

揮発性化合物 – VOCs (US EPA 524.2 PT/GC)

Sample : 10 ppb each component in 5 mL water

Trap : VOCARB 3000

Cat. No. : 21066-U

Purge : 11 min., 40 mL/min.

Dry : 3 min.

Desorb. Temp : 250 for 4 min.

Bake : 280 for 10 min.

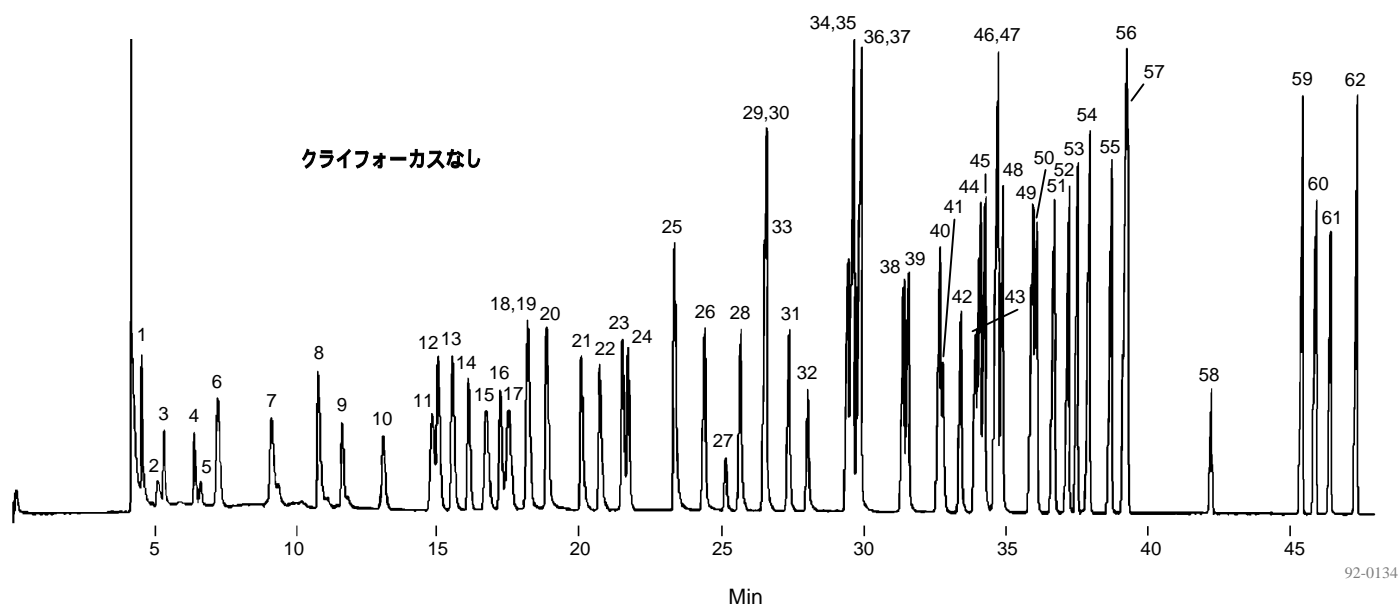
Column : VOCOL, 105 m x 0.53 mm ID, 3.0 µm film

Cat. No. : 25358

Oven : 35 (10 min.), 4 /min. to 200 (hold 10 min.)

Carrier gas : Helium, 10 mL/min.

Det. : MS, Scan Range m/z =35 - 260 at 0.6 sec/scan



- | | | |
|-------------------------------|-------------------------------|--------------------------------------|
| 1. Dichlorodifluoromethane | 22. 1,2-Dichloropropane | 43. 1,2,3-Trichloropropane |
| 2. Chloromethane | 23. Bromodichloromethane | 44. n-Propylbenzene |
| 3. Vinyl chloride | 24. Dibromomethane | 45. Bromobenzene |
| 4. Bromomethane | 25. cis-1,3-Dichloropropene | 46. 1,3,5-Trimethylbenzene |
| 5. Chloroethane | 26. Toluene | 47. 2-Chlorotoluene |
| 6. Trichlorofluoromethane | 27. trans-1,3-Dichloropropene | 48. 4-Chlorotoluene |
| 7. 1,1-Dichloroethylene | 28. 1,1,2-Trichloroethane | 49. tert-Butylbenzene |
| 8. Methylene chloride | 29. 1,3-Dichloropropane | 50. 1,2,4-Trimethylbenzene |
| 9. trans-1,2-Dichloroethylene | 30. Tetrachloroethylene | 51. sec-Butylbenzene |
| 10. 1,1,-Dichloroethane | 31. Chlorodibromomethane | 52. p-Isopropyltoluene |
| 11. 2,2-Dichloropropane | 32. 1,2-Dibromoethane | 53. 1,3-Dichlorobenzene |
| 12. cis-1,2-Dichloroethylene | 33. Chlorobenzene | 54. 1,4-Dichlorobenzene |
| 13. Chloroform | 34. 1,1,1,2-Tetrachloroethane | 55. n-Butylbenzene |
| 14. Bromochloromethane | 35. Ethylbenzene | 56. 1,2-Dichlorobenzene-d4 (int std) |
| 15. 1,1,1-Trichloroethane | 36. m-Xylene | 57. 1,2-Dichlorobenzene |
| 16. 1,1-Dichloropropene | 37. p-Xylene | 58. 1,2-Dibromo-3-chloropropane |
| 17. Carbon tetrachloride | 38. o-Xylene | 59. 1,2,4-Trichlorobenzene |
| 18. 1,2-Dichloroethane | 39. Styrene | 60. Hexachlorobutadiene |
| 19. Benzene | 40. Isopropylbenzene | 61. Naphthalene |
| 20. Fluorobenzene (int std) | 41. Bromoform | 62. 1,2,3-Trichlorobenzene |
| 21. Trichloroethylene | 42. 1,1,2,2-Tetrachloroethane | |

揮発性化合物 – VOCs (水中)

Sample : 20 ppb each component in 5 mL water

Trap : VOCARB 3000

Cat.No. : 21066-U

Purge : 11 min., 40 mL/min.

Dry purge : 3 min.

Desorption : 250 for 4 min.

Bake : 280 for 10 min.

Column : VOCOL, 30 m x 0.53 mm ID,
3.0 μm film

Cat. No. : 25320-U

Oven : 5 (2min.), 5 /min. to 200

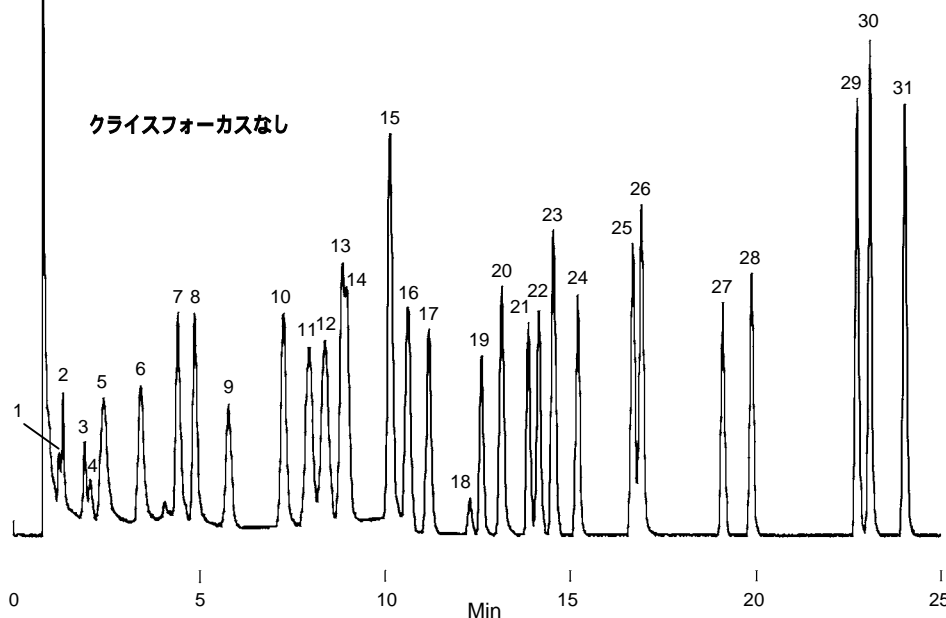
Det. : MS, Scan Range

m/z=35 - 260 at 0.6 sec/scan

Carrier gas : Helium, 7.5 mL/min.

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|-------------------------------|-------------------------------|
| 14. 1,2-Dichloroethane | 23. Tetrachloroethylene |
| 15. Trichloroethylene | 24. Dibromochloromethane |
| 16. 1,2-Dichloropropane | 25. Chlorobenzene |
| 17. Bromodichloromethane | 26. Ethylbenzene |
| 18. 2-Chloroethyl vinyl ether | 27. Bromoform |
| 19. Cis-1,3-Dichloropropene | 28. 1,1,2,2-Tetrachloroethane |
| 20. Toluene | 29. 1,3-Dichlorobenzene |
| 21. trans-1,3-Dichloropropene | 30. 1,4-Dichlorobenzene |
| 22. 1,1,2-Trichloroethane | 31. 1,2-4-Dichlorobenzene |

1. Chloromethane
2. Vinyl chloride
3. Bromomethane
4. Chloromethane
5. Trichlorofluoromethane
6. 1,1-Dichloroethylene
7. Methylene chloride
8. Trans-1,2-Dichloroethene
9. 1,1-Dichloroethane
10. Chloroform
11. 1,1,1-Trichloroethane
12. Carbon tetrachloride
13. Benzene



713-0693

揮発性化合物 – VOCs (US EPA 624 PT/GC)

Sample : 20 ppb each component in 5 mL water

Trap : VOCARB 3000

Cat. No. : 21066-U

Purge : 11 min., 35 mL/min.

Dry Purge : 3 min.

Desorb. Temp : 250 for 4 min.

Bake : 60 for 10 min.

Column : VOCOL, 105 m x 0.53 mm ID, 3.0 μm film

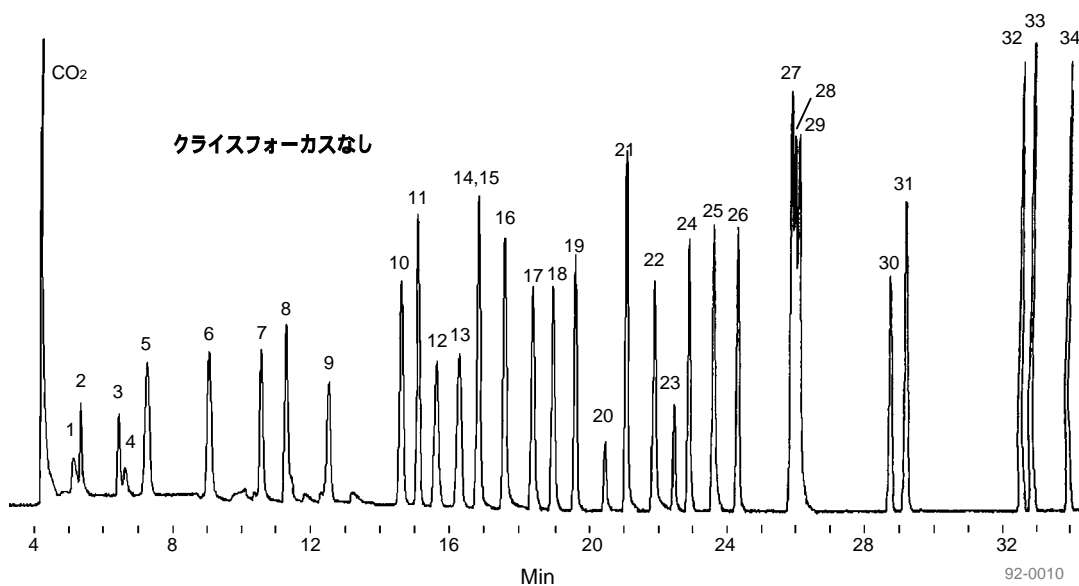
Cat. No. : 25358

Oven : 35 (4 min.), 6 /min. to 200

Carrier gas : Helium, 7.5 mL/min.

Det. : MS, Scan Range m/z =35 - 260 at 0.6 sec/scan

1. Chloromethane
2. Vinyl chloride
3. Bromomethane
4. Chloroethane
5. Trichlorofluoromethane
6. 1,1-Dichloroethylene
7. Methylene chloride
8. trans-1,2-Dichloroethylene
9. 1,1-Dichloroethane
10. Chloroform
11. Bromochloromethane (IS)
12. 1,1,1-Trichloroethane
13. Carbon tetrachloride
14. Benzene
15. 1,2-Dichloroethane
16. Difluorobenzene (IS)
17. Trichloroethylene
18. 1,2-Dichloropropane
19. Bromodichloromethane
20. 2-Chloroethyl vinyl ether
21. cis-1,3-Dichloropropene
22. Toluene
23. trans-1,3-Dichloropropene
24. 1,1,2-Trichloroethane
25. Tetrachloroethylene
26. Chlorodibromomethane
27. Chlorobenzene-d5 (IS)
28. Chlorobenzene
29. Ethylbenzene
30. Bromoform
31. 1,1,2,2-Tetrachloroethane
32. 1,3-Dichlorobenzene
33. 1,4-Dichlorobenzene
34. 1,2-Dichlorobenzene



92-0010

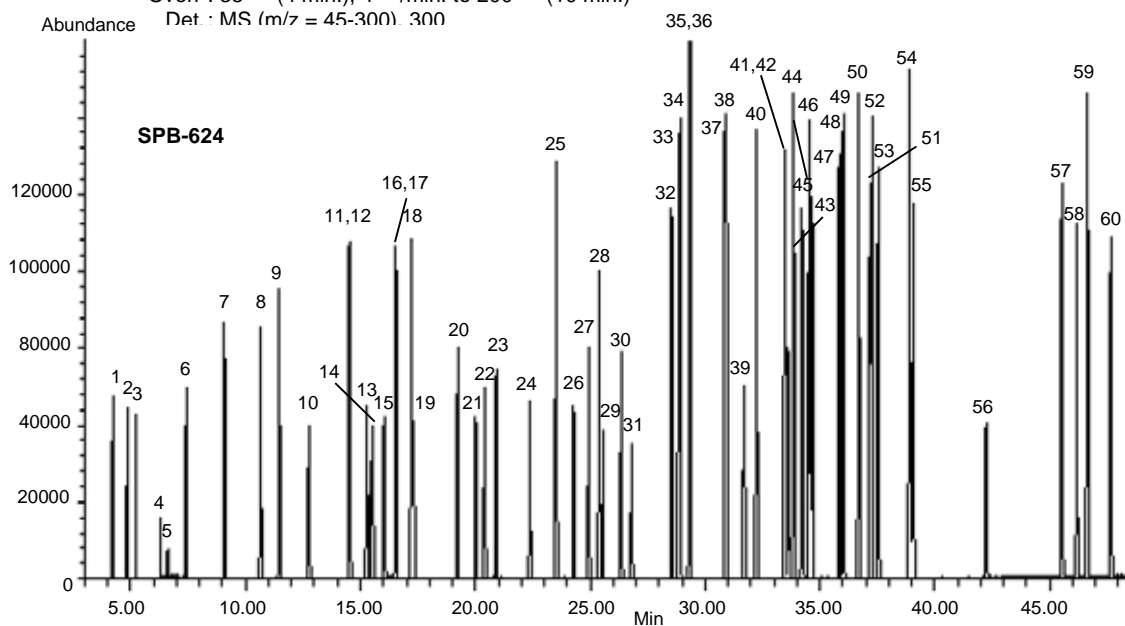
揮発性化合物 – 60種 VOCs 分離 (水中)

Column : SPB-624, 60 m x 0.25 mm ID, 1.4 μm film
 VOCOL, 60 m x 0.25 mm ID, 1.5 μm film
 SPB-Octyl, 60 m x 0.25 mm ID, 1.0 μm film

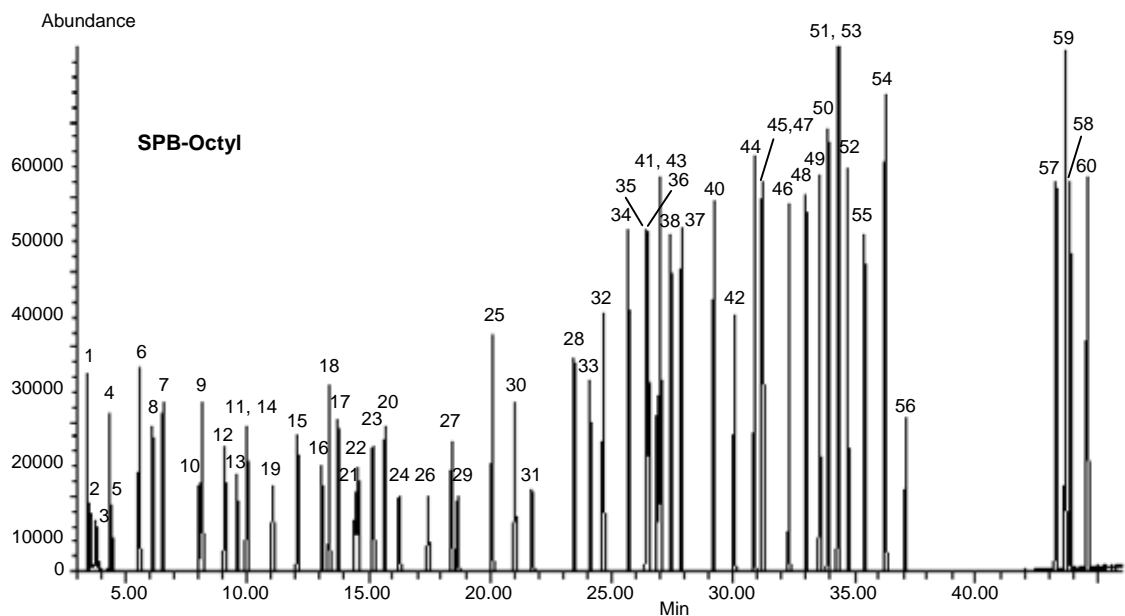
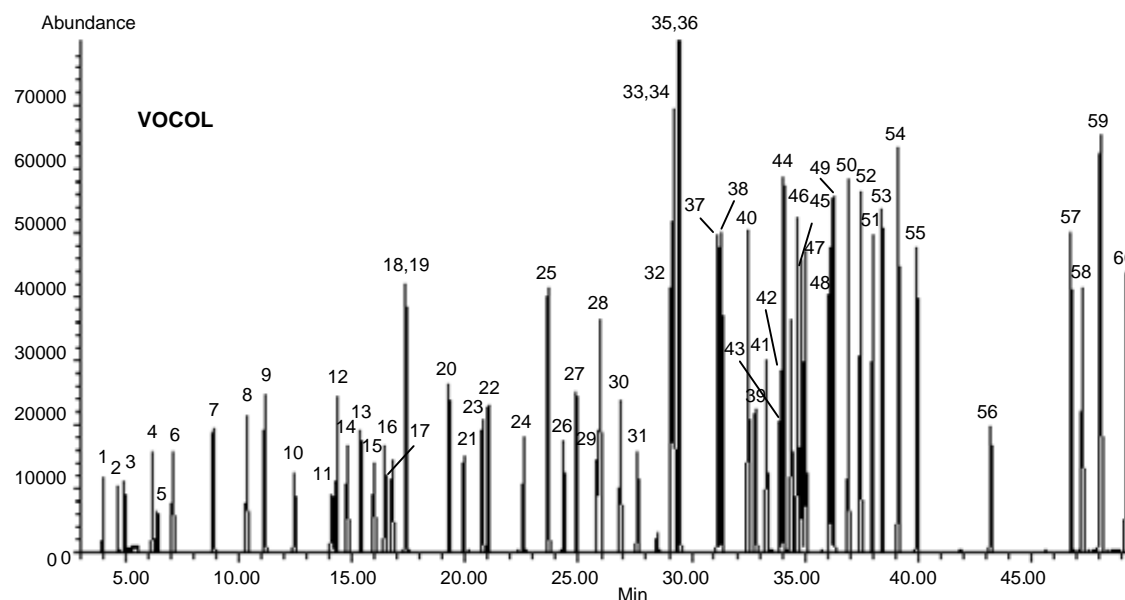
Cat. No. : 24256
 Cat. No. : 24154
 Cat. No. : 24233-U

Oven : 35 (4 min.), 4 /min. to 200 (10 min.)

Det : MS (m/z = 45-300) 300

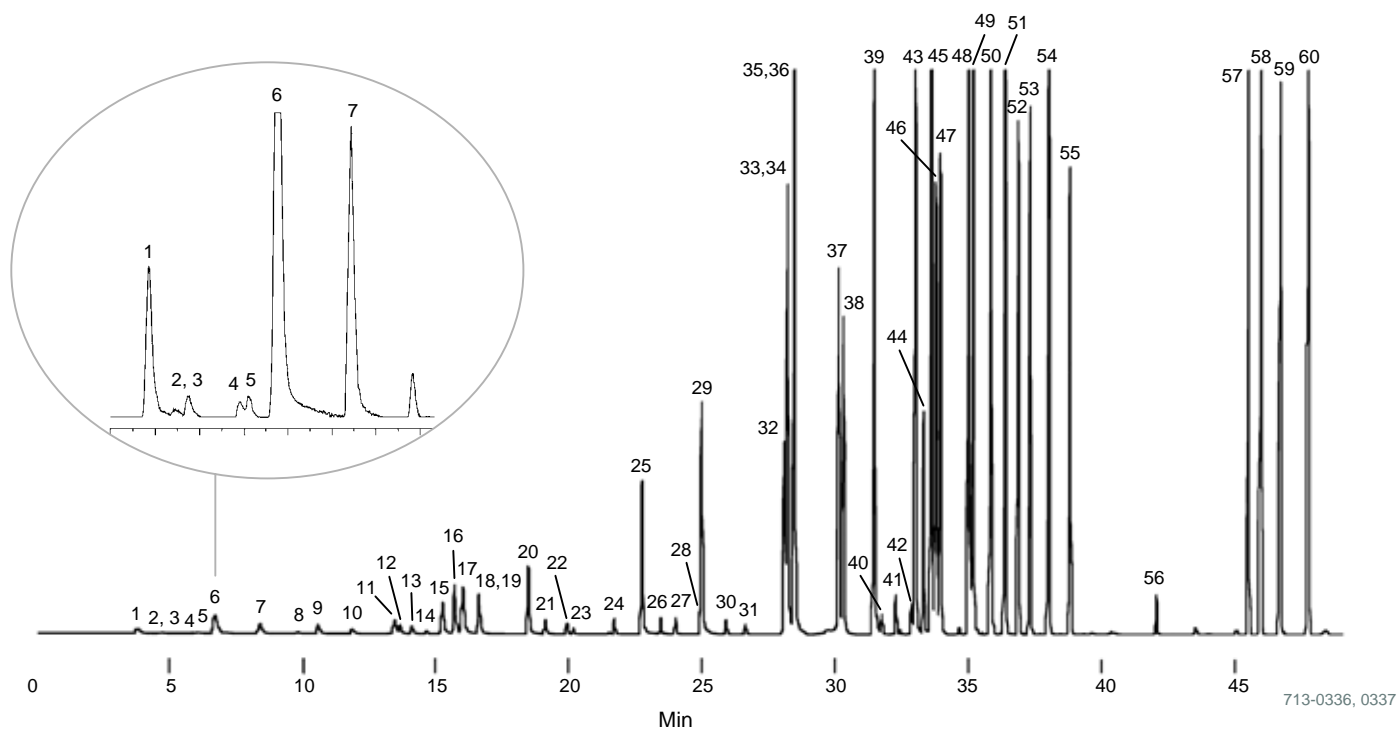


1. Dichlorodifluoromethane
2. Chloromethane
3. Vinyl chloride
4. Bromomethane
5. Chloroethane
6. Trichlorofluoromethane
7. 1,1-Dichloroethene
8. Methylene chloride
9. trans-1,2-Dichloroethene
10. 1,1,-Dichloroethane
11. 2,2-Dichloropropane
12. cis-1,2-Dichloroethene
13. Bromochloromethane
14. Chloroform
15. 1,1,1-Trichloroethane
16. 1,1-Dichloropropene
17. Carbon tetrachloride
18. Benzene
19. 1,2-Dichloroethane
20. Trichloroethene
21. 1,2-Dichloropropane
22. Dibromomethane
23. Bromodichloromethane
24. cis-1,3-Dichloropropene
25. Toluene
26. trans-1,3-Dichloropropene
27. 1,1,2-Trichloroethane
28. Tetrachloroethene
29. 1,3-Dichloropropane
30. Dibromochloromethane
31. 1,2-Dibromoethane
32. Chlorobenzene
33. 1,1,1,2-Tetrachloroethane
34. Ethylbenzene
35. m-Xylene
36. p-Xylene
37. o-Xylene
38. Styrene
39. Bromoform
40. Isopropylbenzene
41. 1,1,2,2-Tetrachloroethane
42. Bromobenzene
43. 1,2,3-Trichloropropane
44. n-Propylbenzene
45. 2-Chlorotoluene
46. 1,3,5-Trimethylbenzene
47. 4-Chlorotoluene
48. tert-Butylbenzene
49. 1,2,4-Trimethylbenzene
50. sec-Butylbenzene
51. 1,3-Dichlorobenzene
52. p-Isopropyltoluene
53. 1,4-Dichlorobenzene
54. n-Butylbenzene
55. 1,2-Dichlorobenzene
56. 1,2-Dibromo-3-chloropropane
57. 1,2,4-Trichlorobenzene
58. Hexachlorobutadiene
59. Naphthalene
60. 1,2,3-Trichlorobenzene



揮発性化合物 – VOCs 60成分 (水中、SPME)

Sample : 50 ppb each analyte in 20 mL water
 SPME Fiber: polydimethylsiloxane, 100 µm film
 Cat. No. : 57300-U
 Sampling: 5 min.
 Desorption: 6 min., 220 °C, split/splitless
 (splitter vent closed 6 min., then vented at 100 mL/min.)
 Column : VOCOL, 60 m x 0.25 mm ID, 1.5 µm film
 Cat. No. : 24154
 Col. Temp.: 35 °C (4 min.) to 200 °C at 4 °C/min.
 Carrier gas: Helium, 2 mL/min.
 Det. : MS (m/z = 35 - 260 at 0.6 sec/scan)



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|-------------------------------|-------------------------------|---------------------------------|
| 1. Dichlorodifluoromethane | 21. 1,2-Dichloropropane | 41. 1,1,2,2-Tetrachloroethane |
| 2. Chloromethane | 22. Bromodichloromethane | 42. 1,2,3-Trichloropropane |
| 3. Vinyl chloride | 23. Dibromomethane | 43. n-Propylbenzene |
| 4. Bromomethane | 24. cis-1,3-Dichloropropene | 44. Bromobenzene |
| 5. Chloroethane | 25. Toluene | 45. 1,3,5-Trimethylbenzene |
| 6. Trichlorofluoromethane | 26. trans-1,3-Dichloropropene | 46. 2-Chlorotoluene |
| 7. 1,1-Dichloroethylene | 27. 1,1,2-Trichloroethane | 47. 4-Chlorotoluene |
| 8. Methylene chloride | 28. 1,3-Dichloropropane | 48. tert-Butylbenzene |
| 9. trans-1,2-Dichloroethylene | 29. Tetrachloroethylene | 49. 1,2,4-Trimethylbenzene |
| 10. 1,1,-Dichloroethane | 30. Dibromochloromethane | 50. sec-Butylbenzene |
| 11. 2,2-Dichloropropane | 31. 1,2-Dibromoethane | 51. p-Isopropyltoluene |
| 12. cis-1,2-Dichloroethylene | 32. Chlorobenzene | 52. 1,3-Dichlorobenzene |
| 13. Chloroform | 33. 1,1,1,2-Tetrachloroethane | 53. 1,4-Dichlorobenzene |
| 14. Bromochloromethane | 34. Ethylbenzene | 54. n-Butylbenzene |
| 15. 1,1,1-Trichloroethane | 35. m-Xylene | 55. 1,2-Dichlorobenzene |
| 16. 1,1-Dichloropropene | 36. p-Xylene | 56. 1,2-Dibromo-3-chloropropane |
| 17. Carbon tetrachloride | 37. o-Xylene | 57. 1,2,4-Trichlorobenzene |
| 18. 1,2-Dichloroethane | 38. Styrene | 58. Hexachlorobutadiene |
| 19. Benzene | 39. Isopropylbenzene | 59. Naphthalene |
| 20. Trichloroethylene | 40. Bromoform | 60. 1,2,3-Trichlorobenzene |

揮発性化合物 – VOCs類の分離 (US EPA TO-17 加熱脱離)

GC Column : VOCOL, 60 m x 0.25 mm ID, 1.5 µm film

Cat. No. : 24154

Oven: 37 (4 min.) 4 /min., to 200 (10 min.)

Carrier gas: Helium, 2 mL/min.

Det.: FID

1. Halocarbon 12
2. Halocarbon 114
3. Chloromethane
4. Vinyl chloride
5. Bromomethane
6. Ethyl chloride
7. Halocarbon 11
8. Halocarbon 113
9. 1,1-Dichloroethene
10. Methylene chloride
11. 1,1-Dichloroethane
12. cis-1,2-Dichloroethene
13. Chloroform
14. 1,1,1-Trichloroethane

15. Carbon tetrachloride
16. 1,2-Dichloroethane
17. Benzene
18. Trichloroethene
19. 1,2-Dichloropropane
20. cis-1,3-Dichloropropene
21. Toluene
22. trans-1,3-Dichloropropene
23. 1,1,2-Trichloroethane
24. Tetrachloroethene
25. 1,2-Dibromoethane
26. Chlorobenzene

27. Ethylbenzene
28. m-Xylene
29. p-Xylene
30. o-Xylene
31. Styrene
32. 1,1,2,2-Tetrachloroethane
33. 1,3,5-Trimethylbenzene
34. 1,2,4-Trimethylbenzene
35. 1,3-Dichlorobenzene
36. 1,4-Dichlorobenzene
37. 1,2-Dichlorobenzene
38. 1,2,4-Trichlorobenzene
39. Hexachloro-1,3-butadiene

