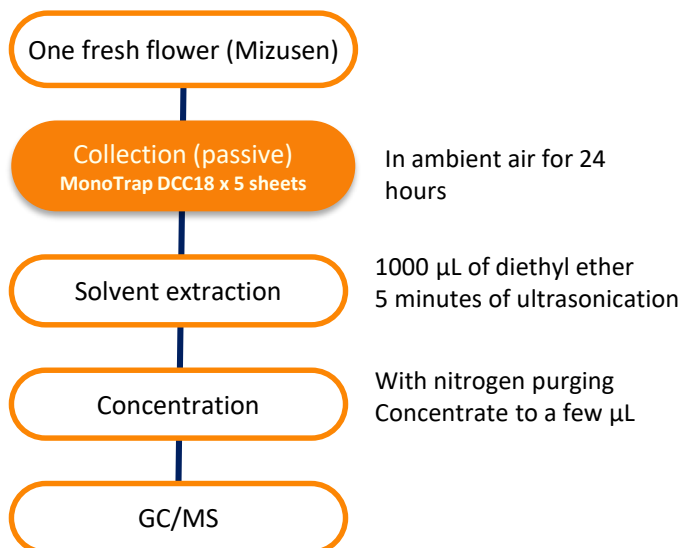


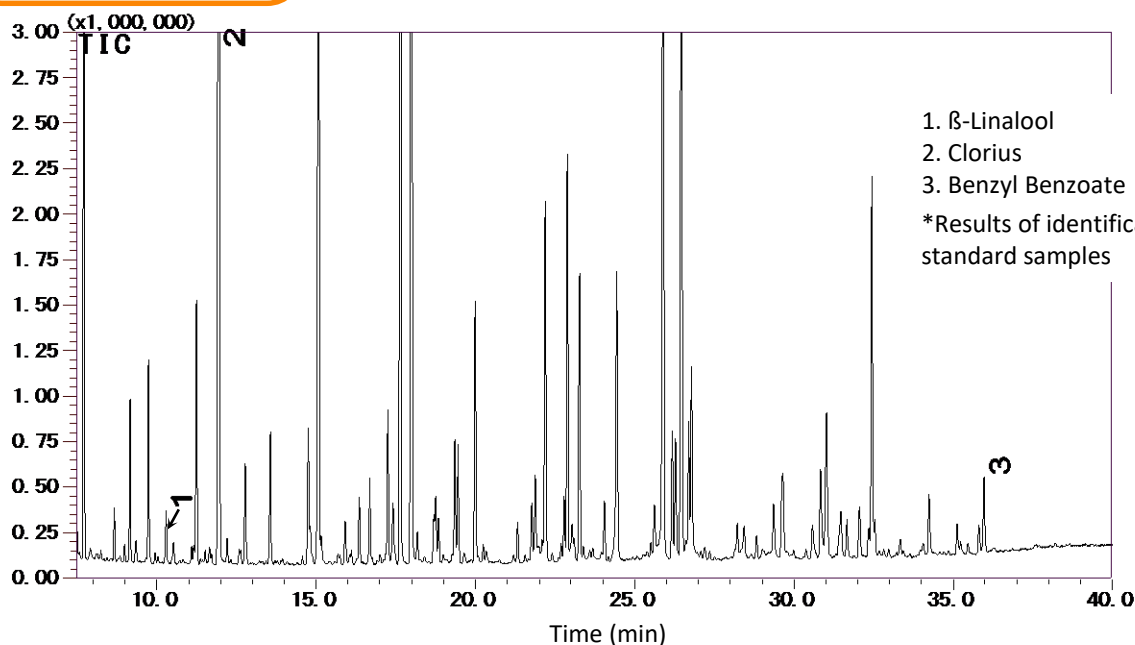
Simple Concentration and Analysis of Fresh Flower Fragrance Components - Using Sorptive Media MonoTrap

Preliminary processing procedure



GC Conditions

System : GC - MS
Column : InertCap Pure-WAX
 0.25 mm I.D. x 30 m df = 0.25 μ m
Col. Temp. : 70 $^{\circ}$ C - 4 $^{\circ}$ C/min - 220 $^{\circ}$ C
Carrier Gas : He 90 kPa
Injection : Split 1:10
 250 $^{\circ}$ C
Detection : MS Scan (m/z 50-450)
Sample Size : 1 μ L



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GL Sciences, Inc. Japan

22-1 Nishishinjuku 6-Chome
 Shinjuku-ku, Tokyo,
 163-1130, Japan
 Phone: +81-3-5323-6620
 Fax: +81-3-5323-6621
 Email: world@glsc.co.jp
 Web: www.glsciences.com

GL Sciences B.V.

De Sleutel 9
 5652 AS Eindhoven
 The Netherlands
 Phone: +31 (0)40 254 95 31
 Email: info@glsciences.eu
 Web: www.glsciences.eu

GL Sciences, Inc. USA

4733 Torrance Blvd. Suite 255
 Torrance, CA 90503
 Phone: 310-265-4424
 Fax: 310-265-4425
 Email: info@glsciencesinc.com
 Web: www.glsciencesinc.com

GL Sciences (ShangHai) Ltd.

Tower B, Room 2003,
 Far East International Plaza,
 NO,317 Xianxia Road,
 Changning District.
 Shanghai, China P.C. 200032
 Phone: +86 (0)21-6278-2272
 Email: contact@glsciences.com.cn
 Web: www.glsciences.com.cn

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Sample name and retention index

Component	RI	Component	RI	Component	RI
1. Methanol	362	24. 2-Methyl-1-propanol	624	45. 3-Methyl-1-butanol	731
2. Ethanol	439	(Isobutyl alcohol)		(Isoamyl alcohol)	
3. Acetonitrile	486	25. Tetrahydrofuran	630	46. 4-Methyl-2-pentanone(MIBK)	739
4. Acetone	488	26. 2-Methoxyethanol	630	47. Pyridine	748
5. 2-Propanol(Isopropyl alcohol)	488	(Methyl cellosolve)		48. 1-Pentanol(Amyl alcohol)	764
6. n-Pentane	500	27. 1,2-Dimethoxyethane	650	49. Isobutyl acetate	772
7. Diethyl ether	504	28. 1,1,1-Trichloroethane	650	50. Toluene	774
8. Ethyl formate	515	29. 1,2-Dichloroethane	650	51. N,N-Dimethylformamide	781
9. 1,1-Dimethoxymethane	515	30. 2,2-Dimethoxypropane	650	52. 2-Hexanone(MBK)	789
10. 1,1-Dichloroethylene	518	31. Methyl isopropyl ketone	658	53. Propionaldehyde diethyl acetate	811
11. Methyl acetate	524	32. Isopropyl acetate	658	54. n-Butyl acetate	811
12. Dichloromethane	530	33. 1-Butanol	658	55. Dimethyl sulfoxide(DMSO)	834
13. 1-Propanol	550	34. Benzene	666	56. Chlorobenzene	858
14. trans-1,2-Dichloroethylene	560	35. Carbon tetrachloride	666	57. N,N-Dimethylacetamide	870
15. tert-Butyl methyl ether	562	36. Cyclohexane	666	58. Ethylbenzene	870
16. Nitromethane	564	37. 2-Methyltetrahydrofuran	672	59. p-Xylene	879
17. 2-Butanone(MEK)	597	38. 2,2,4-Trimethylpentane	690	60. m-Xylene	879
18. 2-Butanol	600	39. n-Heptane	700	61. o-Xylene	905
19. n-Hexane	600	40. Trichloroethylene	704	62. Anisole	926
20. Diisopropyl ether	600	41. 2-Ethoxyethanol	712	63. Cumene	936
21. cis-1,2-Dichloroethylene	611	42. n-Propyl acetate	712	64. N-methyl-2-pyrrolidone	1050
22. Ethyl acetate	611	43. 1,4-Dioxane	712	65. 1,2,3,4-Tetrahydronaphthalene	1194
23. Chloroform	619	44. Methylcyclohexane	731	66. Sulfolane	1232

Xylene used is a mixture of m Xylene, p Xylene, o Xylene, and Ethylbenzene.

Retention indices are...

This value is based on the carbon number of straight-chain alkanes and is calculated using the retention time of each component and hydrocarbon.

In this application, a temperature-rise analysis was made. The formula is shown below.

$$\text{Retention index} = 100 \times \frac{\text{TR} - \text{tR}(Z)}{\text{TR}(Z+1) - \text{tR}(Z)} + 100 \times Z$$

TR = retention time of the target component

T R(Z) = retention time of straight-chain alkanes that precede the components of interest

TR(Z+1) = retention time of straight-chain alkanes emerging after the component of interest.

Z = number of carbon in the straight-chain alkane with retention time tR(Z)

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22-1 Nishishinjuku 6-Chome
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