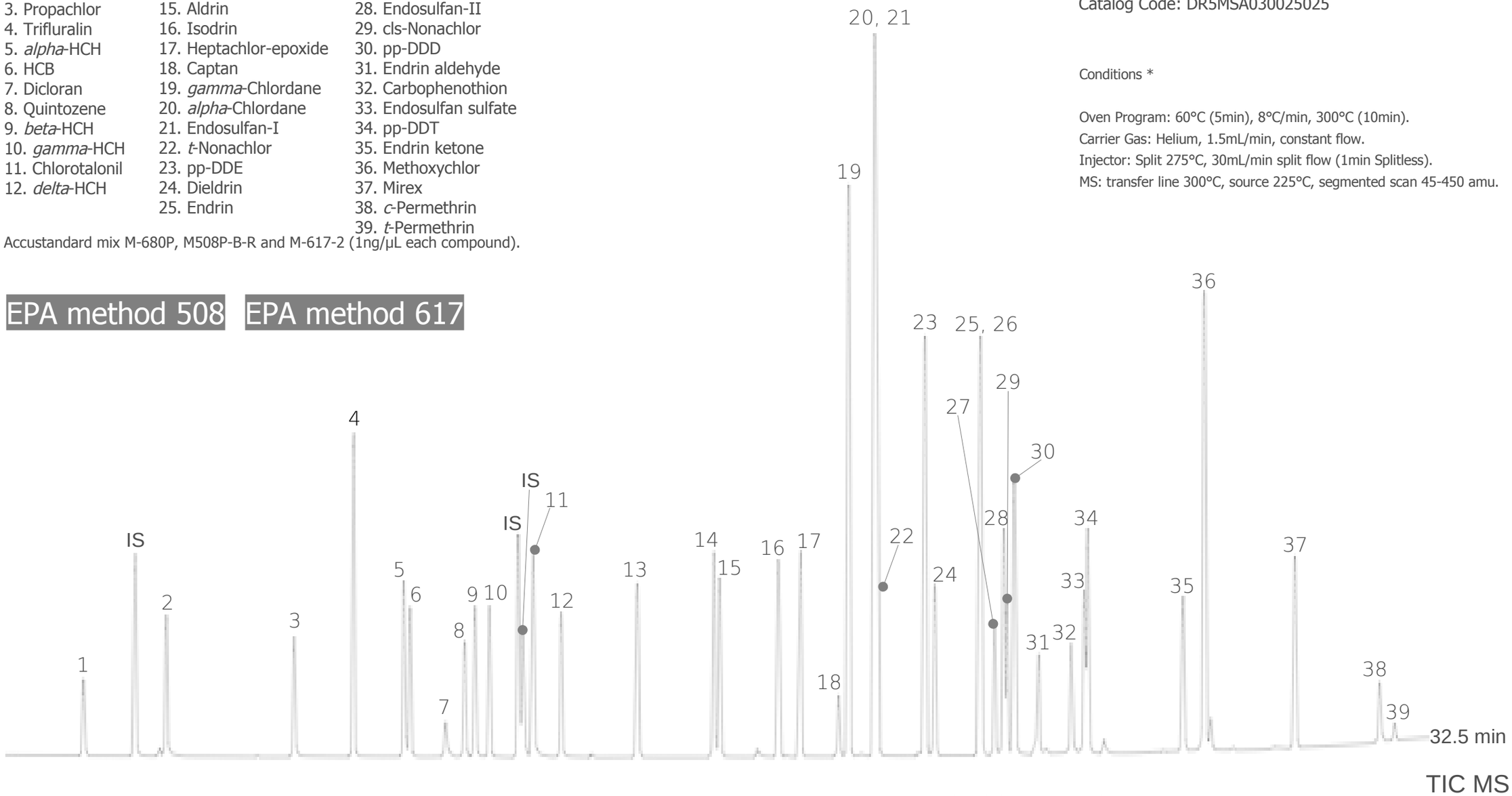
EPA method 508 EPA method 617

Column: DR-5MS SA - 0.25mm, 0.25µm, 30m

Catalog Code: DR5MSA030025025

Conditions *

Oven Program: 60°C (5min), 8°C/min, 300°C (10min).
Carrier Gas: Helium, 1.5mL/min, constant flow.
Injector: Split 275°C, 30mL/min split flow (1min Splitless).
MS: transfer line 300°C, source 225°C, segmented scan 45-450 amu.



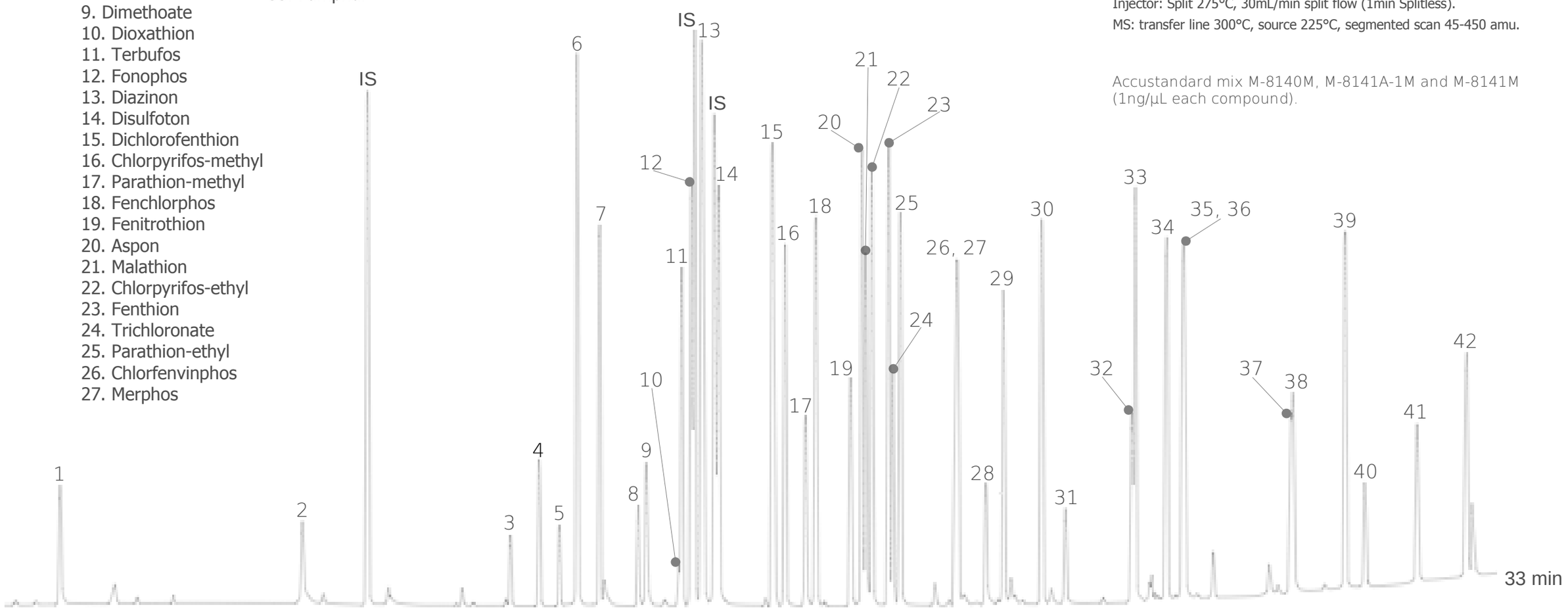
*: conditions used are not optimized for separations but are standard conditions used for a round-robin comparison.

Acknowledgement: Cromlab S.L., Acer 30-32, 08038 Barcelona.

POFs

1. Dichlorvos
2. Mevinphos
3. Demeton-S
4. Ethoprop
5. Naled
6. Sulfotep
7. Phorate
8. Demeton-O
9. Dimethoate
10. Dioxathion
11. Terbufos
12. Fonophos
13. Diazinon
14. Disulfoton
15. Dichlorofenthion
16. Chlorpyrifos-methyl
17. Parathion-methyl
18. Fenchlorphos
19. Fenitrothion
20. Aspon
21. Malathion
22. Chlorpyrifos-ethyl
23. Fenthion
24. Trichloronate
25. Parathion-ethyl
26. Chlorfenvinphos
27. Merphos
28. Crotoxyphos
29. Tetrachlorvinphos
30. Tokuthion
31. Tribuphos
32. Fensulfothion
33. Ethion
34. Sulprophos
35. Famphur
36. Carbophenothion
37. Phosmet
38. EPN
39. Leptophos
40. Azinphos-methyl
41. Azinphos-ethyl
42. Coumaphos

EPA method 8140, 8141



TIC MS

Column: DR-5MS SA - 0.25mm, 0.25µm, 30m

Catalog Code: DR5MSA030025025

Conditions *

Oven Program: 60°C (5min), 8°C/min, 300°C (10min).
Carrier Gas: Helium, 1.5mL/min, constant flow.
Injector: Split 275°C, 30mL/min split flow (1min Splitless).
MS: transfer line 300°C, source 225°C, segmented scan 45-450 amu.

Accustandard mix M-8140M, M-8141A-1M and M-8141M (1ng/µL each compound).

Acknowledgement: Cromlab S.L., Acer 30-32, 08038 Barcelona.

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Triazines

Column: DR-5MS SA - 0.25mm, 0.25µm, 30m

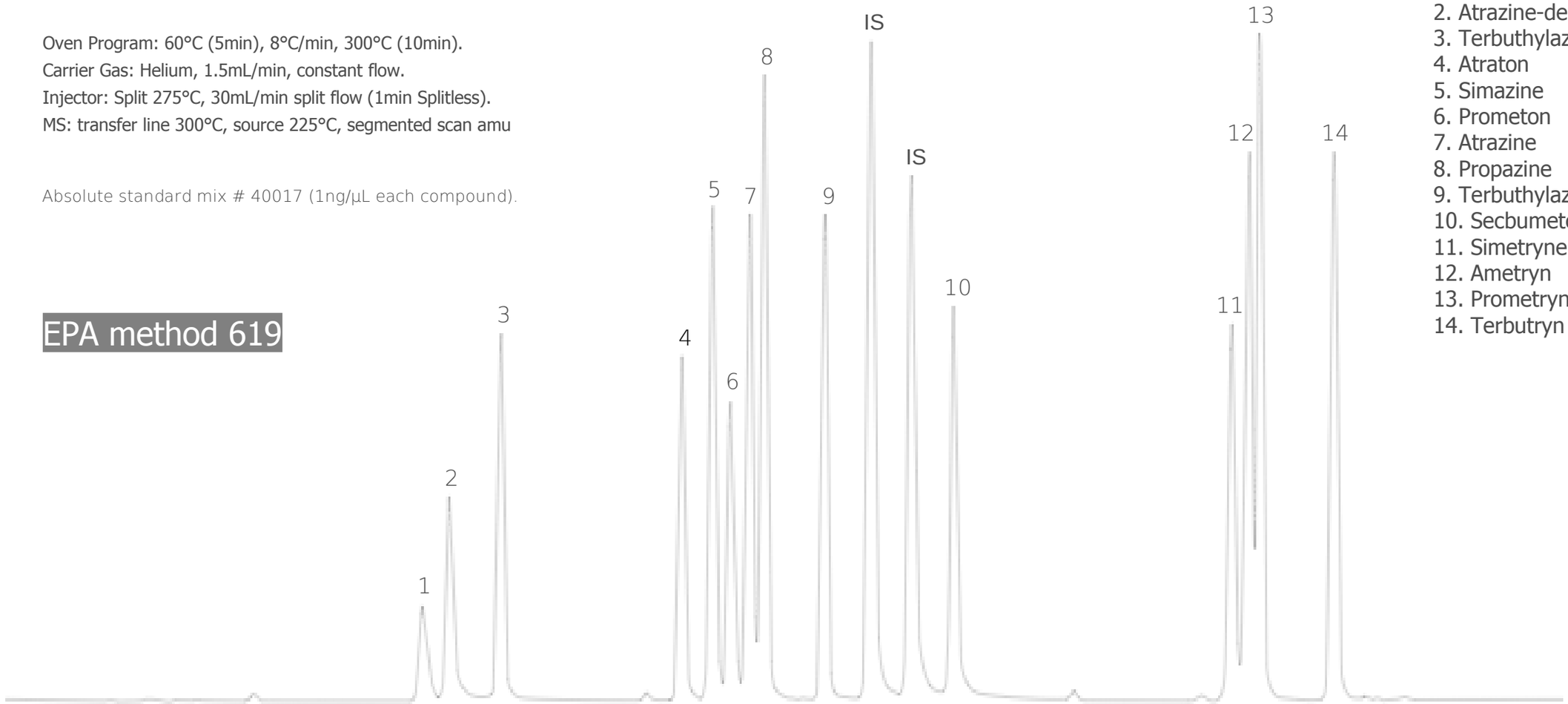
Catalog Code: DR5MSA030025025

Conditions *

Oven Program: 60°C (5min), 8°C/min, 300°C (10min).
Carrier Gas: Helium, 1.5mL/min, constant flow.
Injector: Split 275°C, 30mL/min split flow (1min Splitless).
MS: transfer line 300°C, source 225°C, segmented scan amu

Absolute standard mix # 40017 (1ng/µL each compound).

EPA method 619



1. Atrazine-desisopropyl
2. Atrazine-desethyl
3. Terbuthylazine
4. Atraton
5. Simazine
6. Prometon
7. Atrazine
8. Propazine
9. Terbuthylazine
10. Secbumeton
11. Simetryne
12. Ametryn
13. Prometryne
14. Terbutryn

Acknowledgement: Cromlab S.L., Acer 30-32, 08038 Barcelona.

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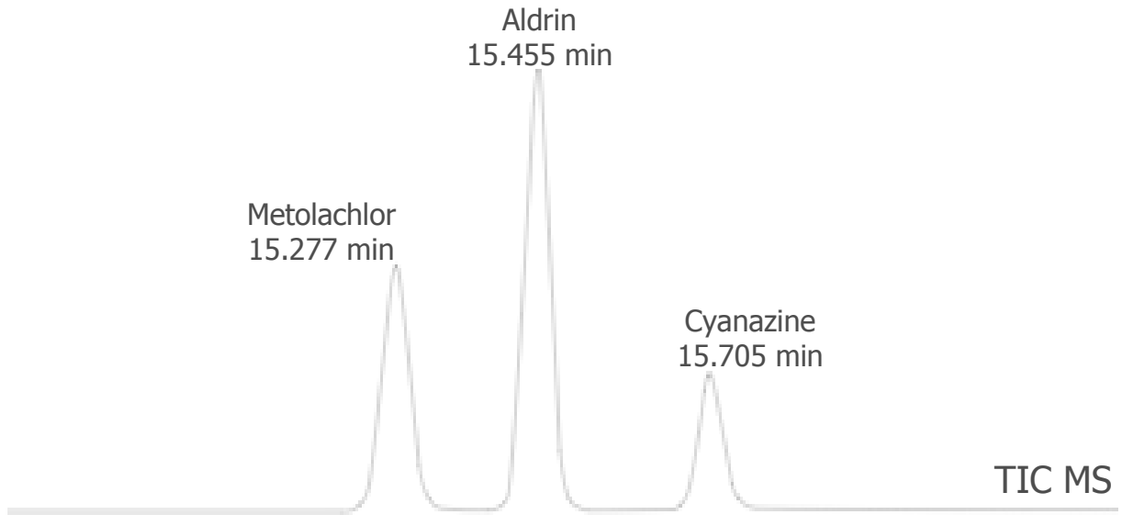
Other Separations

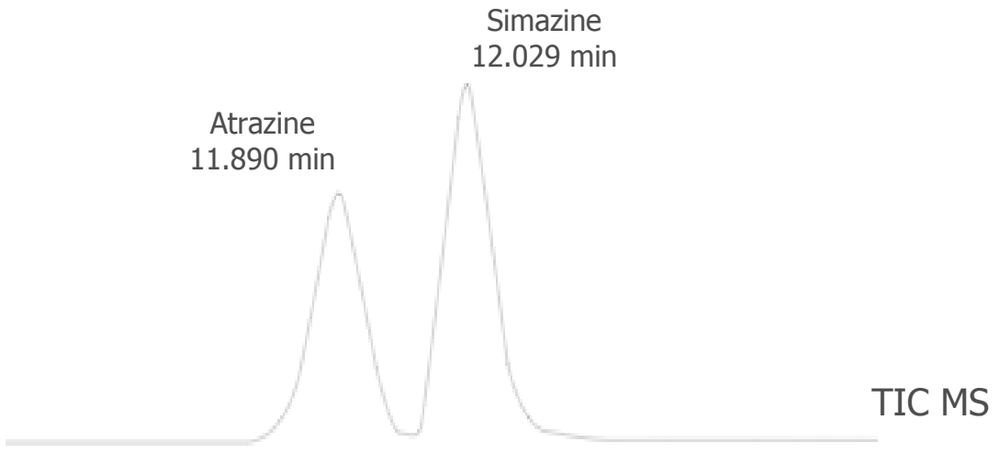
Column: DR-5MS SA - 0.25mm, 0.25µm, 30m
Catalog Code: DR5MSA030025025

Conditions *

Oven Program: 45°C (2min), 50°C/min, 160°C (1min), 6°C/min, 320°C (2min).
Carrier Gas: Helium, 1.0mL/min, constant flow.
Injector: Split 250°C, 50mL/min split flow, 1µL injection volume.
MS: full scan mode.



EPA method 525.2 mix



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