

# HPLC APPLICATION



 株式会社 **ケムコプラス**

No.	アプリケーション名	使用カラム
U-1	ニトロアニリン異性体(Nitroaniline isomers)	CHEMCOSORB 5Si-U
U-2	アンチピリン誘導体(Antipyrine derivatives)	CHEMCOSORB 5CN-U
U-3	クロフィブレート(Clofibrate)	CHEMCOSORB 5CN-U
U-4	ジクロロニトロベンゼン異性体(Dichloronitrobenzene isomers)	CHEMCOSORB 5NH2-U
U-5	感冒薬(Cold medicine)	CHEMCOSORB 5ODS-UH
U-6	フタル酸異性体(Phthalic acid isomers)	CHEMCOSORB 5ODS-UH
U-7	多環芳香族炭化水素(Polyaromatic hydrocarbons)	CHEMCOSORB 5ODS-UH
U-9	金属配位性化合物(Metal complex compounds)	CHEMCOSORB 5ODS-UH
U-10	血管補強剤(Anticoagulants)	CHEMCOSORB 5ODS-UH
U-11	局所鎮痛薬(Analgesic)	CHEMCOSORB 5ODS-UH
U-12	キサンチン誘導体(Xanthine derivatives)	CHEMCOSORB 5ODS-UH
U-13	バルビタール誘導体(Barbiturates)	CHEMCOSORB 5ODS-UH
U-14	カフェイン、フェノール等標準サンプル(Standard samples)	CHEMCOSORB 5ODS-UH
U-15	アンチピリン誘導体(Antipyrine derivatives)	CHEMCOSORB 5DPH-U
U-16	テトラサイクリン誘導体(Tetracycline derivatives)	CHEMCOSORB 5DPH-U
U-17	プリン誘導体(Purine derivatives)	CHEMCOSORB 5ODS-UH
U-18	有機酸類(Organic acids)	CHEMCOSORB 5C8-U
U-19	抗てんかん薬(Anticonvulsants)	CHEMCOSORB 5C8-U
U-20	局所麻酔薬(Anesthetics)	CHEMCOSORB 5C8-U
U-21	金属配位性化合物(Metal complex compounds)	CHEMCOSORB 5C8-U
U-22	不整脈治療薬(キニンアルカロイド) (Antiarrhythmic drug)	CHEMCOSORB 5C8-U
U-23	不整脈治療薬(Antiarrhythmic drug)	CHEMCOSORB 5C8-U
U-24	三環系抗うつ剤(Antidepressant drugs)	CHEMCOSORB 5ODS-UH
U-25	フラーレンC60, C70 (Fullerenes)	CHEMCOSORB 5ODS-UH
U-26	ヌクレオチド(Nucleotides)	CHEMCOSORB 5C8-U

No.	アプリケーション名	使用カラム
U-27	アミノベンゼンスルホン酸異性体(Aminobenzene sulfonic acid isomers)	CHEMCOSORB 5ODS-UH
U-28	デオキシヌクレオシド(Deoxynucleosides)	CHEMCOSORB 5ODS-UH
U-29	ベンゾジアゼピン誘導体(催眠鎮痛剤) (Benzodiazepine derivatives)	CHEMCOSORB 5ODS-UH
U-30	ベンゾジアゼピン誘導体(精神安定薬) (Benzodiazepine derivatives)	CHEMCOSORB 5ODS-UH
U-31	収れん剤(Astringent)	CHEMCOSORB 5ODS-UH
B-2	不整脈治療薬(Antiarrhythmic drug)	CHEMCOBOND 5ODS-H
B-3	ビタミン類(Vitamines)	CHEMCOBOND 5ODS-H
B-4	キサンチン誘導体(Xanthine derivatives)	CHEMCOBOND 5ODS-H
B-6	抗てんかん薬(Anticonvulsants)	CHEMCOBOND 5ODS-H
B-7	局所麻酔薬(Anesthetics)	CHEMCOBOND 5ODS-H
B-8	ヌクレオチド核酸塩基(Nucleosides)	CHEMCOBOND 5ODS-H
B-9	テトラサイクリン類(Tetracyclines)	CHEMCOBOND 5ODS-H
B-10	バルビタール類(Barbiturates)	CHEMCOBOND 5ODS-H
B-11	三環系抗うつ薬(Antidepressant drugs)	CHEMCOBOND 5ODS-H
B-12	不整脈治療薬(キニンアルカロイド) (Antiarrhythmic drug)	CHEMCOBOND 5ODS-H
B-13	デオキシリボ核酸(Deoxyribonucleic acids)	CHEMCOBOND 5ODS-H
B-14	アミノベンゼンスルホン酸異性体(Aminobenzene sulfonic acid isomers)	CHEMCOBOND 5ODS-H
B-15	ベンゾジアゼピン誘導体 (催眠鎮痛剤) (Benzodiazepine)	CHEMCOBOND 5ODS-H
B-16	ベンゾジアゼピン誘導体(精神安定薬) (Benzodiazepine)	CHEMCOBOND 5ODS-H
B-17	脂肪酸(Fatty acids)	CHEMCOBOND 5ODS-H
B-18	血管補強剤(Anticoagulants)	CHEMCOBOND 5ODS-H
B-19	マルトオリゴ糖	CHEMCOBOND 5ODS-W
B-20	有機酸	CHEMCOBOND 5ODS-H
B-21	有機酸	CHEMCOSORB 5C8-U

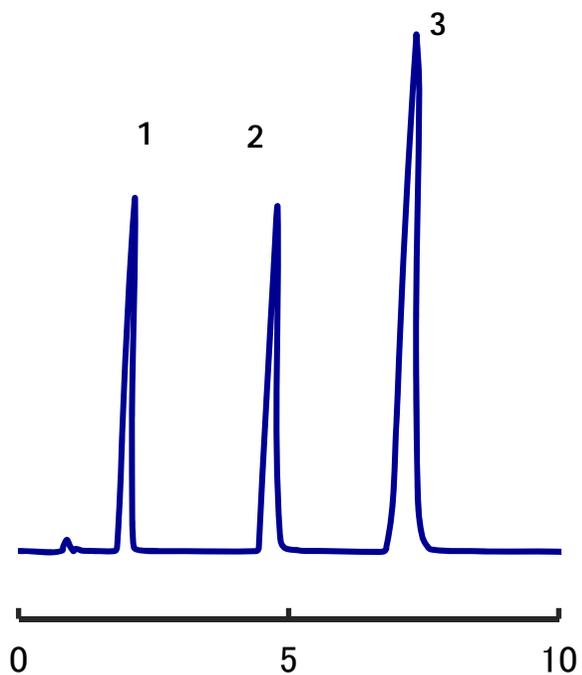
No.	アプリケーション名	使用カラム
1	水溶性ビタミン(Water-soluble vitamins)	CHEMCOSORB 7ODS-H
2	水溶性ビタミン(Water-soluble vitamins)	CHEMCOSORB 5ODS-H
3	水溶性ビタミン(Water-soluble vitamins)	CHEMCOSORB 7ODS-H
4	ビタミンC誘導体(Vitamin C derivatives)	CHEMCOSORB 7-SAX
5	脂溶性ビタミン(Oil-soluble vitamin)	CHEMCOSORB 5ODS-H
6	ビタミンB12(Vitamin B12)	CHEMCOSORB 7-SCX
7	ビタミンE/ユビキノン(Vitamin E / Ubiquinone)	CHEMCOSORB 5ODS-H
8	ビタミンK1,k2(Vitamin K1, K2)	CHEMCOSORB 7C8
9	アンピシリン(Ampicillin)	CHEMCOSORB 7ODS-H
10	クロラムフェニコール(Chloramphenicol)	CHEMCOSORB I-10C18
11	感冒薬成分(Drug for flue)	CHEMCOSORB 10-ODS-L
12	コカイン(Cocaine mix)	CHEMCOSORB I-10C18
13	メルカプトプリン(Mercaptopurine)	CHEMCOSORB 7ODS-H
14	無機塩中の酢酸(Acetic acid in inorganic salts)	CHEMCOSORB 7ODS-H
15	ベンゾトリアゾール(Benzotriazole)	CHEMCOSORB 5ODS-H
16	ジクロロフェノール誘導体(Dichloro-phenol derivatives)	CHEMCOSORB 7CN(R)
17	食品添加物(Food additives)	CHEMCOSORB 5ODS-UH
18	グリチルリチン(Glycyrrhizin)	①CHEMCOSORB 5ODS-H ②CHEMCOSORB 5ODS-UH
19	ヒドロキシベンゾフェノン(Hydroxybenzophenones)	CHEMCOSORB 5ODS-UH
20	有機酸(Organic acids)	CHEMCOSORB 7ODS-L
21	パラヒドロキシ安息香酸エステル(p-Hydroxy benzoic acid ester)	CHEMCOSORB 5ODS-H
22	パラメトキシ安息香酸エステル(p-Methoxy benzoic acid ester)	CHEMCOSORB 5ODS-UH
23	パラベン防腐剤(Paraben preservatives)	CHEMCOSORB 5ODS-H
24	防腐剤(Presevatives)	CHEMCOSORB I-10C18
25	フェノール類化合物(Phenolic compounds)	CHEMCOSORB 5ODS-H

No.	アプリケーション名	使用カラム
26	サッカリン(Saccharin)	CHEMCOSORB I-10C18
27	サリチル酸(Salicylic acid)	CHEMCOSORB I-10C18
28	甘味料(Sweeteners)	CHEMCOSORB I-10C18
29	アセチルコリン/コリン(Acetyl choline / choline)	CHEMCOSORB 300-7C18 L
30	カテコールアミン(Catecholamines)	CHEMCOSORB 5ODS-H
31	カテコールアミン(Catecholamines)	CHEMCOSORB 5ODS-H
32	カテコールアミン(Catecholamines)	CHEMCOSORB 5ODS-H
33	カテコールアミン(Catecholamines)	CHEMCOSORB 7ODS-H
34	カテコールアミンとインドールアミン(Catecholamines/Indoleamines)	CHEMCOSORB 5ODS-H
36	デジタリス配糖体(Digitalis glycosides)	CHEMCOSORB I-10C18
37	エストロゲン(Estrogens)	CHEMCOSORB 7ODS-H
38	脂肪酸(Free fatty acid)	CHEMCOSORB 80-7C18
39	セロトニン(Serotonin)	CHEMCOSORB 7ODS-H
40	血小板活性化因子(Platelet activating factor)	CHEMCOSORB 3ODS-H
41	プロスタグランジン(Prostaglandins)	CHEMCOSORB 5ODS-H
42	D, L - トリプトファン(D,L-Tryptophan)	CHEMCOSORB 5ODS-H
43	芳香族炭化水素(Aromatic hydrocarbons)	CHEMCOSORB 5ODS-H
44	芳香族炭化水素(Aromatic Hydrocarbons)	CHEMCOSORB 5ODS-H
45	多環芳香族炭化水素(Poly aromatic hydrocarbons)	CHEMCOSORB 5ODS-H
46	フタル酸(Phthalic Acid)	CHEMCOSORB 7SAX
47	フタル酸(Phthalic Acid)	CHEMCOSORB 7SAX
48	フタル酸エステル(Phthalic esters)	CHEMCOSORB 7C8

U-1 ニトロアニリン異性体(Nitroaniline isomers)

CHEMCOSORB 5Si-U 4.6φX150mm  
n-Hexane/ IPA (90:10), 2.0mL/min, ambient, UV 254nm

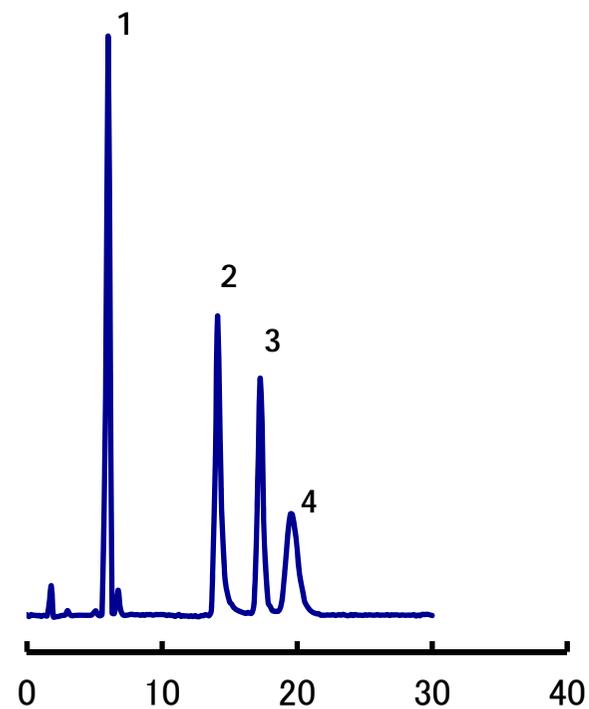
1.o-Nitroaniline 2.m-Nitroaniline 3.p-Nitroaniline



U-2 アンチピリン誘導体(Antipyrine derivatives)

CHEMCOSORB 5CN-U 4.6φX250mm  
Hexane/EtOH(90:10), 2.0mL/min, ambient, UV 260nm

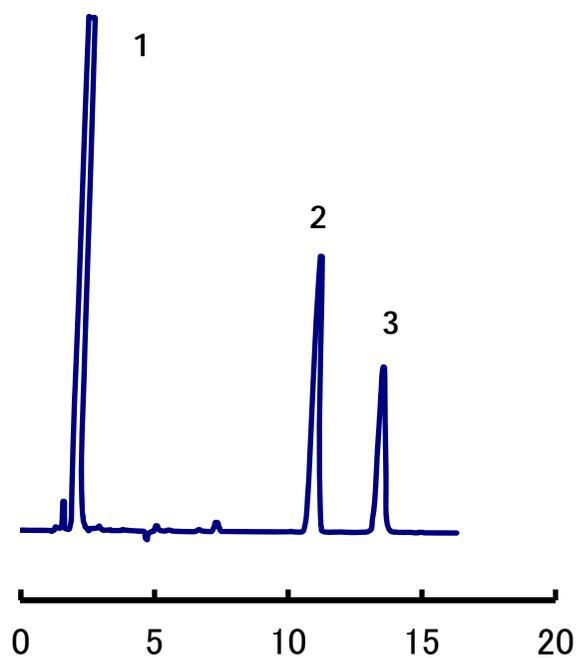
1.Isopropylantipyrine, 2.4-Aminoantipyrine, 3.Antipyrine,  
4.4-Formylaminoantipyrine



U-3 クロフィブレート(Clofibrate)

CHEMCOSORB 5CN-U 4.6φX250mm  
Hexane/IPA/Acetic anhydride (1970:30:1)  
2.5mL/min, ambient, UV 275nm

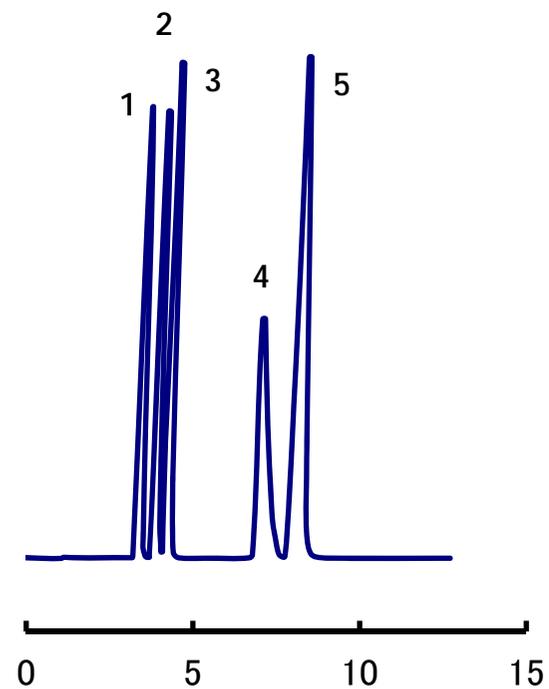
1.Clofibrate 2.p-Chlorophenol (as I.S.)  
3.p-Ethoxyphenol (as I.S.)



U-4 ジクロロニトロベンゼン異性体  
(Dichloronitrobenzene isomers)

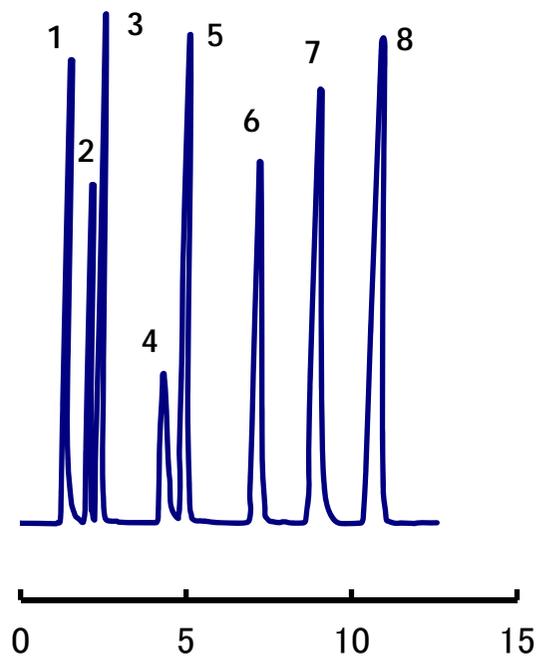
CHEMCOSORB 5NH2-U 4.6φX150mm  
Hexane 100%, 2.0mL/min, ambient, UV 254nm

1.3,4-Dichloronitrobenzene 2.2,5-Dichloronitrobenzene  
3.2,4-Dichloronitrobenzene 4.2,6-Dichloronitrobenzene  
5.2,3-Dichloronitrobenzene



U-5 感冒薬(Cold medicine)

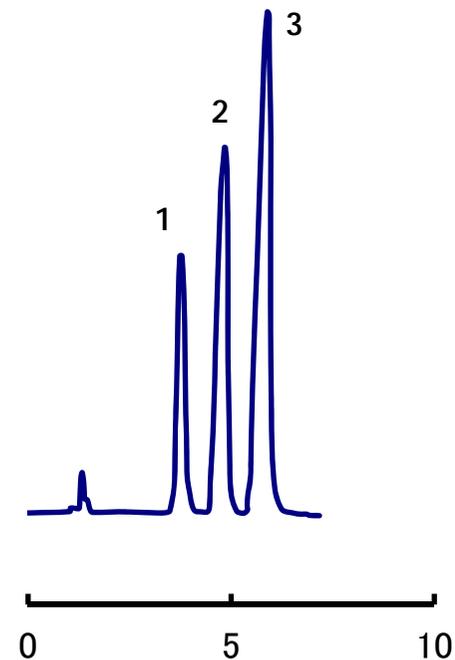
CHEMCOSORB 5ODS-UH 4.6φX150mm  
50mM KH<sub>2</sub>PO<sub>4</sub>[pH 2.5/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (76:24)  
1.0mL/min, 40°C, UV 280nm  
1.Potassium guaiacol-4-sulfonate 2.p-Acetamidophenol  
3.Caffeine 4.d-Chlorpheniramine maleate 5.Salicylamide  
6.Acetylsalicylic acid 7.Phenacetin 8.Bucetin



U-6 フタル酸異性体(Phthalic acid isomers)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
0.1%H<sub>3</sub>PO<sub>4</sub>/CH<sub>3</sub>OH(60:40), 1.0mL/min, 40°C  
UV 254nm

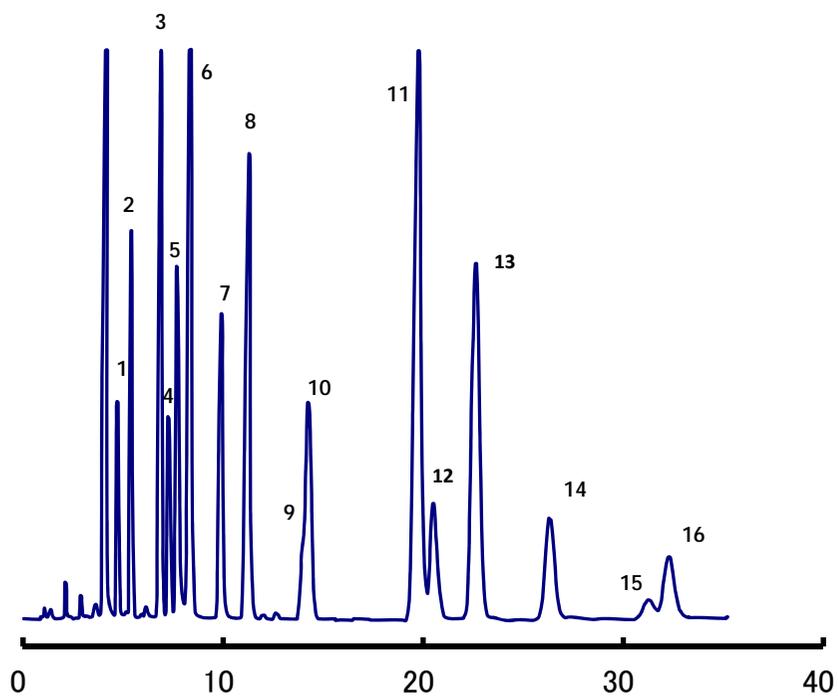
1.Phthalic acid 2.Terephthalic acid 3.Isophthalic acid



U-7 多環芳香族炭化水素 (Polyaromatic hydrocarbons)

CHEMCOSORB 50DS-UH 4.6φX250mm CH<sub>3</sub>CN/H<sub>2</sub>O(76:24),  
1.8mL/min, 40°C, UV @ 254nm

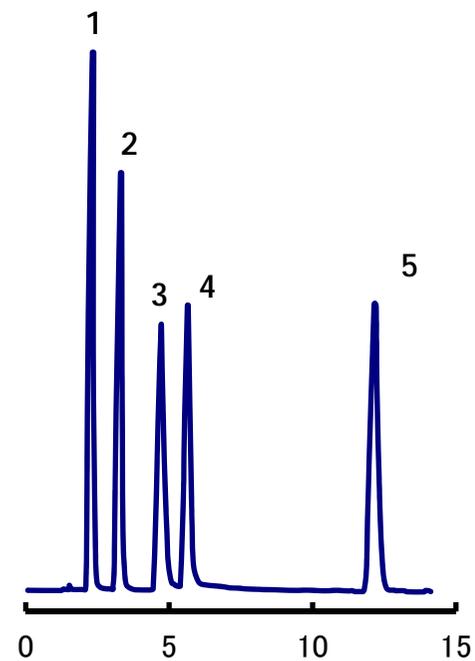
1.Naphthalene 2.Acenaphthylene 3.Flourene 4.Acenaphthene  
5.Phenanthrene 6.Anthracene 7.Fluoranthene 8.Pyrene 9.Chrysene  
10.Benz(a)anthracene 11.Benzo(b)fluoranthene 12.Benzo(k)fluoranthene  
13.Benzo(a)pyrene 14.Dibenz(a,h)anthracene



U-9 金属配位性化合物(Metal complex compounds)

CHEMCOSORB 50DS-UH 4.6φX150mm  
CH<sub>3</sub>OH/20mM Phosphate buffer(pH 7.6) =60/40 (v/v)  
1.0mL/min, 30°C, UV 254nm

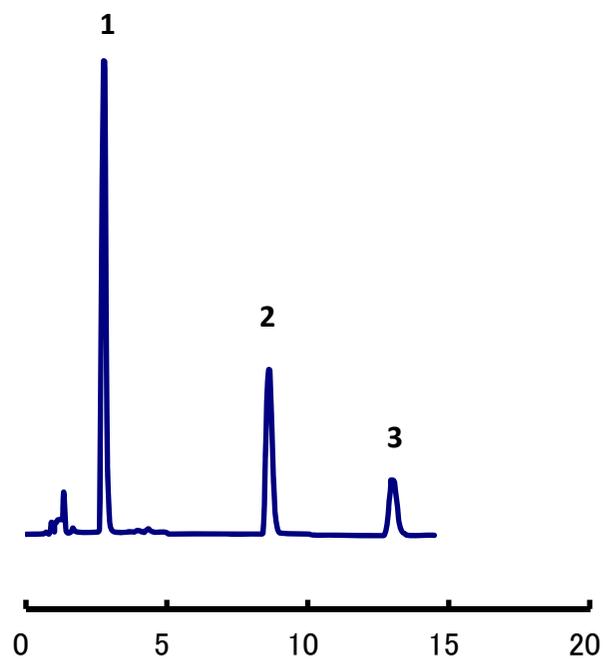
1.Acetyl acetone 2.Phenol 3.N-Benzoyl-N-  
phenylhydroxylamine 4.8-Quinolinol 5.Benzene



U-10 血管補強劑(Anticoagulants)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
H<sub>2</sub>O/CH<sub>3</sub>CN/H<sub>3</sub>PO<sub>4</sub>=80/20/0.1 (v/v/v)  
1.5mL/min, 40°C, UV 280nm

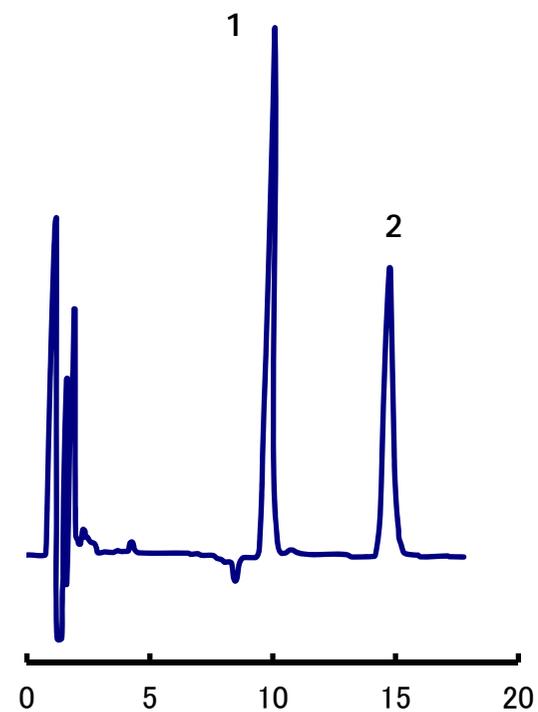
1.Lutin 2.Benzoic acid(I.S.) 3.Coumarin



U-11 局所鎮痛藥(Analgesic)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
CH<sub>3</sub>CN / H<sub>2</sub>O (50:50) incl. 0.1%CH<sub>3</sub>COOH  
1.0mL/min, ambient, UV 230nm

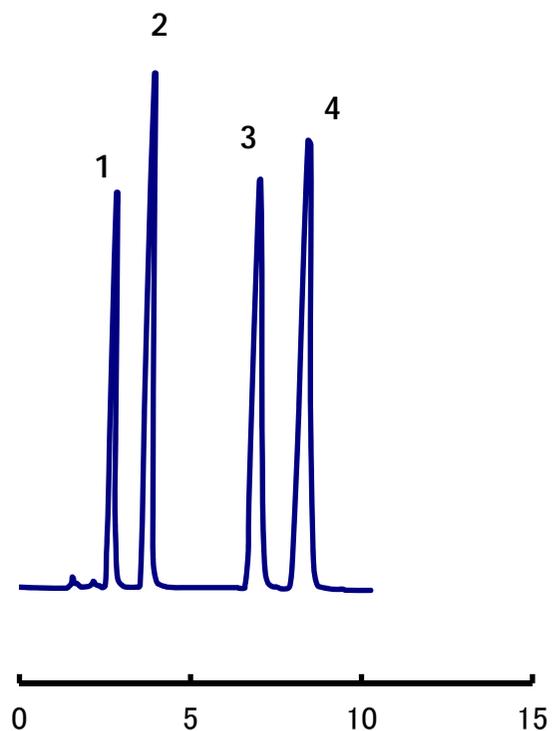
1.L-Menthol 2.Indomethacin



U-12 キサンチン誘導体(Xanthine derivatives)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
25mM KH<sub>2</sub>PO<sub>4</sub>-H<sub>3</sub>PO<sub>4</sub> (pH 4.4)/CH<sub>3</sub>CN =88/12(v/v)  
1.0mL/min, 40°C, UV 254nm

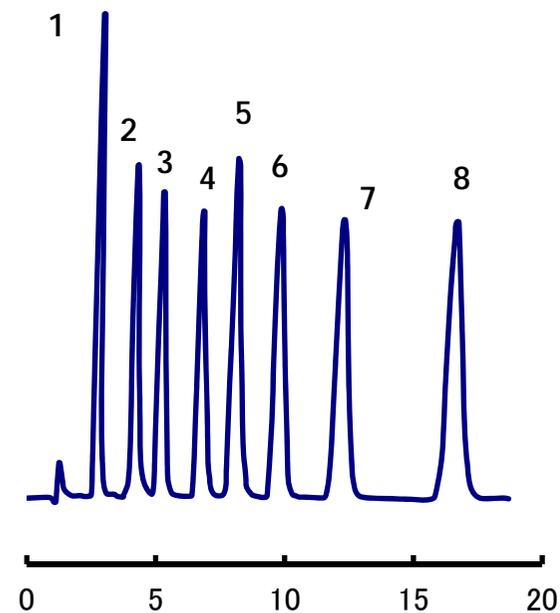
1.Theobromin 2.Theophylline 3.Caffeine  
4.8-Chlorotheophylline



U-13 バルビタール誘導体(Barbiturates)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
CH<sub>3</sub>OH/H<sub>2</sub>O(49:51)  
1.0mL/min, 40°C, UV 220nm

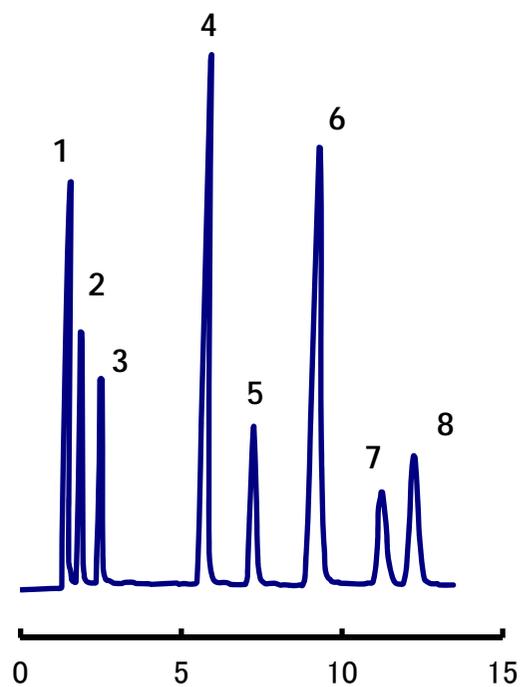
1.Barbital 2.Allobarbital 3.Aprobarbital 4.Butabarbital  
5.butarbital 6.Hexobarbital 7.Pentobarbital 8.Secobarbital



U-14 カフェイン、フェノール等標準サンプル

CHEMCOSORB 5ODS-UH 4.6φX150mm  
CH3OH/H2O(65:35)  
1.0mL/min 40°C, UV 254nm

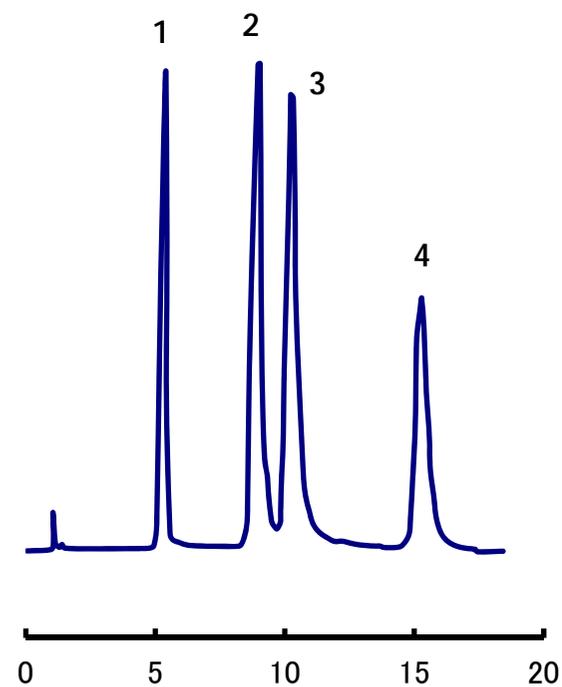
1.Uracil 2.Caffeine 3.Phenol 4.Methyl benzoate 5.Benzene  
6.N,N-Dimethylaniline 7.3-Phenylacetylacetone 8.Toluene



U-15 アンチピリン誘導体(Antipyrene derivatives)

CHEMCOSORB 5DPh-U 4.6φX150mm  
25mM KH2PO4[pH 4.6/H3PO4]/CH3CN (92:8)  
2.0mL/min, 40°C, UV 260nm

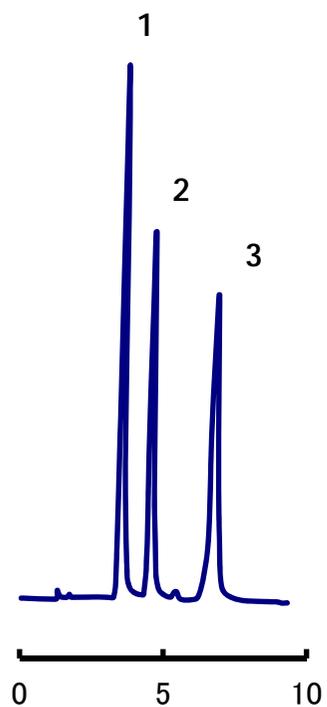
1.Sulpyrine 2.4-Formyl aminoantipyrene 3.4-Acetyl  
aminoantipyrene 4.4-Aminoantipyrene



U-16 テトラサイクリン誘導体(Tetracycline derivatives)

CHEMCOSORB 5DPh-U 4.6φX150mm  
50mM KH<sub>2</sub>PO<sub>4</sub>[pH 2.9/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (87:13)  
1.5mL/min, 40°C, UV 254nm

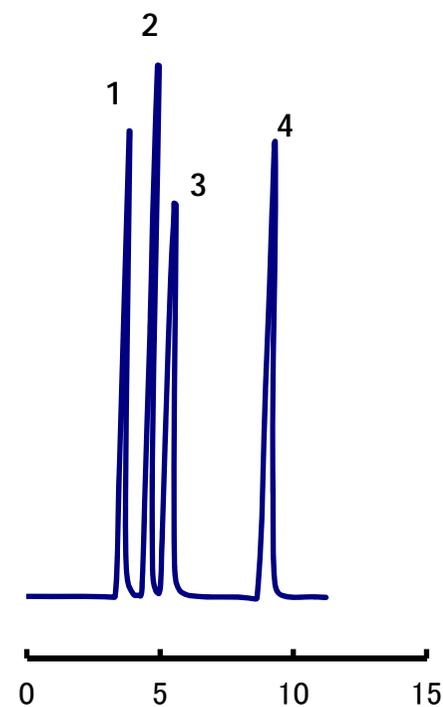
1.Oxytetracycline hydrochloride 2.Minocycline hydrochloride 3.Tetracycline hydrochloride



U-17 プリン誘導体(Purine derivatives)

CHEMCOSORB 5ODS-UH 4.6φX250mm  
6mM KH<sub>2</sub>PO<sub>4</sub>+4mM Na<sub>2</sub>HPO<sub>4</sub> [pH6.64]/ CH<sub>3</sub>OH(90:10)  
incl.5mM Tetra-n-butylammonium bromide  
1.0mL/min, 40°C, UV 254nm

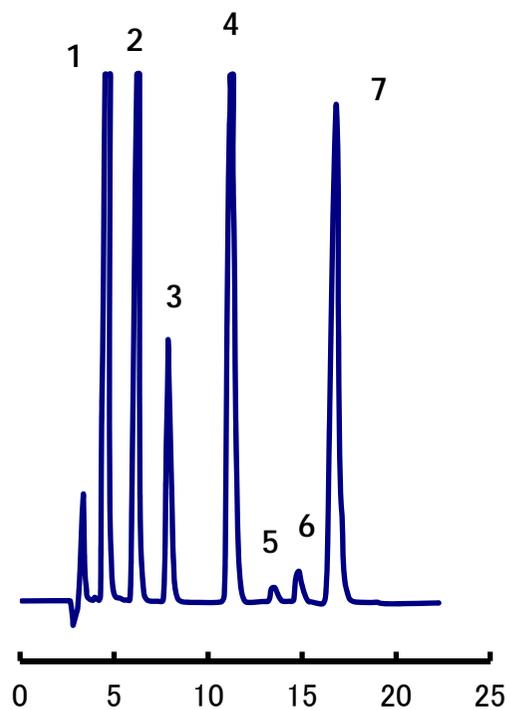
1.Hypoxanthine 2.Allopurinol 3.Xanthine 4.Uric acid



U-18 有機酸類(Organic acids)

CHEMCOSORB 5C8-U 4.6φX150mm  
5mM NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>(pH 2.5/H<sub>3</sub>PO<sub>4</sub>)  
0.8mL/min, 25°C, UV @ 210nm

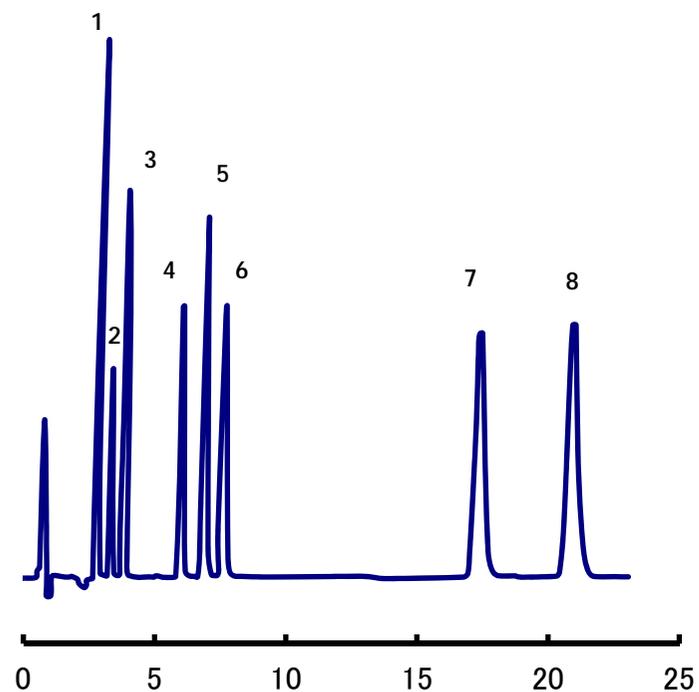
1.Tartaric acid 2.Malic acid 3.Lactic acid 4.Citric acid  
5.Maleic acid 6.Succinic acid 7.Fumaric acid



U-19 抗てんかん薬(Anticonvulsants)

CHEMCOSORB 5C8-U 4.6φX150mm  
25mM NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>[pH4.4/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (78:22)  
2.0mL/min, 40°C, UV 210nm

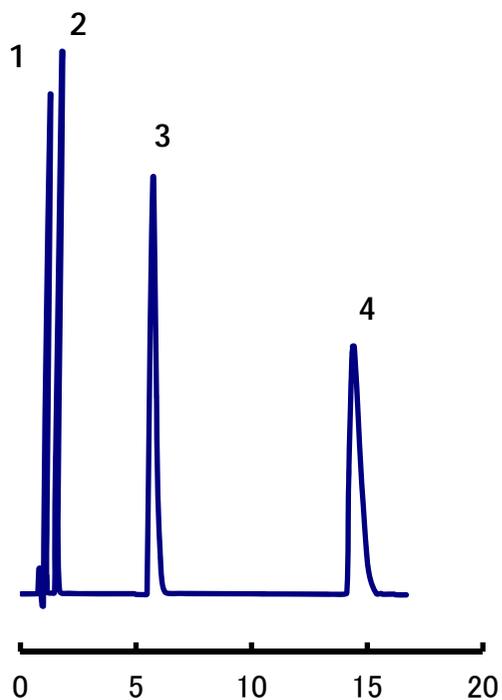
1.Primidone 2.Trimethadione 3.Sultiame 4.Phenobarbital  
5.Metharbital 6.Phenacetin(asl.S.) 7.Carbamazepin  
8.Phenytoin



U-20 局所麻醉薬(Anesthetics)

CHEMCOSORB 5C8-U 4.6φX150mm  
50mM KH<sub>2</sub>PO<sub>4</sub>[pH 2.8/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (74:26)  
2.0mL/min, 40°C, UV 220nm

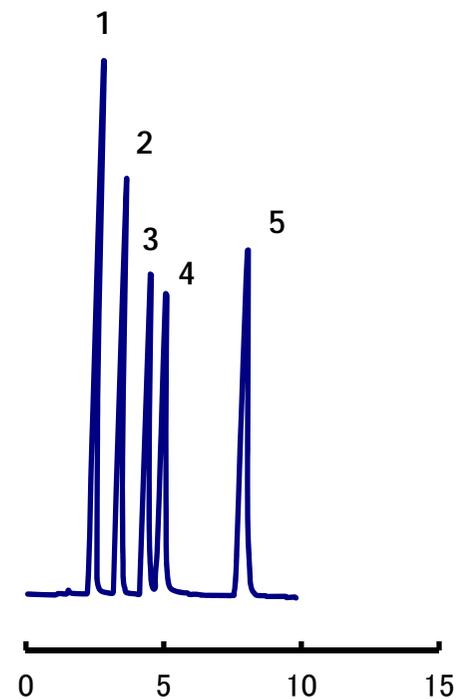
1.Procaine hydrochloride 2.Lidocaine 3.Tetracaine hydrochloride 4.Dibucaine hydrochloride



U-21 金属配位性化合物(Metal complex compounds)

CHEMCOSORB 5C8-U 4.6φX150mm  
CH<sub>3</sub>OH/(2.9mM KH<sub>2</sub>PO<sub>4</sub>+17.1mM K<sub>2</sub>HPO<sub>4</sub>:pH 7.6)(60:40)  
1.0mL/min, 30°C, UV @ 254nm

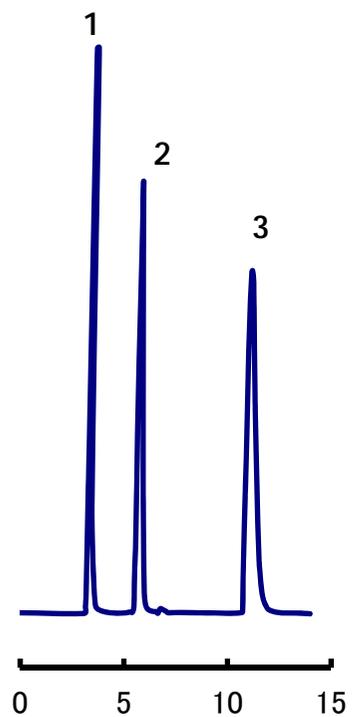
1.Acetyl acetone 2.Phenol 3.N-Benzoyl-N-phenylhydroxylamine 4.8-Quinololinol 5.Benzene



U-22 不整脈治療薬 (キニンアルカロイド, Antiarrhythmic drug)

CHEMCOSORB 5C8-U 4.6φX150mm  
50mM KH<sub>2</sub>PO<sub>4</sub>[pH 2.8/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (84:16)  
1.0mL/min, 40°C, UV 254nm

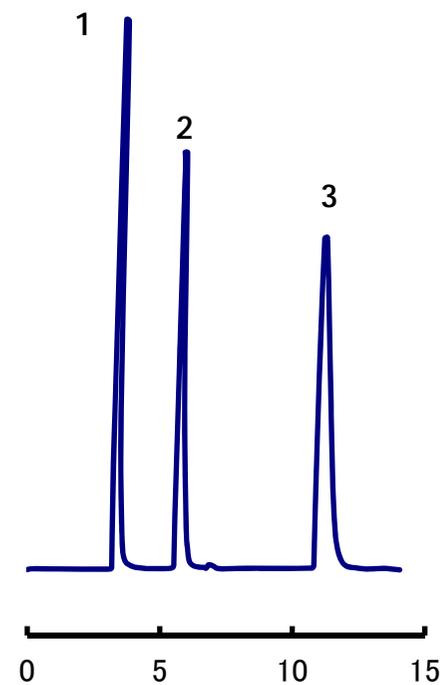
1.Cinchonidine 2.Quinidine 3.Quinine(I.S.)



U-23 不整脈治療薬(Antiarrhythmic drug)

CHEMCOSORB 5C8-U 4.6φX150mm  
25mM KH<sub>2</sub>PO<sub>4</sub>[pH 3.0/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (90:10)  
1.0mL/min, 40°C, UV 280nm

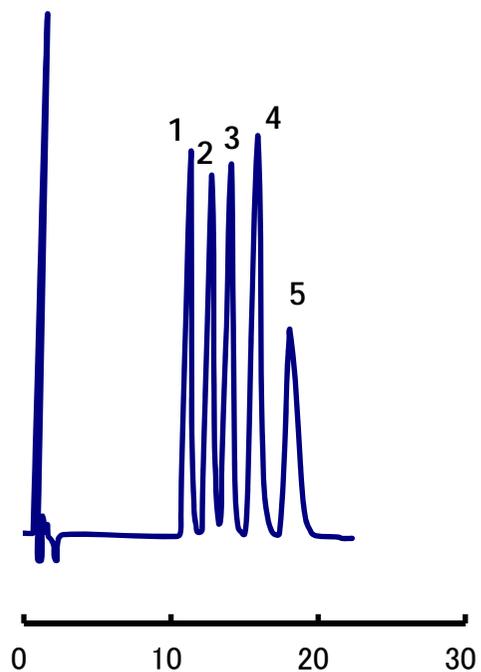
1.Procainamide 2.N-Acetyl procainamide 3.N-Propionyl procainamide



U-24 三環系抗うつ剤(Antidepressant drugs)

CHEMCOSORB 50DS-UH 4.6φX150mm  
25mM KH<sub>2</sub>PO<sub>4</sub>[pH 3.5/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (73:27)  
1.5mL/min, 40°C, UV 214nm

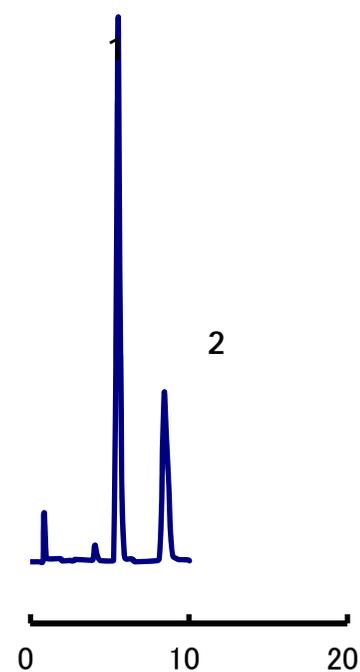
1.Desipramine hydrochloride 2.Imipramine hydrochloride  
3.Nortriptyline hydrochloride 4.Amitriptyline hydrochloride  
5.Carpipramine hydrochloride



U-25 フラーレンC60, C70 (Fullerenes)

CHEMCOSORB 50DS-UH 4.6φX150mm  
C<sub>6</sub>H<sub>6</sub>CH<sub>3</sub>/CH<sub>3</sub>CN(60:40)  
4.5mL/min, ambient, UV @ 285nm

1.Fullerene C60 2.Fullerene C70



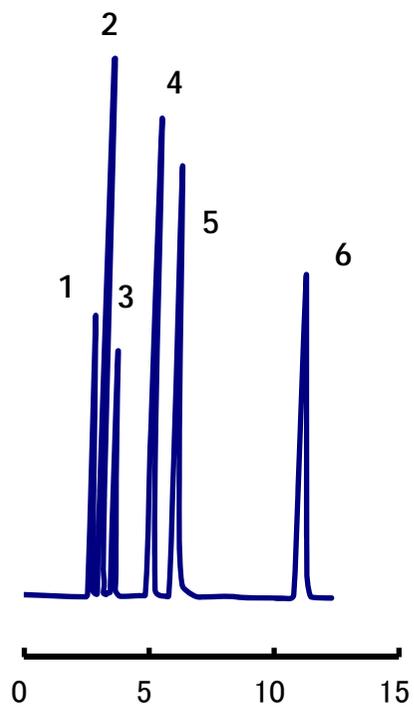
U-26 ヌクレオチド(Nucleotides)

CHEMCOSORB 5C8-U 4.6φX250mm

0.1M NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>(pH 3.7/H<sub>3</sub>PO<sub>4</sub>)

1.5mL/min, 40°C, UV 254nm

1.ATP 2.ADP 3.IMP 4.AMP 5.Hypoxanthine 6.Inosine



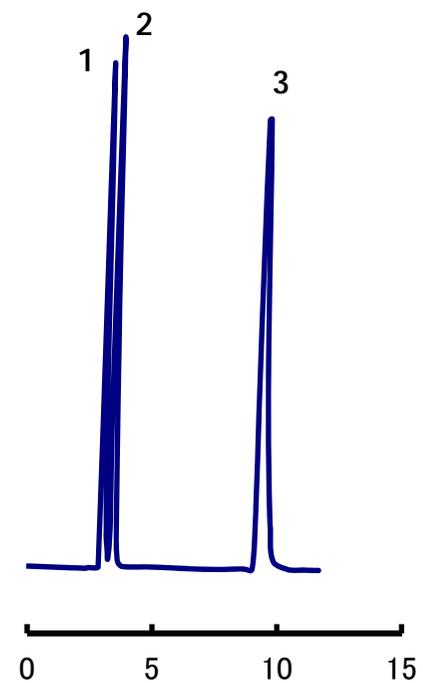
U-27 アミノベンゼンスルホン酸異性体 (Aminobenzene sulfonic acid isomers)

CHEMCOSORB 5ODS-UH 4.6φX250mm

50mM KH<sub>2</sub>PO<sub>4</sub>[pH 3.0/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>OH (93:7)

0.8mL/min, ambient, UV 254nm

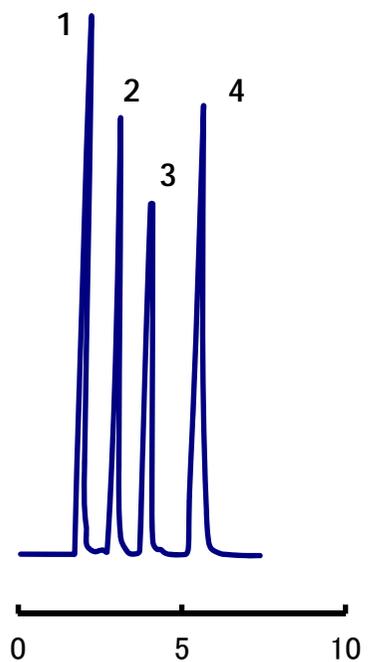
1.p-Aminobenzene sulfonic acid 2.m-Aminobenzene sulfonic acid 3.o-Aminobenzene sulfonic acid



U-28 デオキシヌクレオシド(Deoxynucleosides)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
20mM KH<sub>2</sub>PO<sub>4</sub>[pH 4.0/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>OH (85:15)  
1.0mL/min, 40°C, UV 254nm

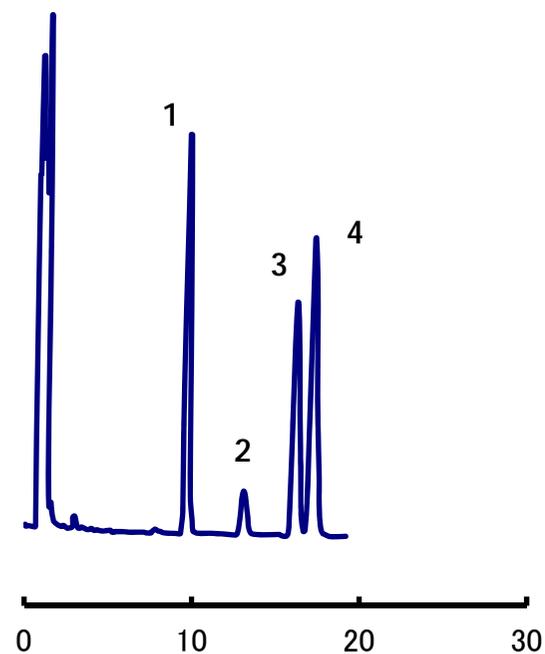
1.2'-Deoxycytidine 2.2'-Deoxyguanosine 3.2'-  
Deoxythymidine 4.2'-Deoxyadenosine



U-29 ベンゾジアゼピン誘導体(催眠鎮痛剤)  
(Benzodiazepine derivatives)

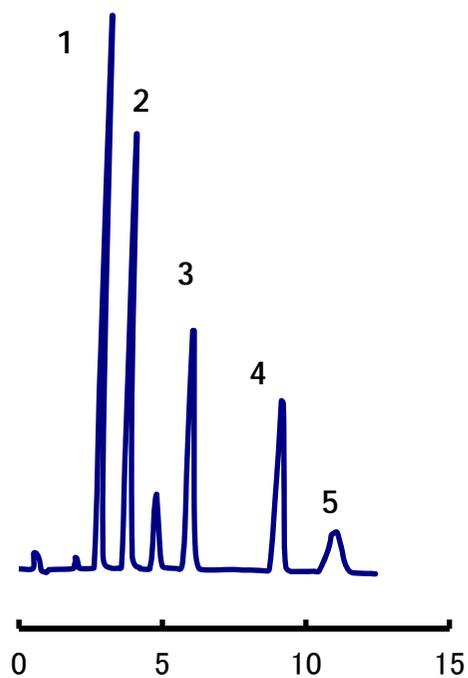
CHEMCOSORB 5ODS-UH 4.6φX150mm  
50mM KH<sub>2</sub>PO<sub>4</sub>[pH 4.0/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (66:34)  
1.5mL/min, 40°C, UV 254nm

1.Nitrazepam 2.Triazolam 3.Flunitrazepam  
4.Nimetazepam



U-30 ベンゾジアゼピン誘導体(精神安定薬)  
(Benzodiazepine derivatives)

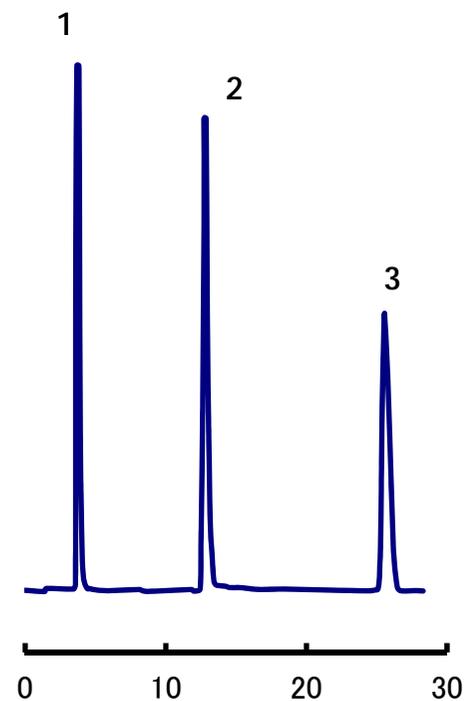
CHEMCOSORB 5ODS-UH 4.6φX150mm  
(35mM KH<sub>2</sub>PO<sub>4</sub>+15mM Na<sub>2</sub>HPO<sub>4</sub>) [pH 6.47]  
/CH<sub>3</sub>CN(60:40) 2.0mL/min, 50°C, UV @ 280nm  
1.Oxazepam 2.Chlordiazepoxide 3.Tofisopam  
4.Diazepam 5.Cloxazolam



U-31 収れん剤(Astringent)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
CH<sub>3</sub>OH/50mM NaH<sub>2</sub>PO<sub>4</sub>(pH 2.1/H<sub>3</sub>PO<sub>4</sub>)  
1.2mL/min, 50°C, UV @ 280nm

1.Baicalin 2.Baicalein 3.Wogonin

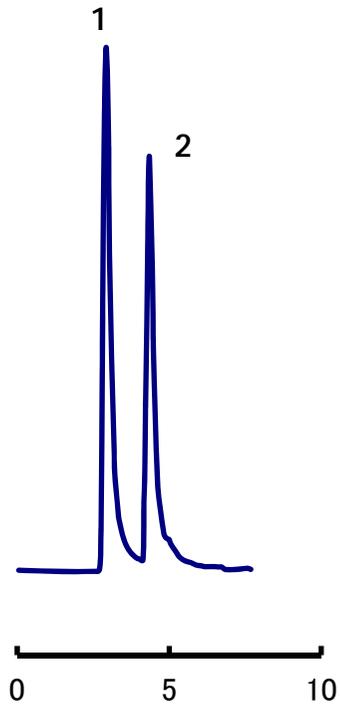


B-2 不整脈治療薬(Antiarrhythmic drug)

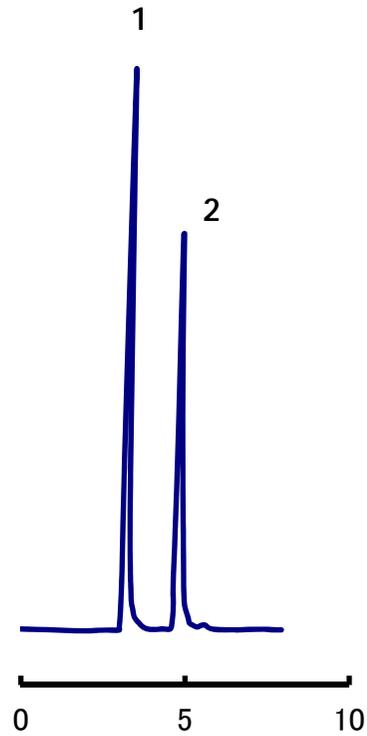
CHEMCOBOND 5ODS-H 4.6φX150mm  
20mM KH<sub>2</sub>PO<sub>4</sub>/CH<sub>3</sub>CN(90:10)  
1.0mL/min, 40°C, UV @ 280nm

1.Procainamide 2.N-Acetyl Procainamide

STANDARD C18



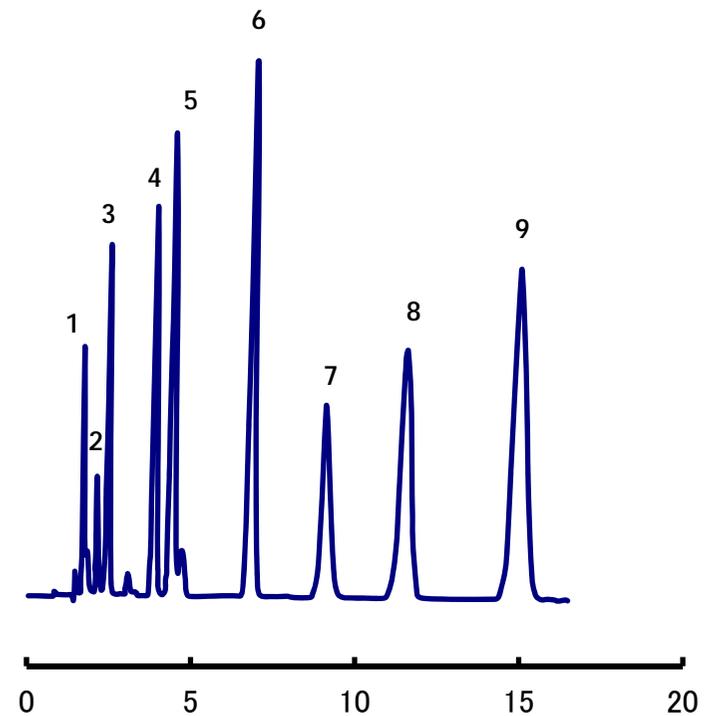
CHEMCOBOND 5-ODS-H



B-3 ビタミン類(Vitamines)

CHEMCOBOND 5ODS-H 4.6φX150mm  
5mM Hexanesulfonatesodium+0.1% H<sub>3</sub>PO<sub>4</sub>/CH<sub>3</sub>CN  
=91:9 (v/v), 1.5mL/min, 40°C, UV @ 210nm

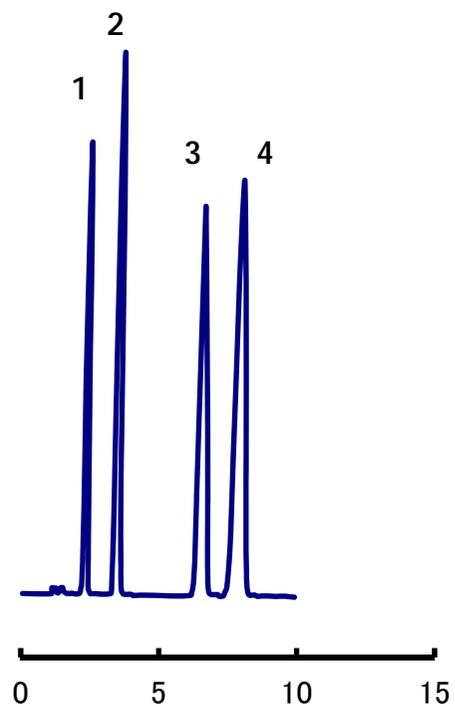
1.Nicotinic acid 2.Nicotinamide 3.Pantothenic acid  
calcium salt 4.Pyridoxine hydrochloride 5.Flavin  
mononucleotide 6.Thiamine hydrochloride 7.Cafeine  
8.Folic acid 9.Riboflavin



B-4 キサンチン誘導体(Xanthine derivatives)

CHEMCOBOND 5ODS-H 4.6φX150mm  
25mM KH<sub>2</sub>PO<sub>4</sub>/CH<sub>3</sub>CN(90:10)  
1.5mL/min, ambient, UV 254nm

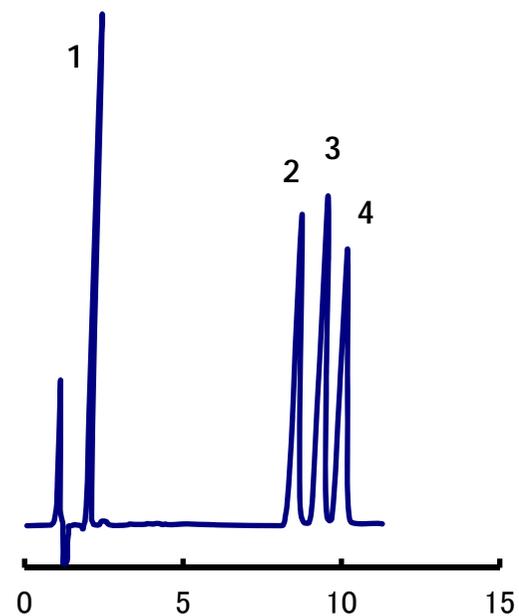
1.Theobromine 2.Theophylline 3.Caffeine  
4.8-Chlorotheophylline



B-6 抗てんかん薬(Anticonvulsants)

CHEMCOBOND 5ODS-H 4.6φX150mm  
50mM KH<sub>2</sub>PO<sub>4</sub>(pH 4.4)/CH<sub>3</sub>CN(71:29)  
1.5mL/min, ambient, UV 210nm

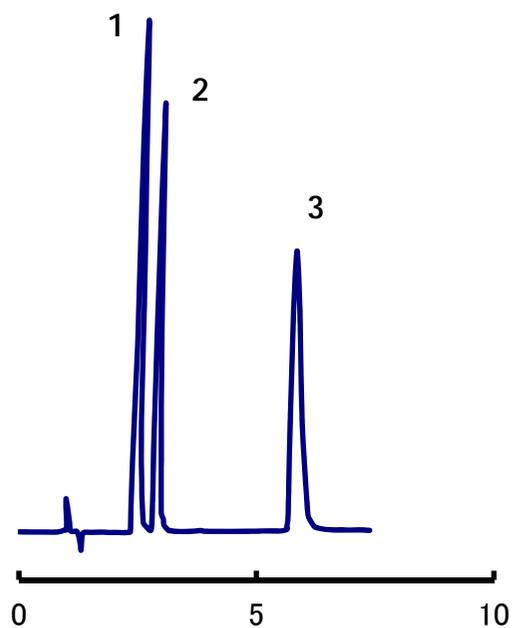
1.Primidone 2.Carbamazepine 3.Hexobarbital  
4.Phenytoin



B-7 局所麻酔薬(Anesthetics)

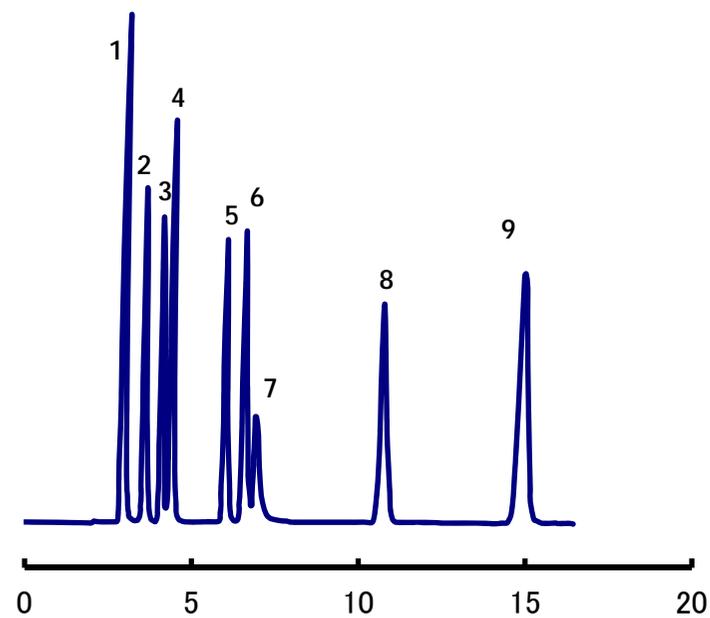
CHEMCOBOND 5ODS-H 4.6φX150mm  
20mM KH<sub>2</sub>PO<sub>4</sub>(pH 3.9/H<sub>3</sub>PO<sub>4</sub>)/CH<sub>3</sub>CN (85:15)  
1.5mL/min, ambient, UV 220nm

1.Procaine 2.Benzocain 3.Lidocaine



B-8 ヌクレオチド核酸塩基(Nucleosides)

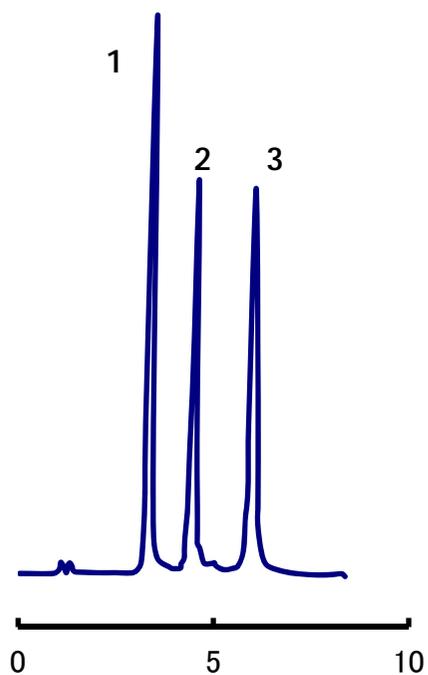
CHEMCOBOND 5ODS-H 4.6φX250mm  
(22.5mM KH<sub>2</sub>PO<sub>4</sub>+2.5mM Na<sub>2</sub>HPO<sub>4</sub>)  
[pH5.91]/CH<sub>3</sub>OH(91:9)  
1.0mL/min, 40°C, UV 260nm  
1.Cytosine 2.Cytidine 3.Guanine 4.Uridine 5.Thymine  
6.Guanosine 7.Adenine 8.Thymidine 9.Adenosine



B-9 テトラサイクリン類(Tetracyclines)

CHEMCOBOND 5ODS-H 4.6φX150mm  
50mM KH<sub>2</sub>PO<sub>4</sub>[pH 2.9/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (85:15)  
1.5mL/min, 40°C, UV 254nm

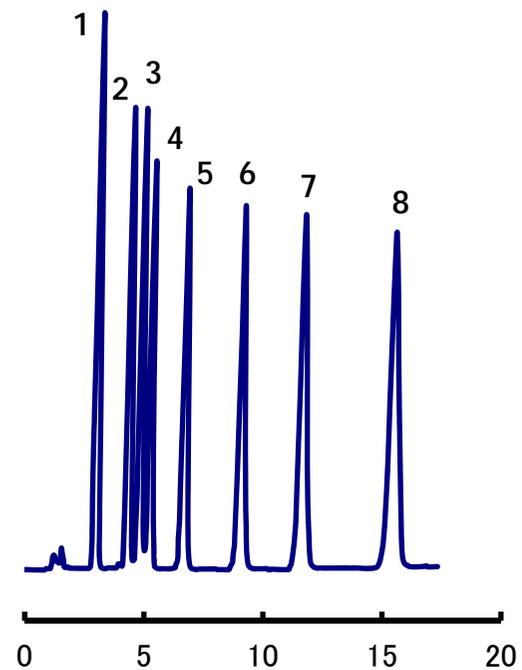
1.Oxytetracycline hydrochloride 2.Minocycline hydrochloride 3.Tetracycline hydrochloride



B-10 バルビタール類(Barbiturates)

CHEMCOBOND 5ODS-H 4.6φX150mm CH<sub>3</sub>OH/H<sub>2</sub>O(48:52)  
1.0mL/min, 40°C, UV 220nm

1.Barbital 2.Allobarbital 3.Phenobarbital 4.Aprobarbital  
5.Butabarbital 6.Hexobarbital 7.Pentobarbital  
8.Secobarbital



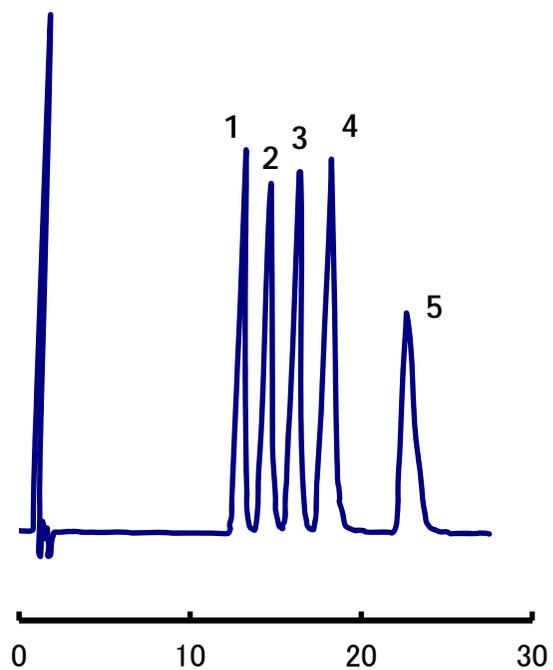
B-11 三環系抗うつ薬(Antidepressant drugs)

CHEMCOBOND 5ODS-H 4.6φX150mm

25mM KH<sub>2</sub>PO<sub>4</sub>[pH 3.5/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (73:27)

1.5mL/min, 40°C, UV 214nm

- 1.Desipramine hydrochloride
- 2.Imipramine hydrochloride
- 3.Nortriptyline hydrochloride
- 4.Amitriptyline hydrochloride
- 5.Carpipramine hydrochloride



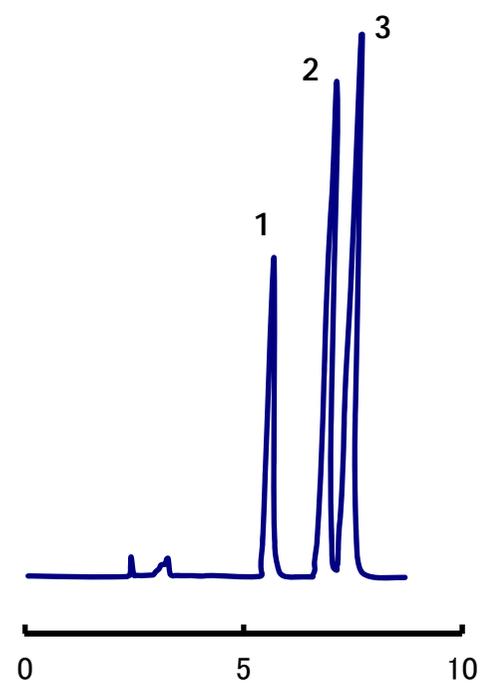
B-12 不整脈治療薬(キニンアルカロイド) (Antiarrhythmic drug)

CHEMCOBOND 5ODS-H 4.6φX250mm

50mM KH<sub>2</sub>PO<sub>4</sub>[pH 2.8/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (83:17)

1.0mL/min, 40°C, UV 254nm

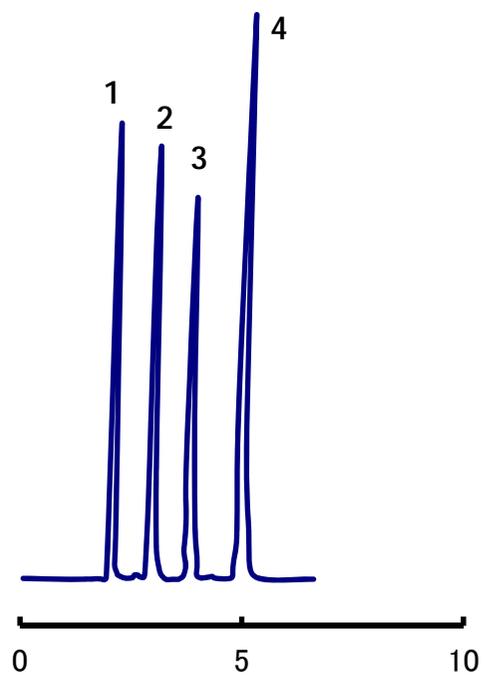
- 1.Cinchonidine
- 2.Quinidine
- 3.Quinine(I.S.)



B-13 デオキシリボ核酸(Deoxyribonucleic acids)

CHEMCOBOND 5ODS-H 4.6φX150mm  
20mM KH<sub>2</sub>PO<sub>4</sub>[pH 4.0/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>OH (85:15)  
1.0mL/min, 40°C, UV 254nm

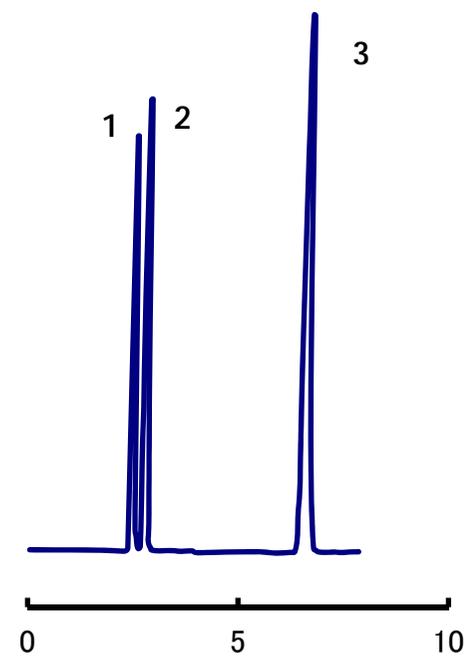
1.2'-Deoxycytidine 2.2'-Deoxyguanosine 3.2'-  
Deoxythymidine 4.2'-Deoxyadenosine



B-14 アミノベンゼンスルホン酸異性体(Aminobenzene sulfonic acid isomers)

CHEMCOBOND 5ODS-H 4.6φX250mm  
50mM KH<sub>2</sub>PO<sub>4</sub>[pH 3.0/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>OH (93:7)  
1.0mL/min, ambient, UV 254nm

1.p-Aminobenzene sulfonic acid 2.m-Aminobenzene  
sulfonic acid 3.o-Aminobenzene sulfonic acid



B-15 ベンゾジアゼピン誘導体 (催眠鎮痛剤)

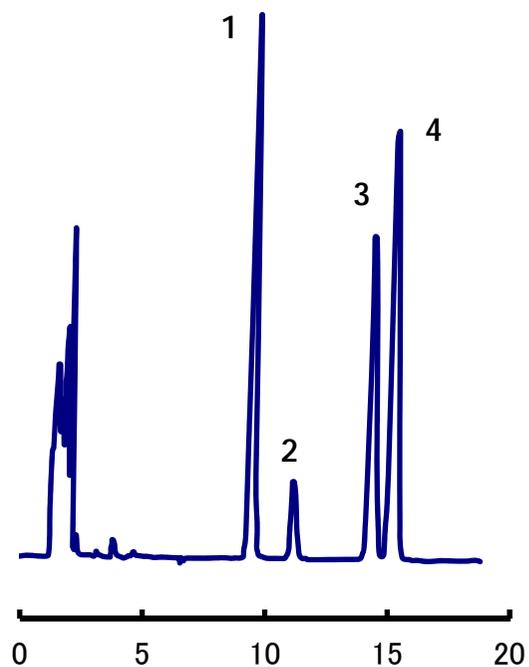
(Benzodiazepine)

CHEMCOBOND 5ODS-H 4.6φX250mm

50mM KH<sub>2</sub>PO<sub>4</sub>[pH 4.0/H<sub>3</sub>PO<sub>4</sub>]/CH<sub>3</sub>CN (65:35)

1.5mL/min, 40°C, UV 254nm

1.Nitrazepam 2.Triazolam 3.Flunitrazepam  
4.Nimetazepam



B-16 ベンゾジアゼピン誘導体(精神安定薬) (Benzodiazepine)

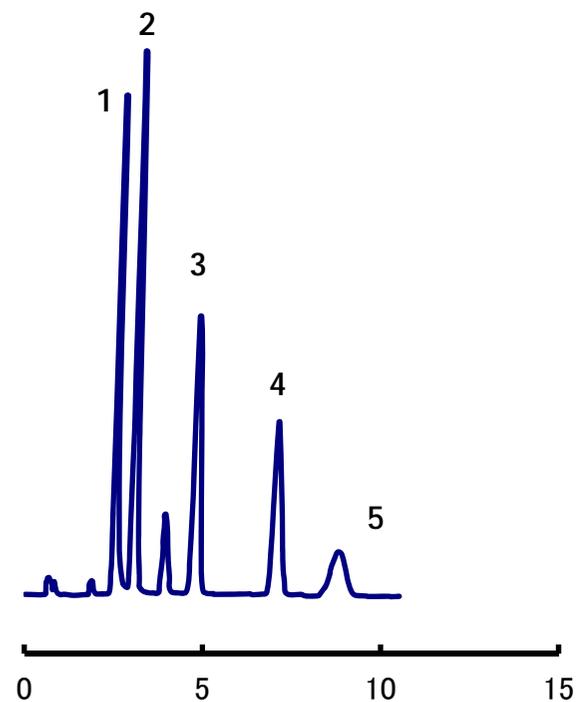
CHEMCOBOND 5ODS-H 4.6φX150mm

(35mM KH<sub>2</sub>PO<sub>4</sub>+15mM Na<sub>2</sub>HPO<sub>4</sub>)[pH

6.47]/CH<sub>3</sub>CN(60:40)

2.0mL/min, 40°C, UV 254nm

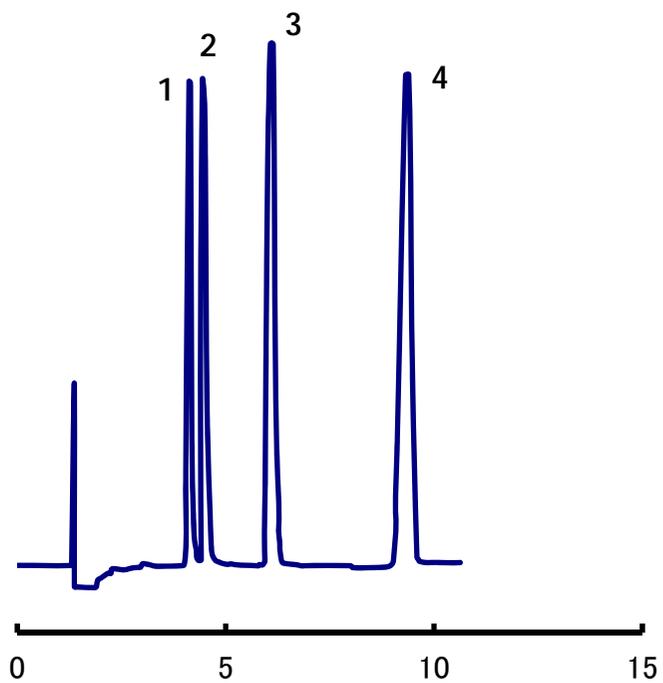
1.Oxazepam 2.Chlordiazepoxide 3.Tofisopam  
4.Diazepam 5.Cloxazepam



B-17 脂肪酸(Fatty acids)

CHEMCOBOND 5ODS-H 4.6φX150mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(95:5)  
1.0mL/min, 40°C, Refractive Index

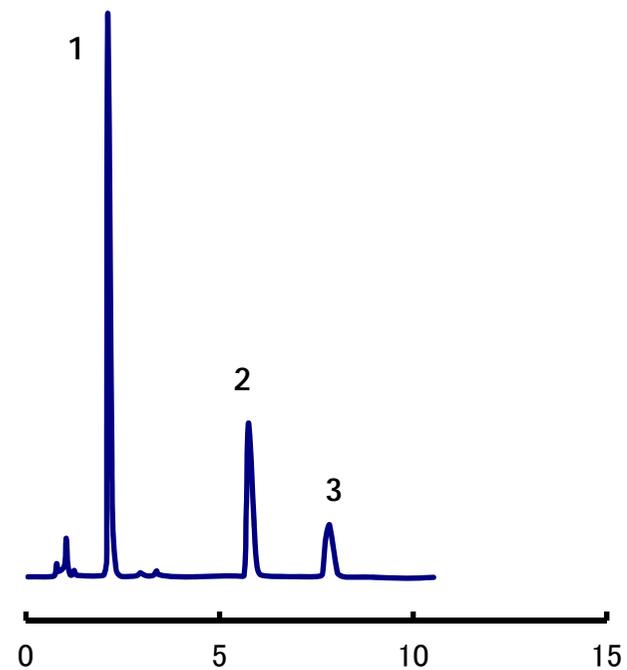
1.Myristic acid 2.Linolic acid 3.Palmitic acid 4.Stearic acid



B-18 血管補強劑(Anticoagulants)

CHEMCOBOND 5ODS-H 4.6φX150mm  
H<sub>2</sub>O/CH<sub>3</sub>CN/H<sub>3</sub>PO<sub>4</sub>(80:20:0.1)  
2.0mL/min 40°C, UV 280nm

1.Rutin 2.Benzoic acid(I.S.) 3.Coumarin



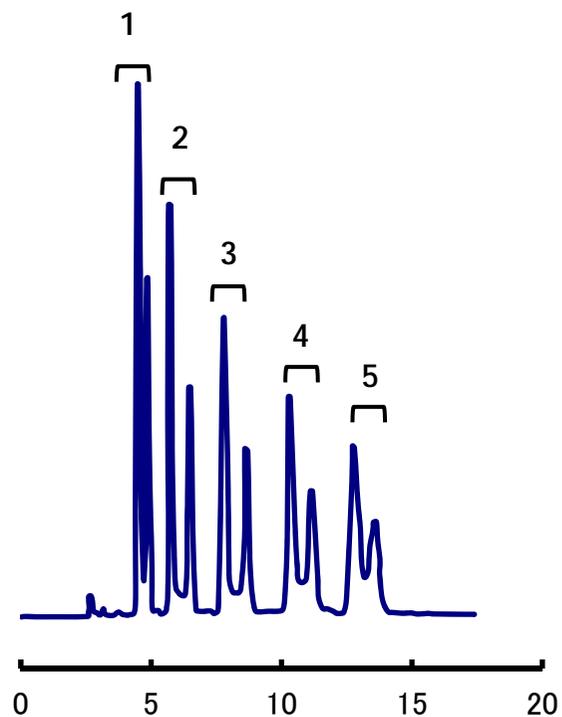
B-19 マルトオリゴ糖 (Malto-oligo saccharides)

CHEMCOBOND 5ODS-W 4.6φX250mm

Water 100%

1.0mL/min , 40°C, RI

1. Maltotriose, 2. Maltotetraose, 3. Maltopentaose, 4. Malthexaose, 5. Maltoheptaose



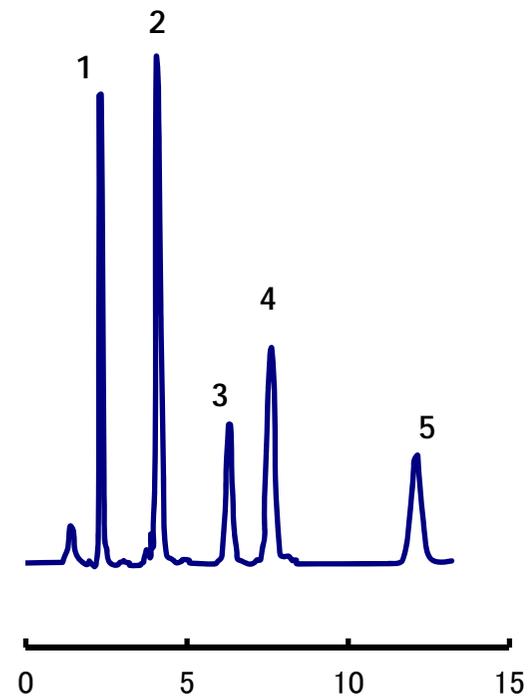
B-20 有機酸誘導体 (Organic acid derivatives)

CHEMCOBOND 5ODS-H 1.0φX150mm

CH<sub>3</sub>CN / Water = 3 / 7 (v/v)

50 μL/min , 40°C, UV 244 nm

1. Pyruvic acid derivative, 2. By-product, 3. Lactic acid derivative, 4. 3-Hydroxybutyric acid derivative, 5. Acetic acid derivative



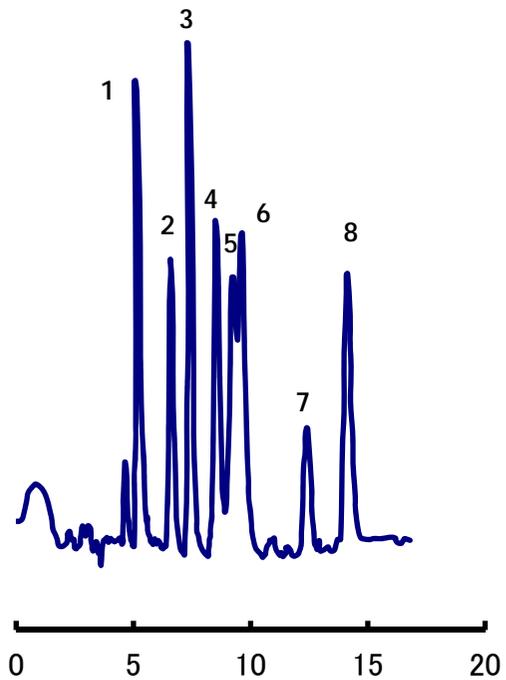
B-21 有機酸 ( Organic acid )

CHEMCOSORB C8-U 1.0φX150mm

20 mM H<sub>3</sub>PO<sub>4</sub>- NaH<sub>2</sub>PO<sub>4</sub> (pH 2.2)

25 μL/min, UV 210 nm

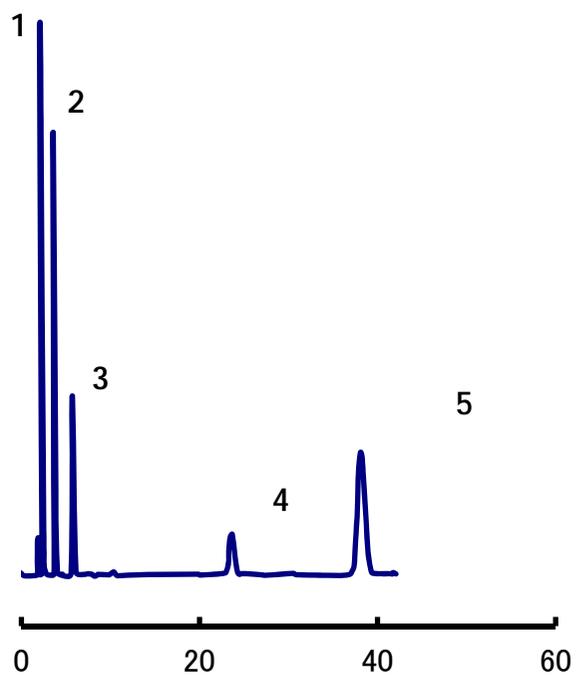
1. Formic acid, 2. Malonic acid, 3. Lactic acid, 4. Acetic acid,  
5. Nicotinic acid, 6. Citric acid, 7. Succinic acid,  
8. Fumaric acid



1. 水溶性ビタミン(Water-soluble vitamins)

CHEMCOSORB 7ODS-H 4.6φX250mm  
CH<sub>3</sub>CN/2%AcOH(6:94)incl 0.1%Sod.Pentane sulfonate  
2.0mL/min, R.T., UV 280nm

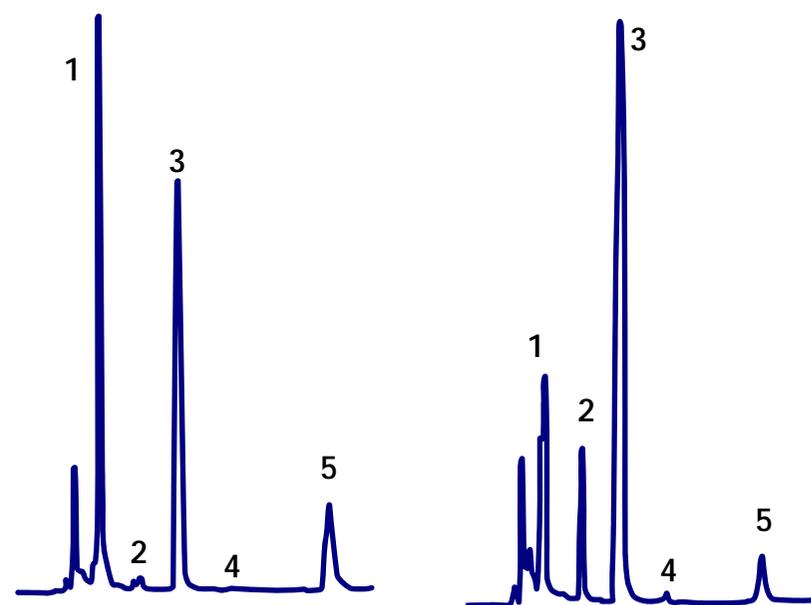
1.Nicotinamide 2.VB6 3.VB1 4.Folic acid 5.VB2



2. 水溶性ビタミン(Water-soluble vitamins)

CHEMCOSORB 5ODS-H 4.6φX150mm  
Methanol/H<sub>2</sub>O/Acetic Acid(25:74:1) incl.0.1% Sod.  
Hexanesulfonate  
0.8mL/min, R.T.  
1 UVD 254nm x0.5 O.D. 2 UVD 280nm x0.5 O.D.

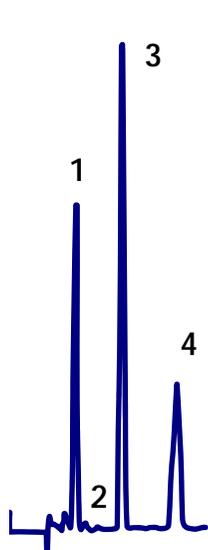
1.Nicotinamide 2.VB6 3.Anhydrous Caffeine 4.VB2 5.VB1



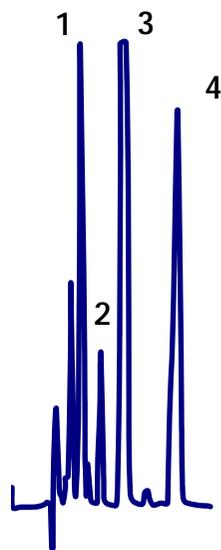
### 3. 水溶性ビタミン(Water-soluble vitamins)

CHEMCOSORB 7ODS-H 4.6φX250mm  
CH<sub>3</sub>CN/0.1%CH<sub>2</sub>ClCOOH(15:85)incl.  
0.1%Sod.hexanesulfonate(pH 3.0) 0.8mL/min, R.T.  
1 UVD 254nm x0.2 O.D.  
2 UVD 280nm x0.2 O.D. 1.Nicotinamide 2.VB6 3.Caffeine  
4.VB1

UV 254 nm

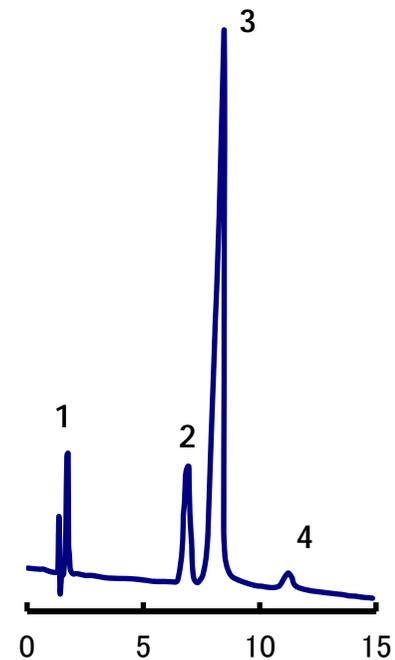


UV 280 nm



### 4. ビタミンC誘導体(Vitamin C derivatives)

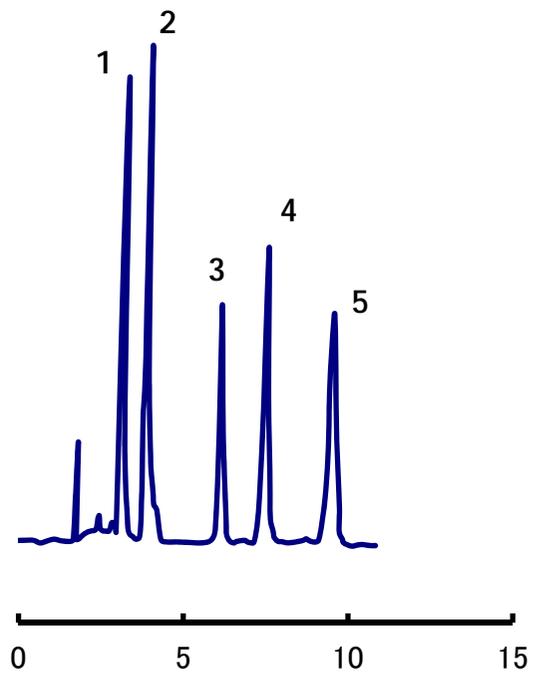
CHEMCOSORB 7-SAX 4.6φX150mm  
CH<sub>3</sub>OH/0.1N KH<sub>2</sub>PO<sub>4</sub>(5:95)[pH 3.0]  
1.0mL/min, R.T., UVD 254nm x0.1 O.D.  
1.L-Ascorbic acid 2.L-Ascorbic acid,monophosphate 3.L-Ascorbic acid,diphosphate 4.Unknown



5. 脂溶性ビタミン(Oil-soluble vitamin)

CHEMCOSORB 5ODS-H 4.6φX150mm MeOH/H<sub>2</sub>O(95:5)  
1.0mL/min, R.T., UVD 254nm

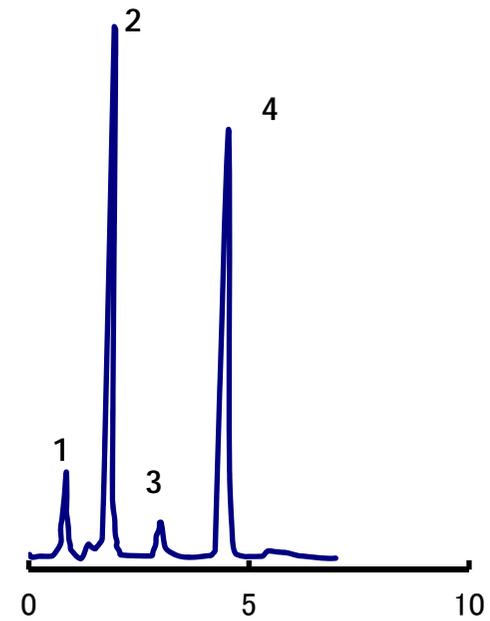
1.VA 2.VA Acetate 3.VD3 4.VE 5.VE Acetate



6. ビタミンB12(Vitamin B12)

CHEMCOSORB 7-SCX 4.6φX150mm CH<sub>3</sub>CN/5mM  
NaH<sub>2</sub>PO<sub>4</sub>(30:70) 1.5mL/min, R.T., UVD 361nm

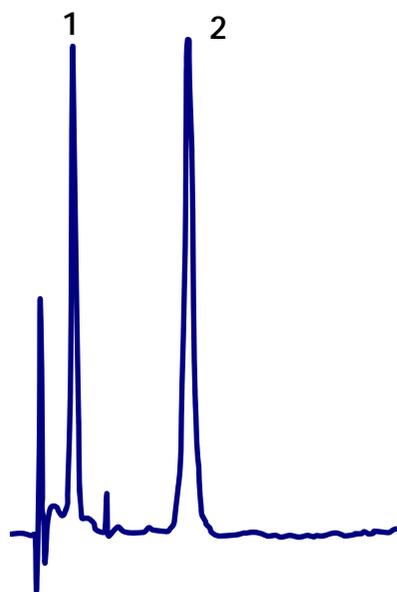
1. 2. VB1-6, 3. 4.VB12



7. ビタミンE/ユビキノン(Vitamin E / Ubiquinone)

CHEMCOSORB 5ODS-H 4.6φX150mm EtOH/MeOH(7:3)  
50mM-NaClO<sub>4</sub> 0.1%-CH<sub>3</sub>COOH  
1.0mL/min, R.T., ECD, 10nA(0.7V)

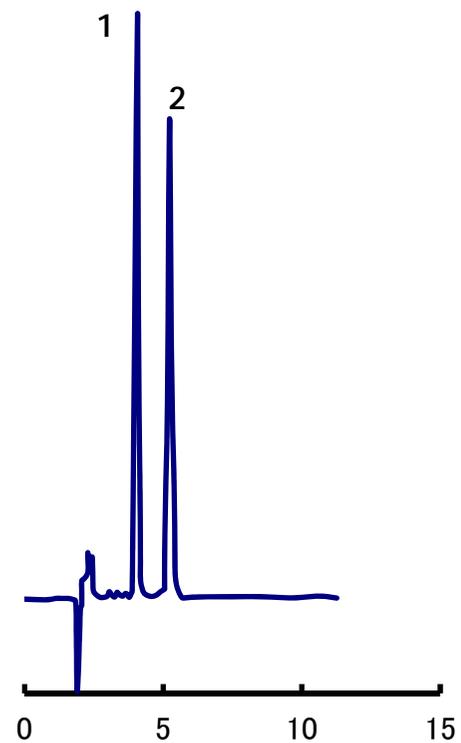
1.Vitamin E 2.Ubiquinone



8. ビタミンK1.K2(Vitamin K1, K2)

CHEMCOSORB 7C8 4.6φX150mm  
EtOH/H<sub>2</sub>O(96:4)  
1.0mL/min, R.T., UVD 254nm

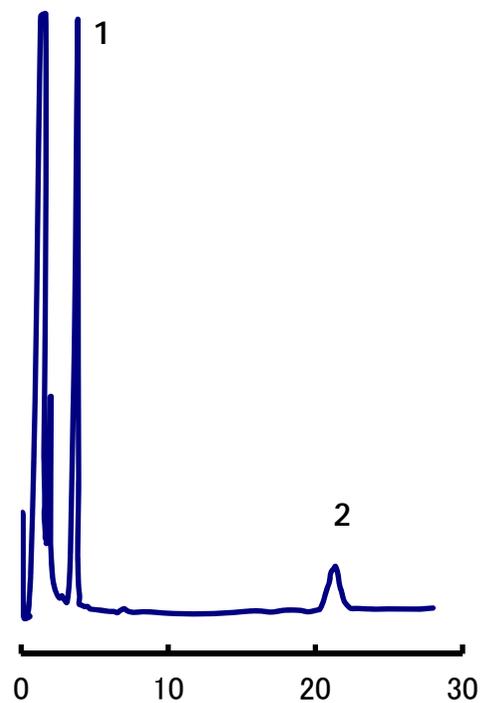
1.VK1 2.VK2



9. アンピシリン(Ampicillin)

CHEMCOSORB 7ODS-H 4.6φX150mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(10:90) incl. 0.1% LiClO<sub>4</sub> 0.1% Triethylamine  
2.0mL/min, R.T., UVD 220nm×0.2

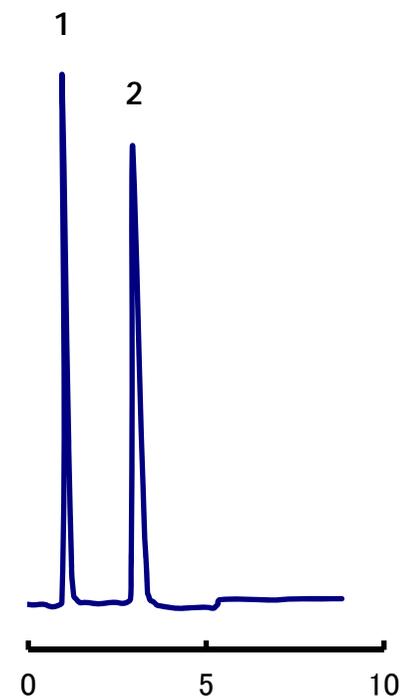
1.Ampicillin 2.Azthreonam



10. クロラムフェニコール(Chloramphenicol)

CHEMCOSORB I-10C18 4.0φX 300mm  
MeOH/H<sub>2</sub>O(4:6)  
1.5mL/min, R.T., UVD

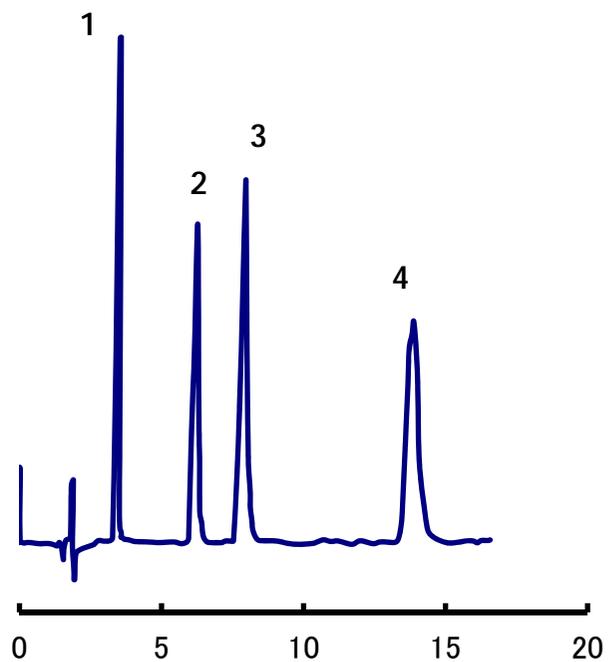
1.Thiamphenicol 2.Chloramphenicol



11. 感冒薬成分(Drug for flue)

CHEMCOSORB 10-ODS-L 4.6φX250mm  
MeOH/0.02M-H<sub>3</sub>PO<sub>4</sub>(30:70)  
1.5mL/min, R.T., UVD 254nm

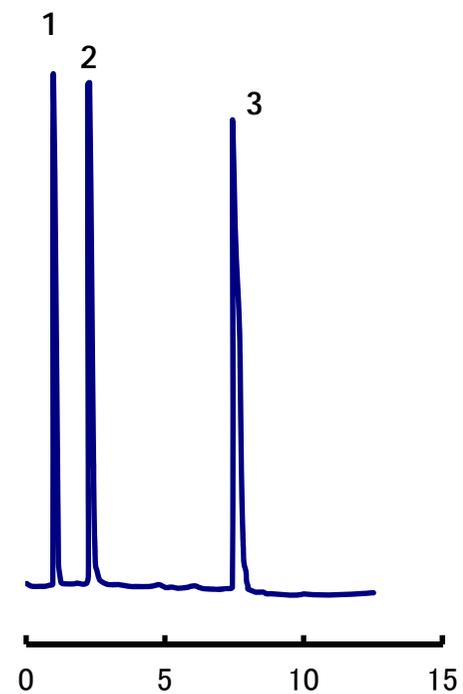
1.Acetaminophen 2.Salicylamide 3.Caffeine  
4.Acetylsalicylic Acid



12. コカイン(Cocaine mix)

CHEMCOSORB I-10C18 4.0φ X 300mm  
CH<sub>3</sub>CN/KH<sub>2</sub>PO<sub>4</sub> Buffer(pH 2.7)(17:83)  
2.0mL/min, R.T., UVD

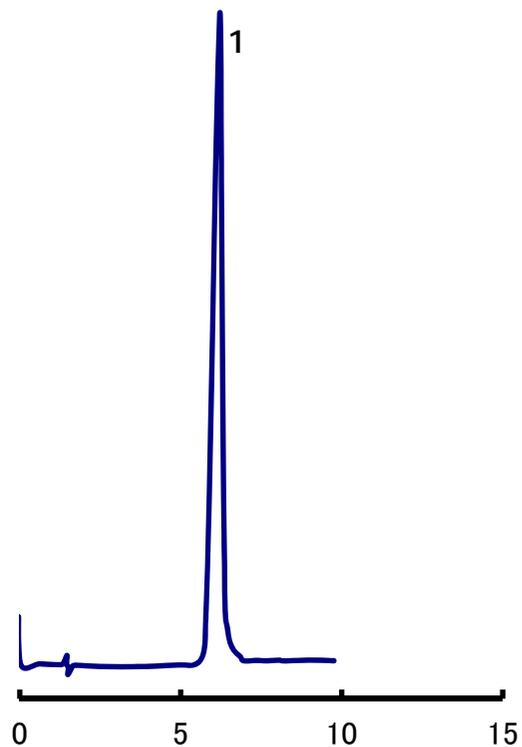
1.Renzoylecgonine 2.Cocaine 3.Ecgonine



13. メルカプトプリン(Mercaptopurine)

CHEMCOSORB 7ODS-H 4.6φX150mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(2:98)incl.1.0%CH<sub>3</sub>COOH 0.1%Sod.Octane  
Sulfonate  
1.5mL/min, R.T., UVD 313nm×0.16 O.D.

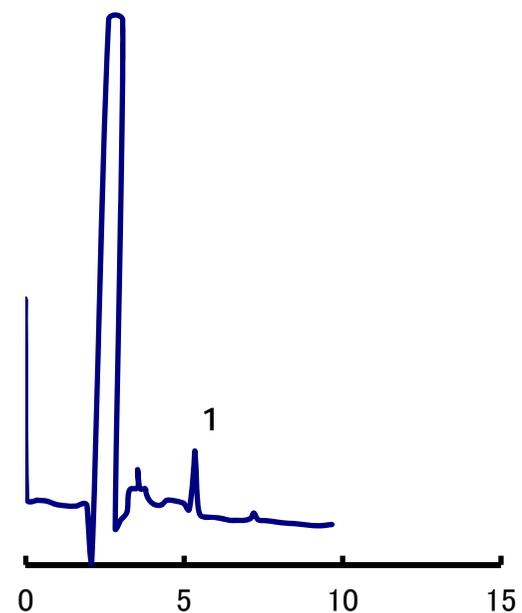
1. 6-Mercaptopurine



14. 無機塩中の酢酸(Acetic acid in inorganic salts)

CHEMCOSORB 7ODS-H 4.6φX250mm 0.1% H<sub>3</sub>PO<sub>4</sub>(pH 2)  
1.0mL/min, R.T., UVD 210nm × 0.04 O.D.

1. 20ppm Acetic Acid



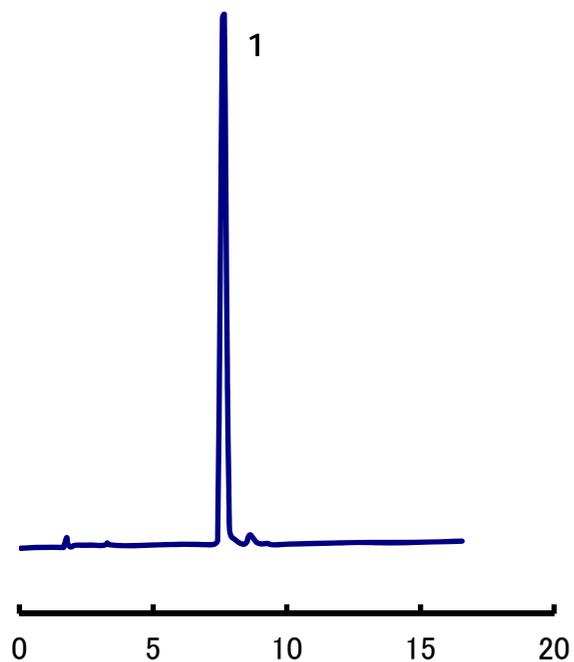
15. ベンゾトリアゾール(Benzotriazole)

CHEMCOSORB 5ODS-H 4.6φX150mm

MeOH/H<sub>2</sub>O(95:5)

1.0mL/min, R.T., UVD 280nm

1. Benzotriazole

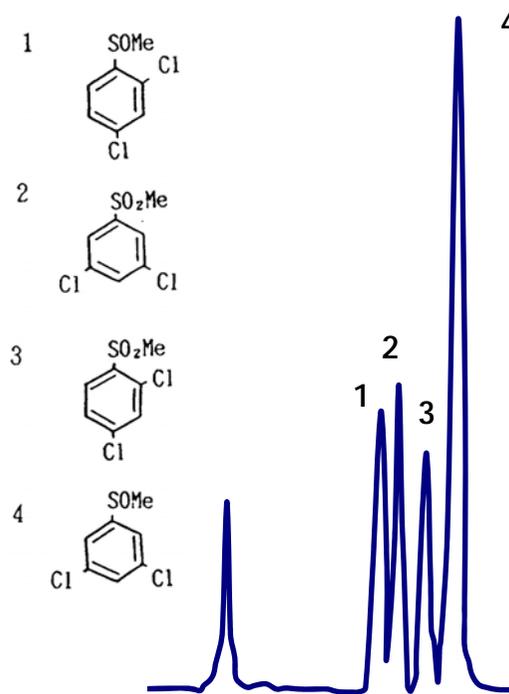


16. ジクロロフェノール誘導体 (Dichloro-phenol derivatives)

CHEMCOSORB 7CN(R) 4.6φX250mm

Cyclohexane/Dioxane(95:5)

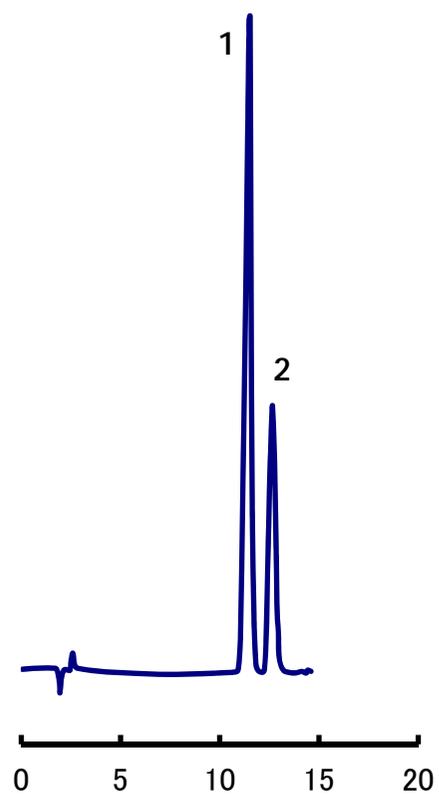
2.0mL/min, R.T., UVD 254nm × 0.08 O.D.



17. 食品添加物(Food additives)

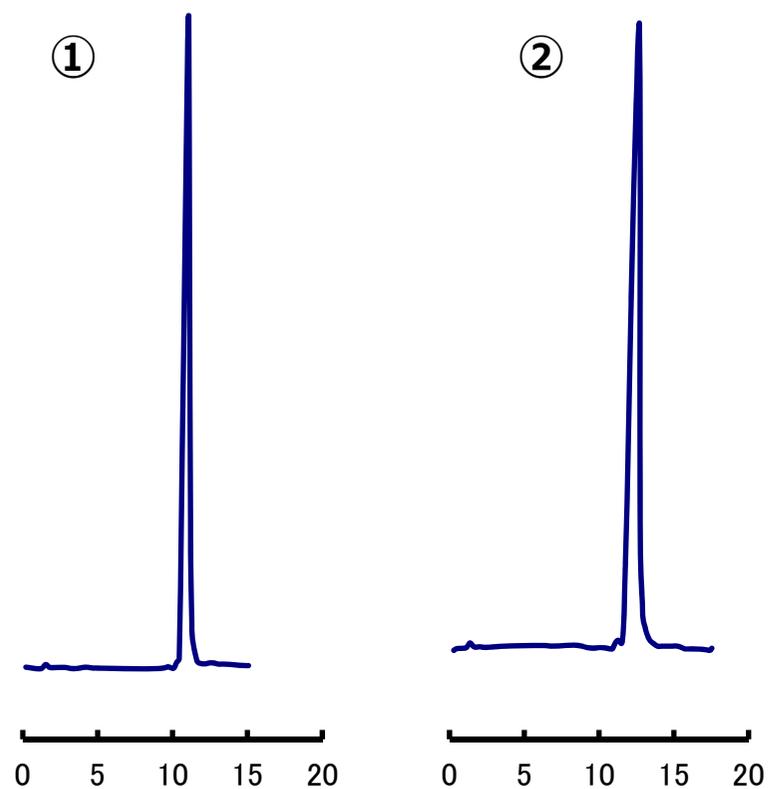
CHEMCOSORB 5ODS-UH 4.6φX150mm  
MeOH/H<sub>2</sub>O(55:45) incl. 2.5mM AcONa, 10mMAcOH  
0.7mL/min, R.T., UVD 225nm

1.Benzoic acid, 2.Sorbic acid



18. グリチルリチン(Glycyrrhizin)

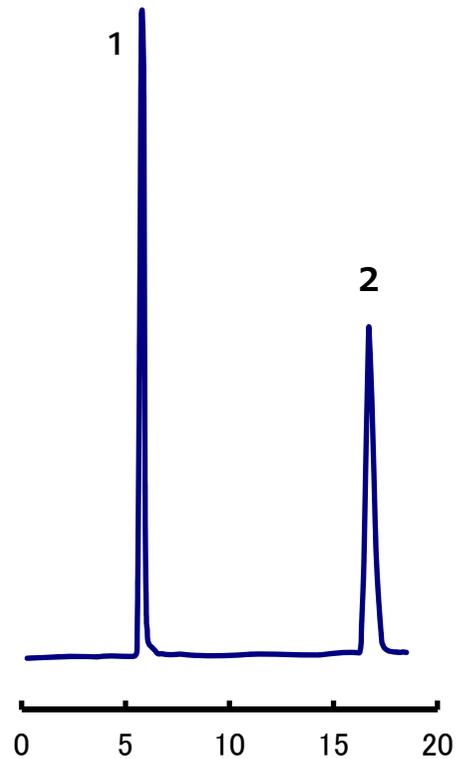
① CHEMCOSORB 5ODS-H, 4.6φ X150mm  
② CHEMCOSORB 5ODS-UH, 4.6φ X150mm  
CH<sub>3</sub>CN/2%AcOH(35:65)  
1.0mL/min, R.T., UVD 258nm



19. ヒドロキシベンゾフェノン(Hydroxybenzophenones)

CHEMCOSORB 5ODS-UH 4.6φX150mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(6:4)  
0.7mL/min, R.T., UVD 254nm

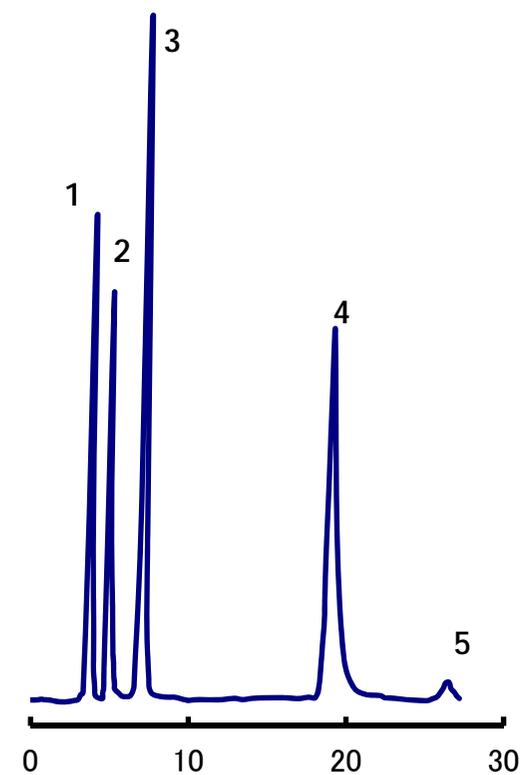
1.2,4-Dihydroxybenzophenone 2.2-hydroxy-4-methoxybenzophenone



20. 有機酸(Organic acids)

CHEMCOSORB 7ODS-L 4.6φX150mm  
10mM(NH<sub>4</sub>)<sub>3</sub>HPO<sub>4</sub>/CH<sub>3</sub>OH(95:5)[pH 2.0]  
1.0mL/min, R.T., UVD 220nm

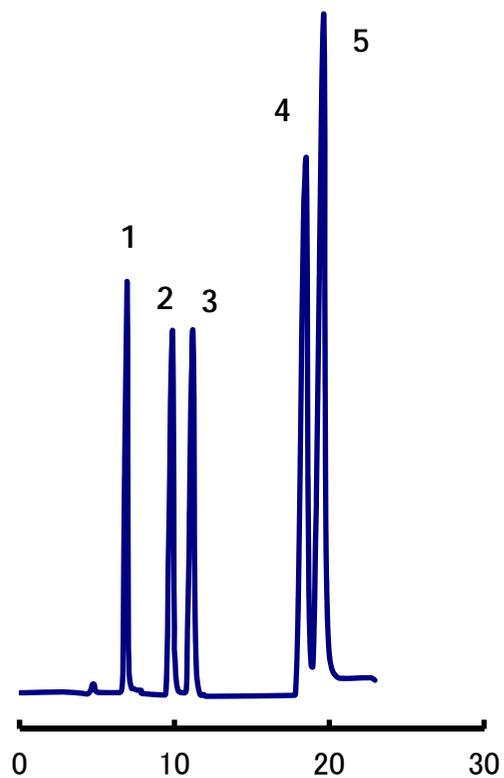
1.dl-Malic acid 2.Maleic acid 3.Fumaric acid 4.Crotonic acid



21. パラヒドロキシ安息香酸エステル (p-Hydroxy benzoic acid ester)

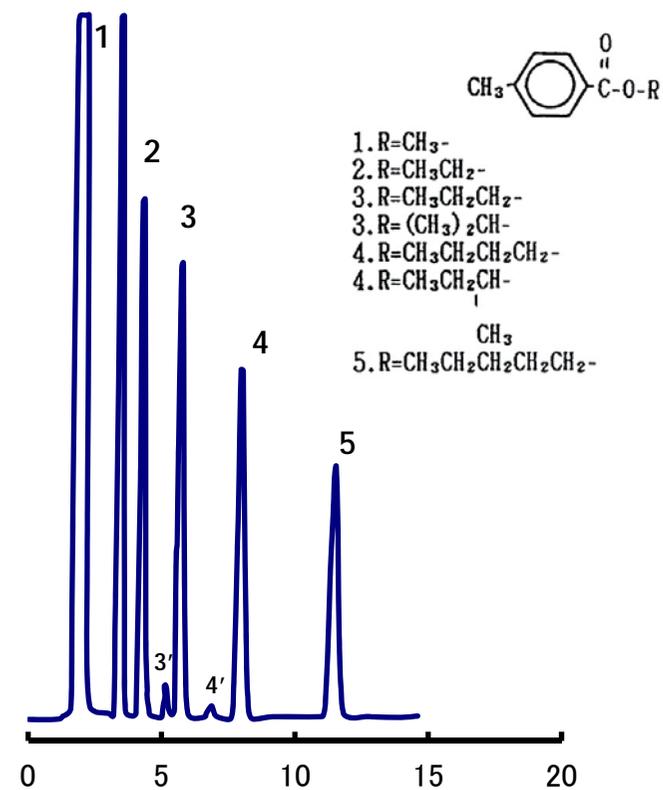
CHEMCOSORB 5ODS-H 4.6φX150mm  
MeOH/H<sub>2</sub>O(47:33) incl. 2.5Mm AcONa, 10Mm AcOH  
0.7mL/min, R.T., UVD 254nm

1.ethyl 2.iso-propyl 3.n-propyl 4.iso-butyl 5.n-butyl



22. バラメトキシ安息香酸エステル (p-Methoxy benzoic acid ester)

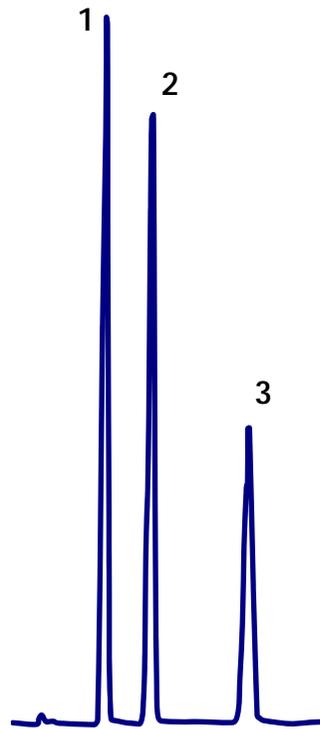
CHEMCOSORB 5ODS-UH 4.6φX125mm  
CH<sub>3</sub>OH/CH<sub>3</sub>COOH/H<sub>2</sub>O(80:0.1:20)  
1.0mL/min, R.T., UVD 254nm × 0.5 O.D.



23. パラベン防腐剤(Paraben preservatives)

CHEMCOSORB 5ODS-H 4.6φX150mm  
MeOH/H<sub>2</sub>O(60:40)  
1.0mL/min, R.T., UVD 254nm

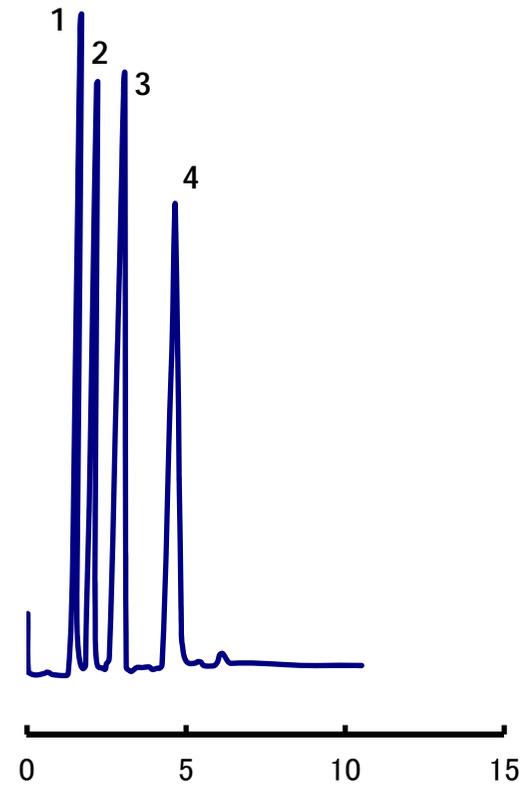
1.Me-Paraben 2.Et-Paraben 3.Pro-Paraben



24. 防腐剤(Presevatives)

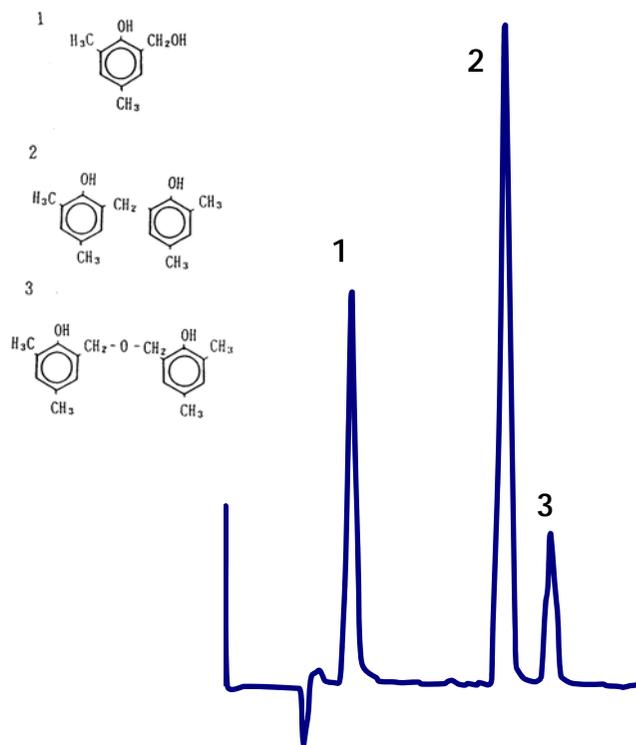
CHEMCOSORB I-10C18, 4.0φX300mm  
MeOH/H<sub>2</sub>O(60:40)  
2.0mL/min, R.T., UVD

1.Methyl Paraben 2.Ethyl Paraben 3.Propyl Paraben  
4.Buthyl Paraben



25. フェノール類化合物(Phenolic compounds)

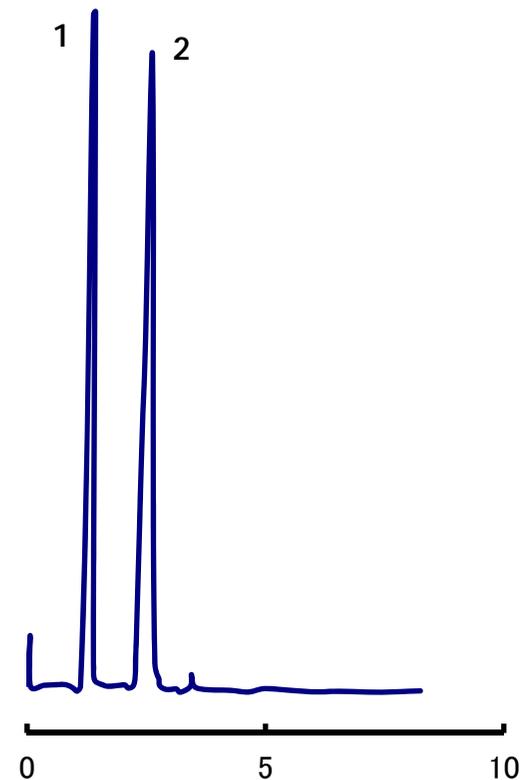
CHEMCOSORB 5ODS-H 4.6φX150mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(75:25)  
1.0mL/min, R.T., UVD 254nm × 0.5 O.D.



26. サッカリン(Saccharin)

CHEMCOSORB I-10C18 4.0φX300mm  
MeOH/H<sub>2</sub>O/AcOH(30:70:0.5) 2.0mL/min, R.T., UVD

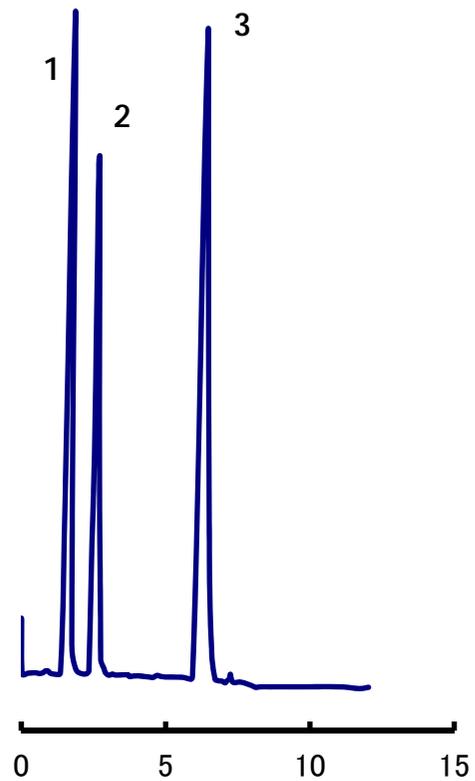
1.Saccharine 2.Theophylline



27. サリチル酸(Salicylic acid)

CHEMCOSORB I-10C18 4.0φX300mm  
MeOH/H<sub>2</sub>O/AcOH(18:78:4) 3.0mL/min, R.T., UVD

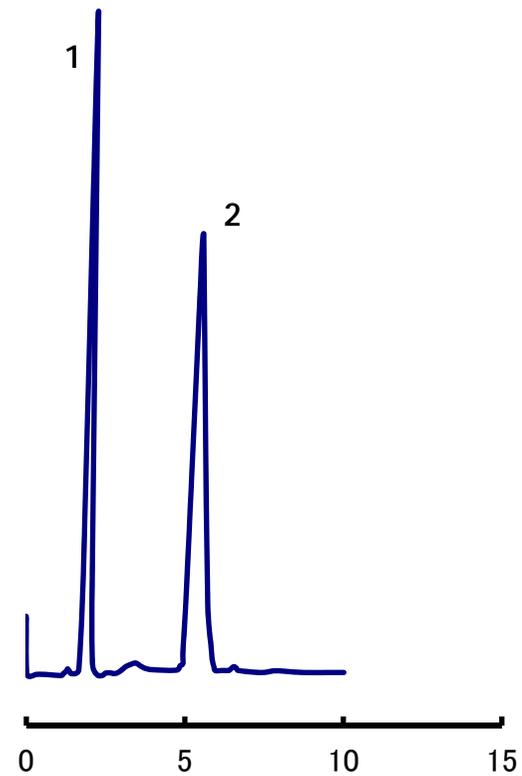
1.Gentisic Acid 2.Salicyluric Acid 3.Salicylic Acid



28. 甘味料(Sweeteners)

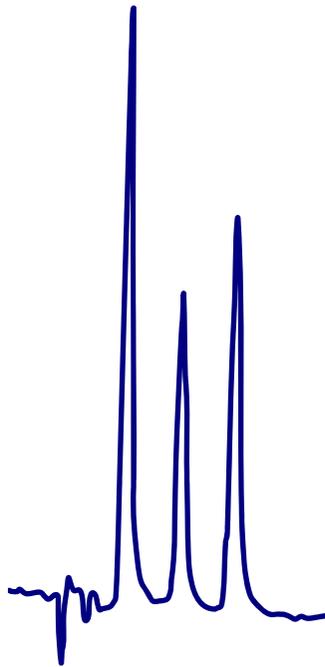
CHEMCOSORB I-10C18 4.0φX300mm  
CH<sub>3</sub>CN/KH<sub>2</sub>PO<sub>4</sub>Buffer(10:90) 2.0mL/min, R.T., UVD

1.Sodium Saccharin 2.Aspartame



29. アセチルコリン/コリン(Acetyl choline / choline)

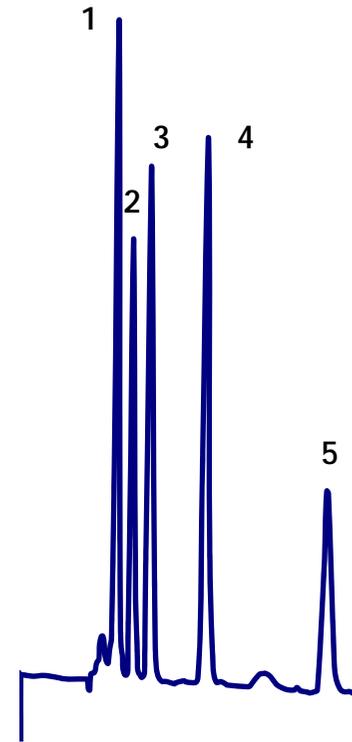
CHEMCOSORB 300-7C18 L 4.6φX150mm  
0.01M-Sod.Acetate[pH 5.0 with 0.2M-Citric Acid] incl. 20  
mg/L of Sod. Octane Sulfonate and 1.2mM/L of TMA,  
0.8mL/min, 40°C, ECD with Platinum Electrode  
1.CH 2.EHC 3.ACH, Post column reaction; immobilized  
enzyme column, φ4x10) 0.2M-Phos Buffer (pH 8.5)



30. カテコールアミン(Catecholamines)

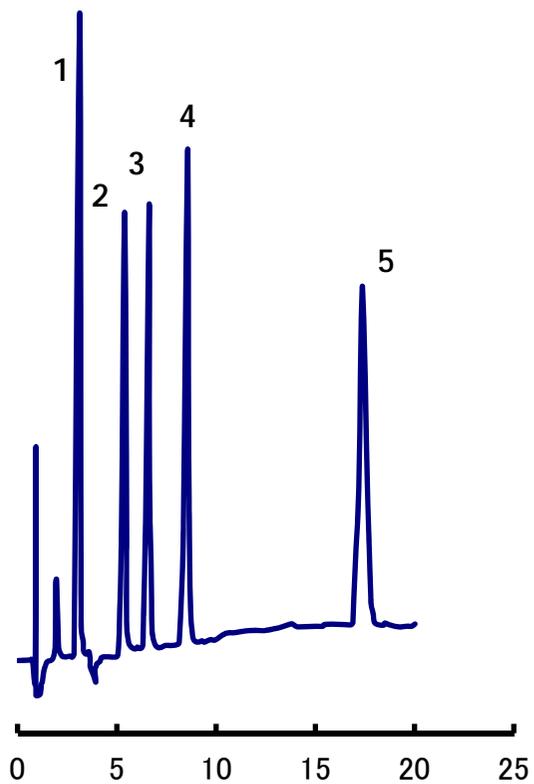
CHEMCOSORB 5ODS-H 4.6φX250mm 0.1M-KH<sub>2</sub>PO<sub>4</sub> incl.  
1% THF [pH 4.2] 1.0mL/min, R.T., ECD, 700mV

1.NE 2.E 3.DHBA (I.S.) 4.D 5.5-HT



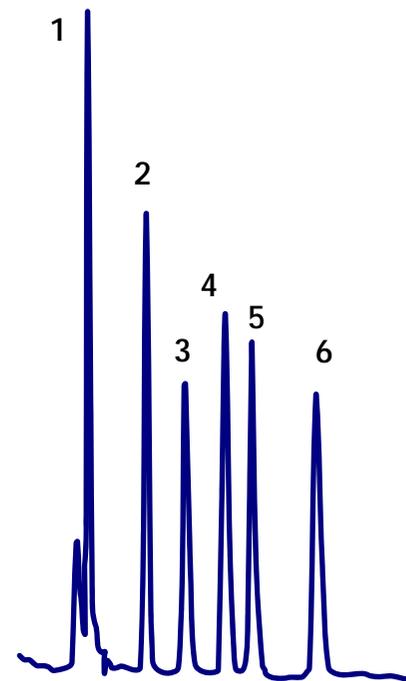
31. カテコールアミン(Catecholamines)  
CHEMCOSORB 5ODS-H 5.0φX150mm 0.15M-Mono-chloro  
Acetic Acid(incl.SOS 40!/L) [pH 3.0]  
1.5mL/min, R.T., ECD,700mV

1.NE 2.L-DOPA 3.EPI 4.DHBA(I.S.) 5.DA



32. カテコールアミン(Catecholamines)  
CHEMCOSORB 5ODS-H 4.6φX150mm  
H<sub>2</sub>O/CH<sub>3</sub>OH(9:1)(incl. 10mM-18-Crown ether) [pH 2.4]  
1.0mL/min, R.T., UV-220

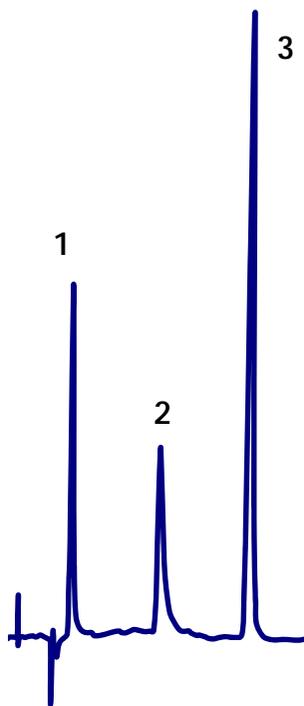
1.AD 2.DOPA 3.NA 4.OP 5.NM 6.DA



33. カテコールアミン(Catecholamines)

CHEMCOSORB 7ODS-H 4.6φX250mm  
80% 0.1M Phosphate buffer[pH3.1] 15% CH<sub>3</sub>OH 40mgLiCl  
5%CH<sub>3</sub>CN  
1.0mL/min, R.T., ECD

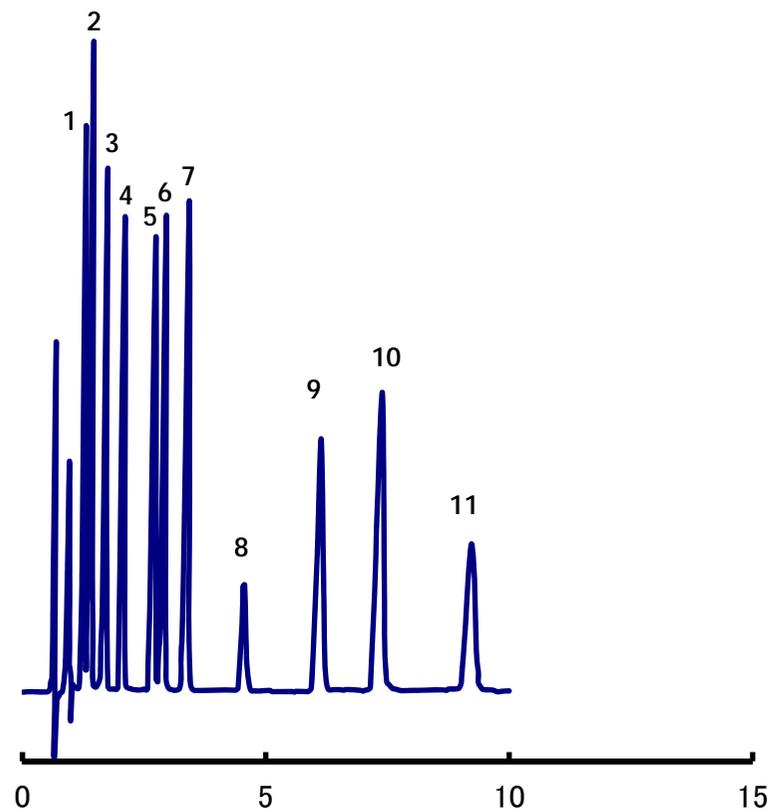
1.VMA 2.VLA 3.HVA



34. カテコールアミンとインドールアミン  
(Catecholamines/Indoleamines)

CHEMCOSORB 5ODS-H 4.6φX250mm  
90% 0.1M Citric buffer[pH3.4] 10% MeOH 0.5mM I.P.R.  
0.8mL/min, ECD

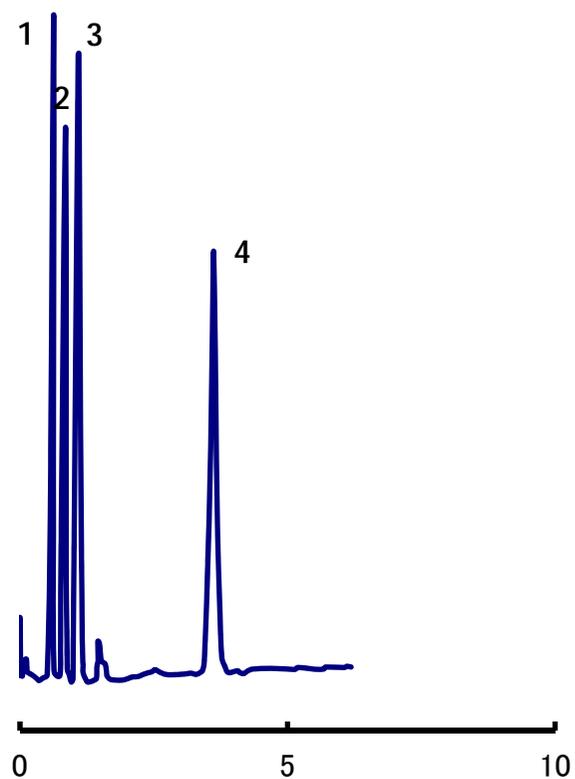
1.DOPA 2.NE 3.EPI 4.DHBA 5.5-HTP 6.DA 7.DOPAC  
9.5-HT 10.5-HIAA 11.HVA



36. デジタリス配糖体(Digitalis glycosides)

CHEMCOSORB I-10C18 4.0φX300mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(38:62)  
1.5mL/min, R.T., UVD

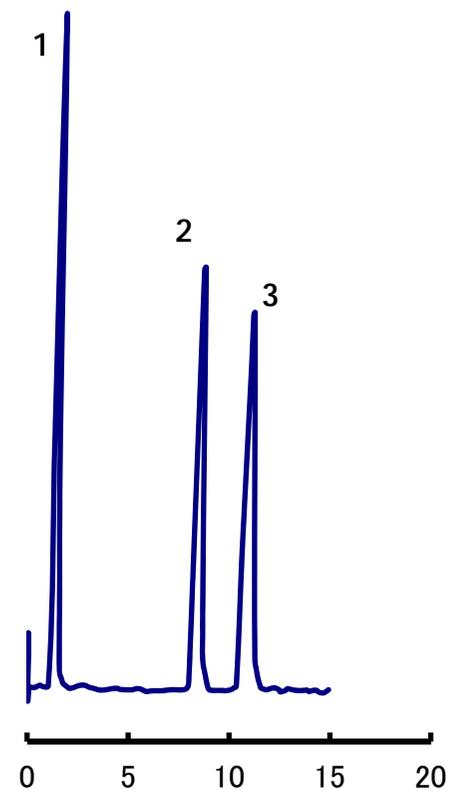
1.Solvent 2.Digoxin 3.Gitoxigen 4.Digitoxin



37. エストロゲン(Estrogens)

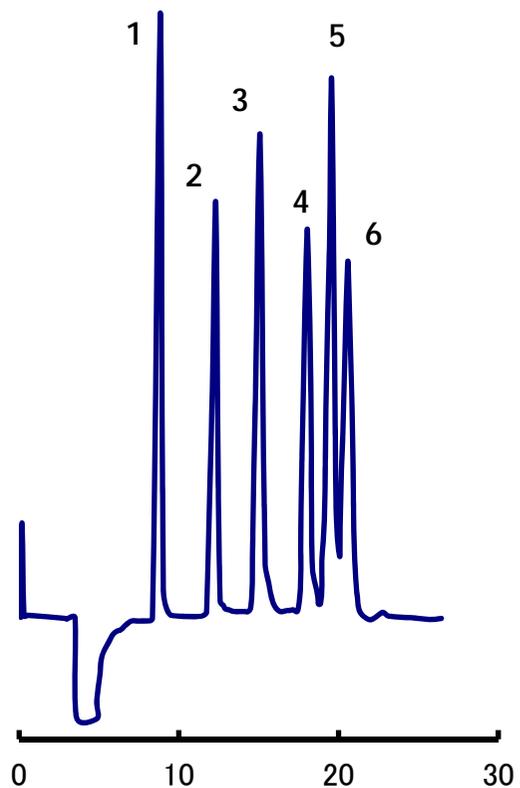
CHEMCOSORB 7ODS-H 4.6φX250mm  
0.1M Phosphate buffer[pH 3.1]/CH<sub>3</sub>CN(60:40)  
incl.40mgLiCl  
2.0mL/min, ECD

1.Estriol 2.Estradiol 3.Eestron



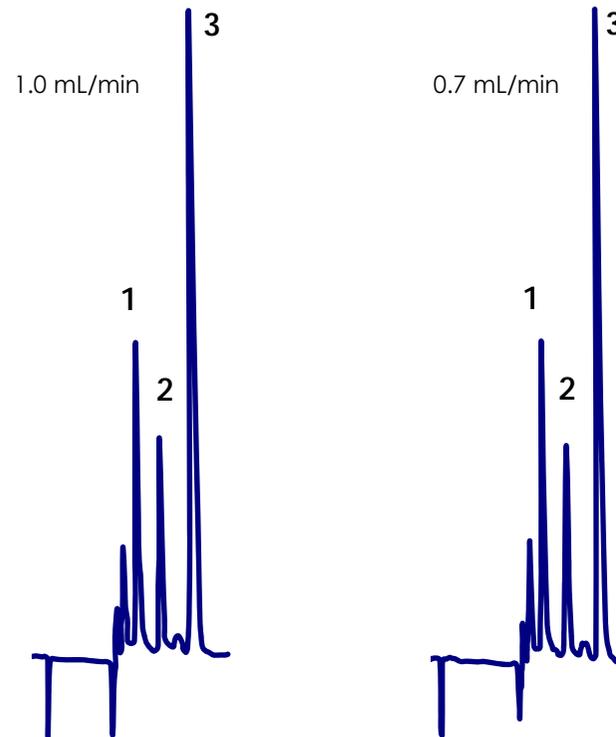
38. 脂肪酸(Free fatty acid)

CHEMCOSORB 80-7C18 4.6φX150mm  
MeOH/0.05M-NaH<sub>2</sub>PO<sub>4</sub>(90:10)[pH 2.0 with H<sub>3</sub>PO<sub>4</sub>]  
1.0mL/min, R.T., KNAUER RID  
1.Lauric Acid(12.5μg) 2.Myristic Acid(12.5μg) 3.Linoleic  
Acid(12.5μg) 4.Palmitic Acid(12.5μg) 5.Oleic  
Acid(12.5μg) 6.Elaidic Acid(12.5μg)



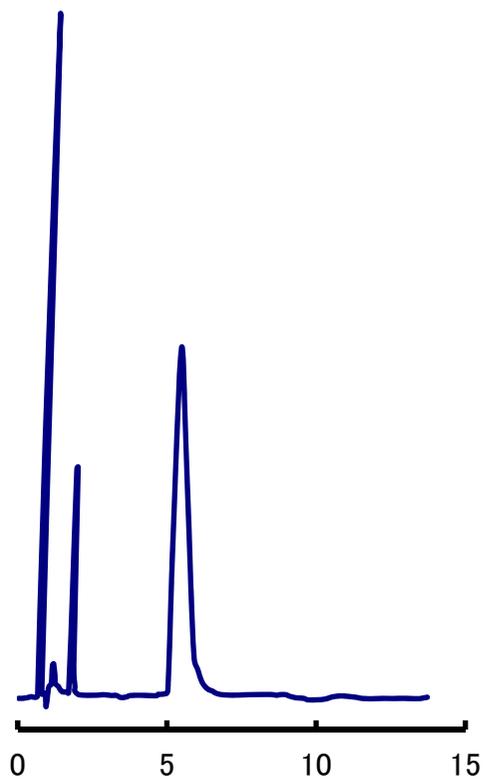
39. セロトニン(Serotonin)

CHEMCOSORB 7ODS-H 4.6φX250mm  
0.075M-Citrate Buffer/Acetic  
Acid[pH4.5]/MeOH/THF(77:12:10:1)  
1.0mL/min, 0.7mL/min, R.T., ECD 800mV 16nA/f  
1.5HT(5ng) 2.SHIAA(5ng) 3.HVA(5ng)



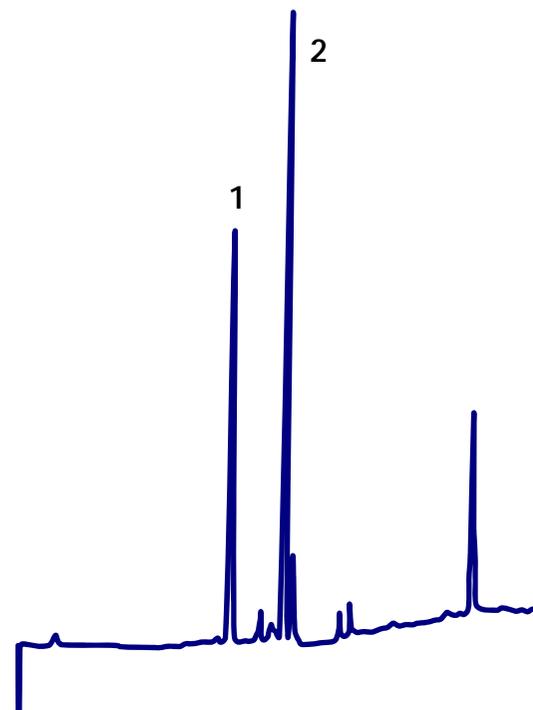
40. 血小板活性因子(Platelet activating factor)

CHEMCOSORB 3ODS-H 4.6φX75mm  
MeOH/0.1M NH<sub>3</sub> aq.-0.1M CH<sub>3</sub>COONH<sub>4</sub> [pH 6.0 by  
H<sub>3</sub>PO<sub>4</sub>] = 9 / 1 (v/v)  
1.0mL/min, R.T., UVD 210nm



41. プロスタグランジン(Prostaglandins)

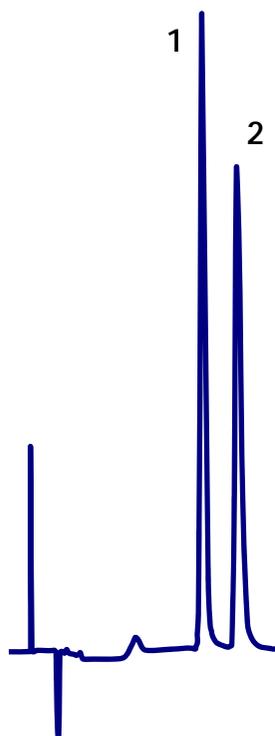
CHEMCOSORB 5ODS-H 4.6φX150mm  
A:MeOH/CH<sub>3</sub>CN/H<sub>2</sub>O/AcOH(35:25:45:0.01)  
B:MeOH/CH<sub>3</sub>CN(75:25)  
0-6min 100% A, 6-12min 40% B, 12-30min 100% B  
1.0mL/min, R.T. UVD  
1.PCB2(Prostaglandin B2) 2.LTB4(Leukotriene B4)



42. D,L-トリプトファン(D,L-Tryptophan)

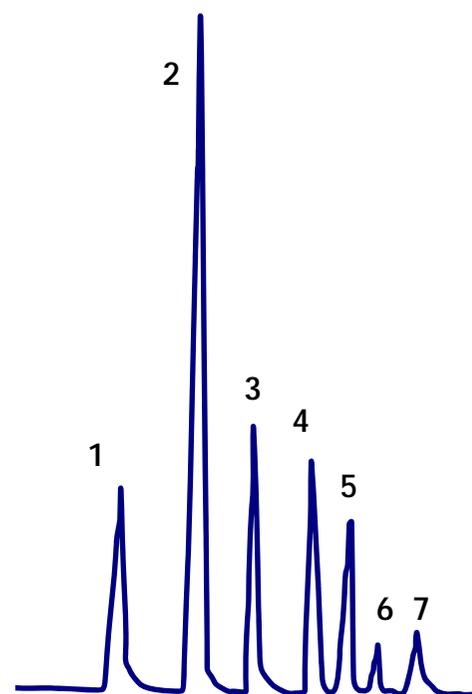
CHEMCOSORB 5ODS-H 4.6φX150mm  
0.008M L-phenylalanine 0.004M CuSO<sub>4</sub> · 5H<sub>2</sub>O in 20%  
MeOH/H<sub>2</sub>O  
0.8mL/min, R.T., UVD 280nm

1.D-Tryptophan 2.L-Tryptophan



43. 芳香族炭化水素(Aromatic hydrocarbons)

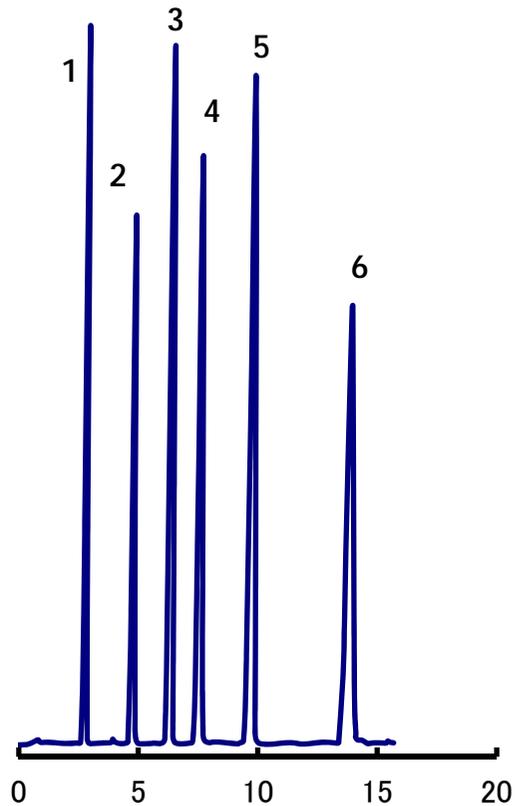
CHEMCOSORB 5ODS-H 4.6φX200mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(70:30)  
2.0mL/min, R.T., Fluoro D  
1.Anthracene 2.Pyrene 3.Benz(a)anthracene  
4.Benzo(e)pyrene 5.Benzo(a)pyrene  
6.Benbzo(g.h.i)perylene 7.Dibenz(a.h)anthracene



44. 芳香族炭化水素(Aromatic Hydrocarbons)

CHEMCOSORB 5ODS-H 4.6φX150mm  
CH<sub>3</sub>CN/H<sub>2</sub>O(70:30)  
1.0mL/min, R.T., UVD 254nm

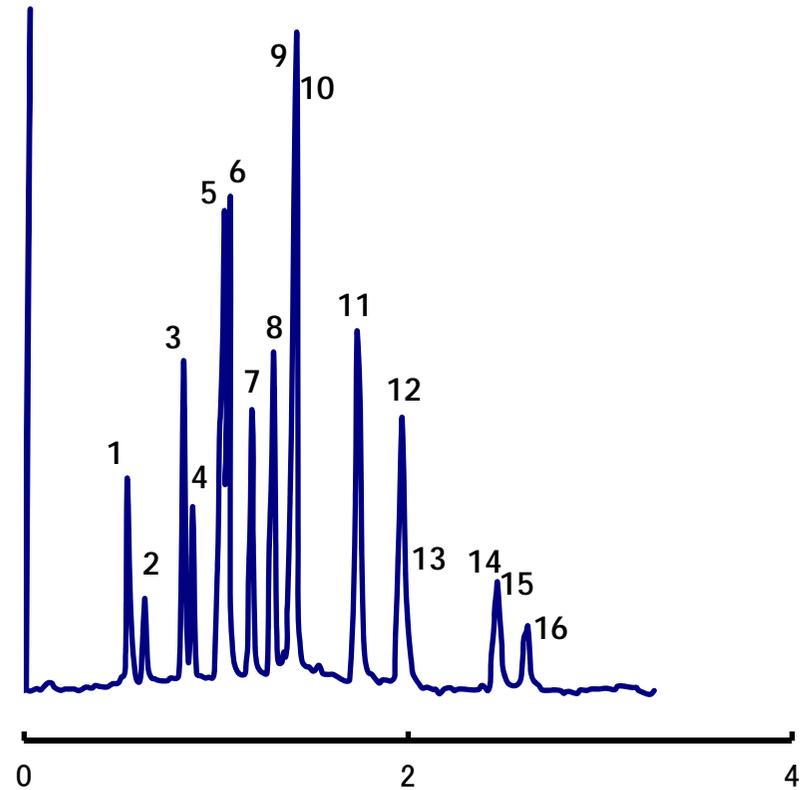
1.Benzene 2.Naphthalene 3.Diphenyl 4.Flourene  
5.Anthracene 6.Pyrene



45. 多環芳香族炭化水素(Poly aromatic hydrocarbons)

CHEMCOSORB 5ODS-H 0.35mmI.D.X500mm  
MeOH 100%, 1.0μL/min, 30°C, UVD 254nm

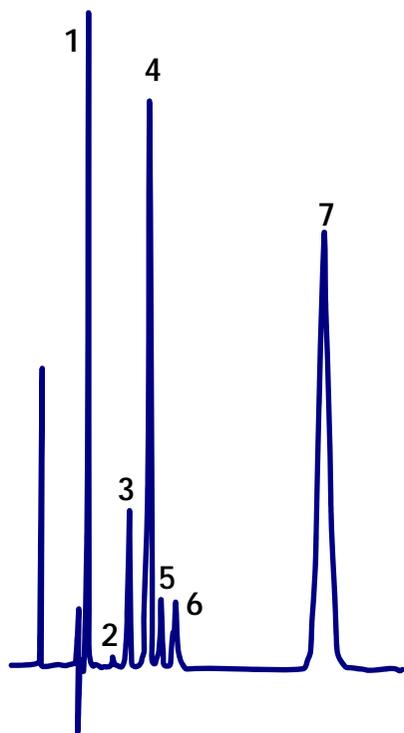
1.Naphthalene 2.Acenaphthylene 3.Acenaphthene  
4.Flourene 5.Phenanthrene 6.Anthracene 7.Flourene  
8.Pyrene 9.Benzo(a)anthracene 10.Chrysene  
11.Benzo(b)fluoranthene 12.Benzo(k)fluoranthene  
13.Benzo(a)pyrene 14.Benzo(g.h.i)perylene 15.Dibenz(a.h)  
anthracene



46. フタル酸(Phthalic Acid)

CHEMCOSORB 7SAX 6.0φX250mm  
0.05M-Phos. Buffer[pH 5.0] incl. 10% MeOH & 5% CH3CN  
2.0mL/min, R.T., UVD 254nm × 0.16 O.D.

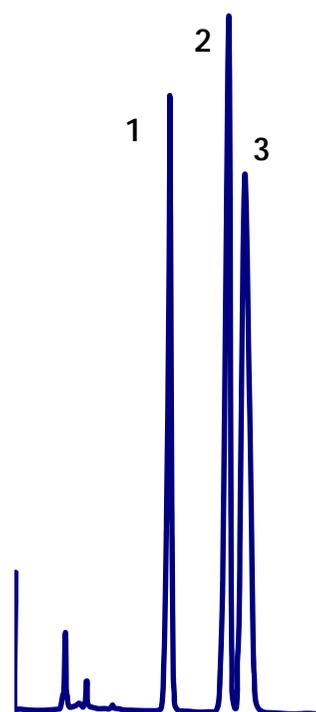
1.Phtharide 2.Unknown 3.Unknown 4.O-Toluic Acid  
5.Benzoic Acid 6.Unknown 7.Phchalic Acid



47. フタル酸(Phthalic Acid)

CHEMCOSORB 7SAX 4.6φX250mm  
0.5M-Phos. Buffer[pH 5.0] incl. 10% MeOH  
1.0mL/min, R.T., UVD 254nm × 0.2 O.D.

1.o-Phthalic acid 2.p-Phthalic acid 3.m-Phthalic acid



48. フタル酸エステル(Phthalic esters)

CHEMCOSORB 7C8 4.6φX250mm

MeOH/H<sub>2</sub>O(70:30)

1.5mL/min, 30°C, UVD 254nm

1. Dimethyl Phthalate (DMP) 2. Diethyl Phthalate (DEP)  
3. Di-iso-propyl Phthalate (DPP) 4. Di-n-butyl Phthalate (DEP)

