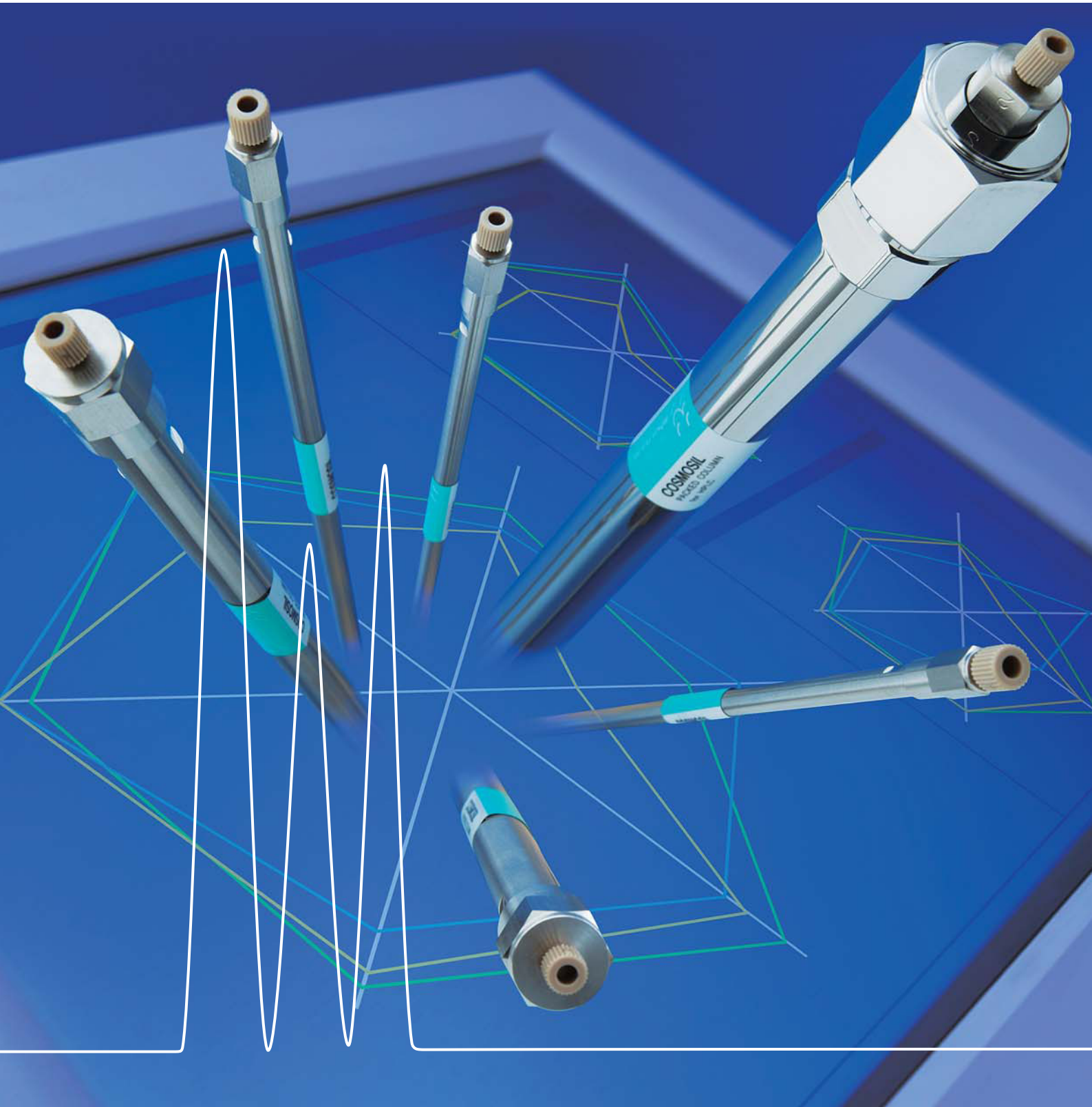
nacalai tesque
The quality for certainty.

HPLC Chromatogram Index
COSMOSIL HILIC



Selection guide of mobile phase

COMOSIL HILIC column generates retention and separation by hydrophilic interaction (mainly hydrogen bond) and anion-exchange. Refer to following recommendations to select an appropriate mobile phase condition.

(1) The effect of organic solvent type and content

- In general, acetonitrile/water is used as mobile phase.
- Retention increases as water content in the mobile phase decreased. (Fig.1)
- Use acetonitrile content in the mobile phase within the range of 0-95% (in general 50-95%).
- Methanol/water generates shorter retention than acetonitrile/water. (Fig.2)
- Use only HPLC grade solvents.

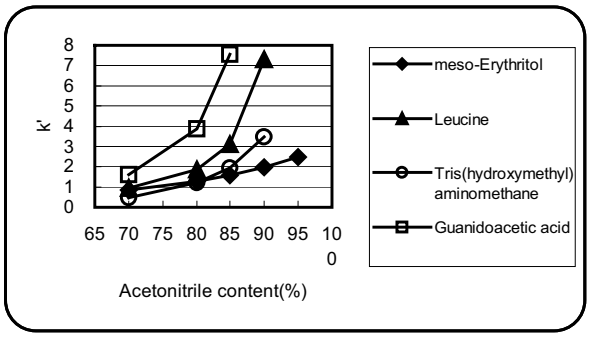


Fig.1 The effect of acetonitrile content on retention

Column; COSMOSIL HILIC

Mobile phase; Acetonitrile/ 10mmol/l CH_3COONH_4

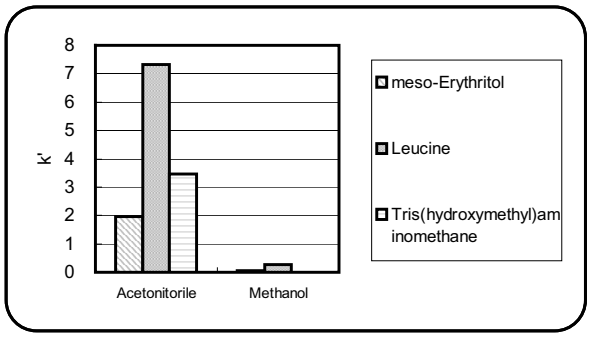


Fig.2 Difference of acetonitrile and methanol on retention

Column; COSMOSIL HILIC

Mobile phase; Organic solvent/ 10mmol/l CH_3COONH_4 = 90/10

(2) The effect of buffer pH

- Keep pH of the mobile phase within the range of 2-7.5.
- The buffer around neutrality generates larger retention. (Fig.3)

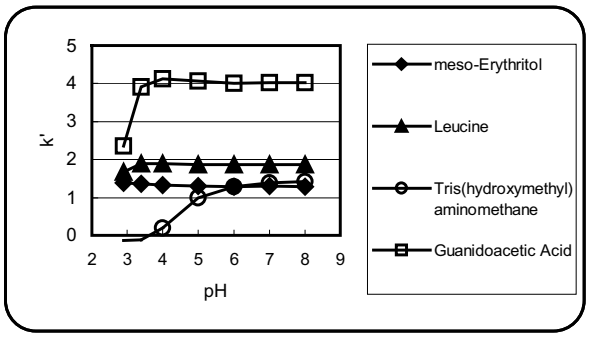


Fig.3 The effect of buffer pH on retention

Column; COSMOSIL HILIC

Mobile phase; Acetonitrile / 10mmol/l buffer = 90/10

(3) The effect of salt type and concentration

- When analyze ionic compounds, add salts or buffers in the mobile phase.
- When mobile phase has high acetonitrile content, note dissolubility of the salt. The dissolubility of phosphate buffers used widely in reversed phase chromatography is low in acetonitrile. Therefore use of phosphate buffers is not recommended. Keep the concentration of acetonitrile under 70% if use a phosphate buffer. Check that the salt does not precipitate when mixed with acetonitril before use.
- Ammonium acetate or formic acid ammonium buffers are recommended because they are soluble in high t acetonitrile content.

- Use the buffer concentration within the range of 5 - 100mmol/l. Moreover, Check that the salt does not precipitate after mixing buffer and acetonitrile.
- High salt concentration inhibits ion exchange and decreases retention. (Fig.4)
- Run mobile phase through membrane filter (less than 0.45μm in pore size) before use.

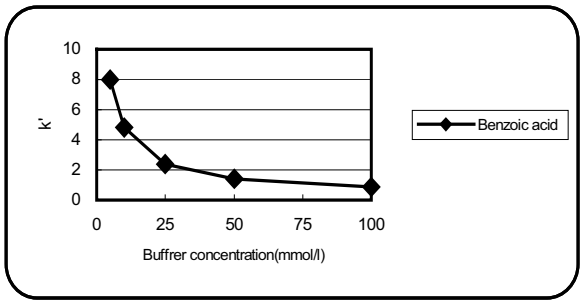


Fig.4 The effect of salt concentration on retention

Column: COSMOSIL HILIC

Mobile phase; Acetonitrile / 10mmol/l CH_3COONH_4 = 50/50

(4) Selection of mobile phase

Following are the recommended mobile phases for different compound types.

Neutral compounds	→	Acetonitrile / Water = 90/10
Basic compounds	→	Acetonitrile / 10mmol/l CH_3COONH_4 = 90/10
Amphoteric compounds	→	Acetonitrile / 10mmol/l CH_3COONH_4 = 70/30
Acidic compounds	→	Acetonitrile / 10mmol/l CH_3COONH_4 = 50/50
		↓not eluted
		Acetonitrile / 10mmol/l Phosphate buffer (pH7.0)= 50/50

(5) Improvement of peak shape

Try following if peak shape is tailing. The peak shape might improve.

- Add 5mmol/l EDTA to mobile phase.
- Change to citrate buffer. (i. e. 10 mmol/l citrate buffer pH7.0)

80%Acetonitrile/ 10mmol/l CH_3COONH_4

80%Acetonitrile/ 10mmol/l CH_3COONH_4+ 5mmol/l EDTA

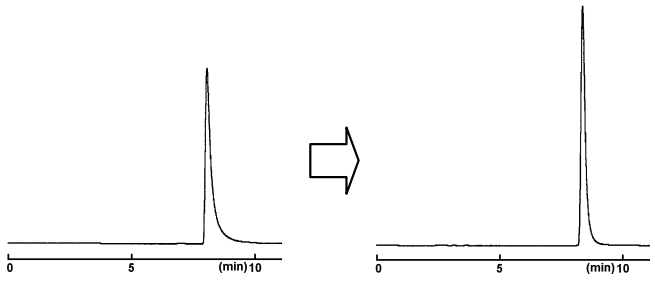


Fig.5 Improvement of peak shape

Column: COSMOSIL HILIC(4.6mmI.D.-250mm)

Sample: Tryptophan(1ng), Flow rate: 1.0ml/min

Detection: UV254nm, Temperature: 30°C

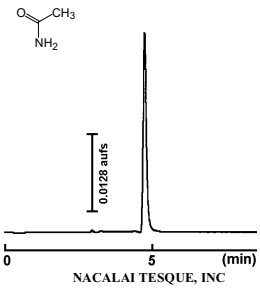
(6) Others

- Use scrupulously degassed mobile phase. Air bubbles generate detection noise and accelerate column deterioration.
- We recommend keeping the chromatography conditions constant, since frequent changes of mobile phase shorten column life.

Index

COSMOSIL Chromatogram Index

Sample: Acetamide
CAS No.: [60-35-5]
Molecular formula: C_2H_5NO
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ H_2O=95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 4.75min
Capacity factor: 0.57



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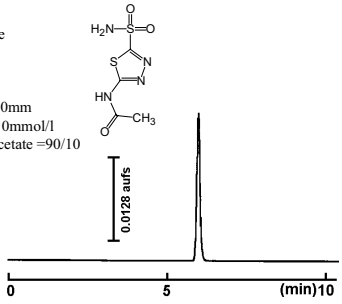
COSMOSIL Chromatogram Index

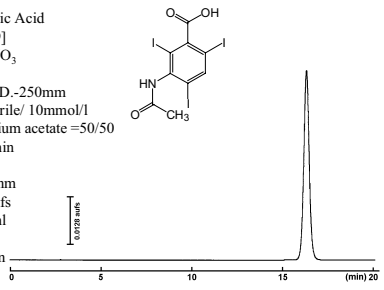
Sample: Acetazolamide
CAS No.: [59-66-5]
Molecular formula: $C_4H_6N_4O_3S_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.2mg/ml
Injection volume: 0.5µl
Retention time: 5.99min
Capacity factor: 1.05



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Acetrizoic Acid
CAS No.: [85-36-9]
Molecular formula: $C_9H_6I_3NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.8mg/ml
Injection volume: 1.0µl
Retention time: 16.39min
Capacity factor: 4.76



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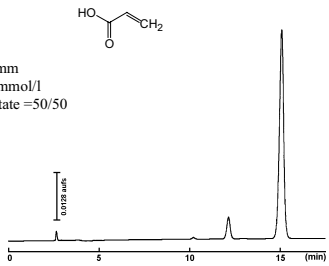
COSMOSIL Chromatogram Index

Sample: Acrylic Acid
CAS No.: [79-10-7]
Molecular formula: $C_3H_4O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 15.05min
Capacity factor: 4.28



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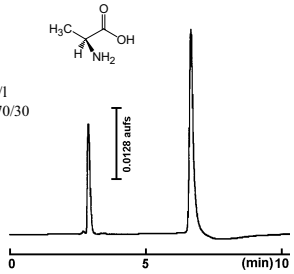
COSMOSIL Chromatogram Index

Sample: L-α-Alanine
CAS No.: [56-41-7]
Molecular formula: $C_3H_7NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 2.0µl
Retention time: 6.67min
Capacity factor: 153



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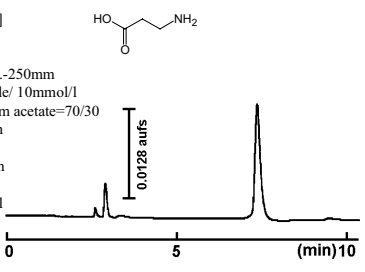
COSMOSIL Chromatogram Index

Sample: β-Alanine
CAS No.: [107-95-9]
Molecular formula: $C_3H_7NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 7.38min
Capacity factor: 1.81



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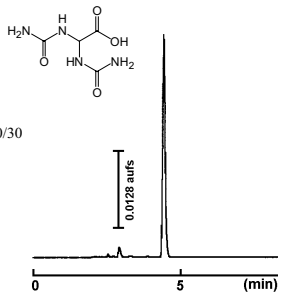
COSMOSIL Chromatogram Index

Sample:	Allantoic Acid
CAS No.:	[99-16-1]
Molecular formula:	$C_4H_8N_4O_4$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV220 nm
Attenuation:	0.128 aufs
Sample conc.:	5.0mg/ml
Injection volume:	0.5µl
Retention time:	4.45min
Capacity factor:	0.69



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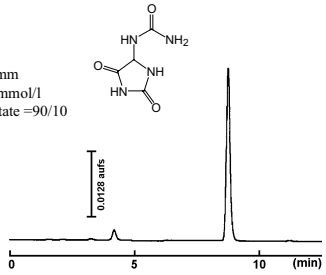
COSMOSIL Chromatogram Index

Sample:	Allantoin
CAS No.:	[97-59-6]
Molecular formula:	$C_4H_6N_4O_3$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV220 nm
Attenuation:	0.128 aufs
Sample conc.:	1.0mg/ml
Injection volume:	1.0µl
Retention time:	8.75min
Capacity factor:	2.02



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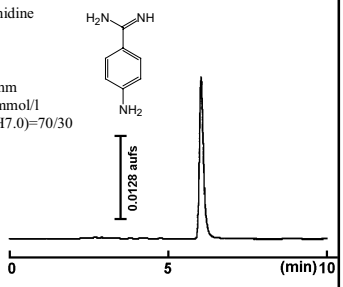
COSMOSIL Chromatogram Index

Sample:	p-Aminobenzamidine
CAS No.:	[3858-83-1]
Molecular formula:	$C_7H_9N_3$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.5mg/ml
Injection volume:	1.0µl
Retention time:	6.07min
Capacity factor:	1.31



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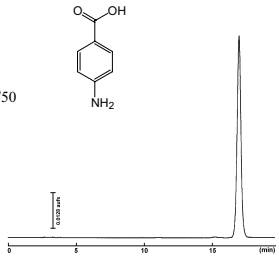
COSMOSIL Chromatogram Index

Sample:	p-Aminobenzoic Acid
CAS No.:	[150-13-0]
Molecular formula:	$C_7H_7NO_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.4mg/ml
Injection volume:	1.0µl
Retention time:	16.97min
Capacity factor:	4.91



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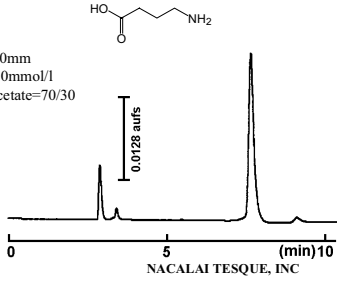
COSMOSIL Chromatogram Index

Sample:	4-Amino-n-butyric Acid
CAS No.:	[56-12-2]
Molecular formula:	$C_4H_9NO_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV210 nm
Attenuation:	0.128 aufs
Sample conc.:	10.0mg/ml
Injection volume:	1.0µl
Retention time:	7.67min
Capacity factor:	1.92



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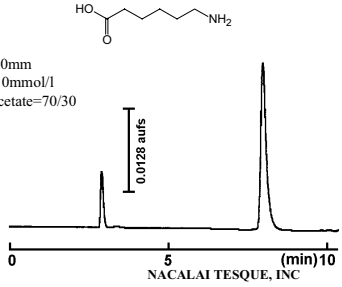
COSMOSIL Chromatogram Index

Sample:	6-Aminohexanoic Acid
CAS No.:	[60-32-2]
Molecular formula:	$C_6H_{13}NO_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV 210nm
Attenuation:	0.128 aufs
Sample conc.:	10.0mg/ml
Injection volume:	1.0µl
Retention time:	7.98min
Capacity factor:	2.03



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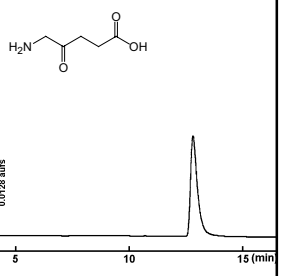
COSMOSIL Chromatogram Index

Sample: 5-Aminolevulinic Acid
CAS No.: [5451-09-2]
Molecular formula: $C_5H_9NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.0µl
Retention time: 12.80min
Capacity factor: 3.87



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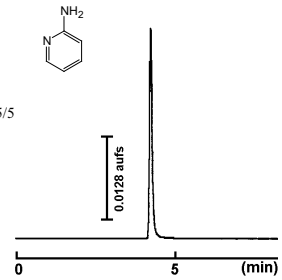
COSMOSIL Chromatogram Index

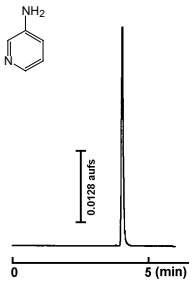
Sample: 2-Aminopyridine
CAS No.: [504-29-0]
Molecular formula: $C_5H_6N_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 0.5µl
Retention time: 4.25min
Capacity factor: 0.39



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: 3-Aminopyridine
CAS No.: [462-08-8]
Molecular formula: $C_5H_6N_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 1.0µl
Retention time: 4.05min
Capacity factor: 0.51



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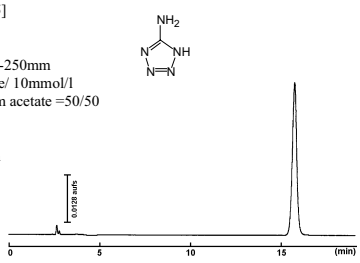
COSMOSIL Chromatogram Index

Sample: 5-Amino-1H-tetrazole
CAS No.: [4418-61-5]
Molecular formula: CH_3N_5
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 1.0µl
Retention time: 15.76min
Capacity factor: 4.49



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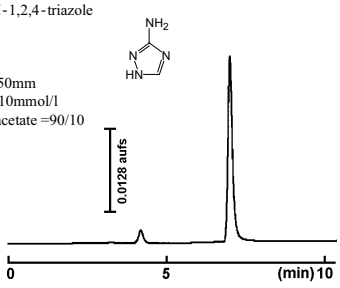
COSMOSIL Chromatogram Index

Sample: 3-Amino-1H-1,2,4-triazole
CAS No.: [61-82-5]
Molecular formula: $C_2H_4N_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.2mg/ml
Injection volume: 1.0µl
Retention time: 7.01min
Capacity factor: 1.42



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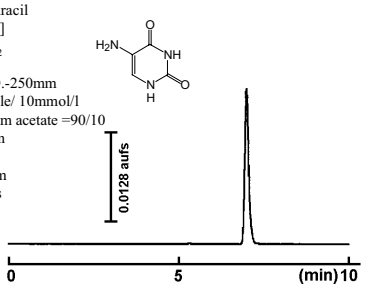
COSMOSIL Chromatogram Index

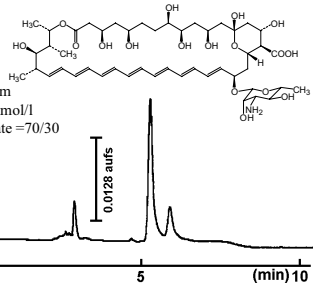
Sample: 5-Aminouracil
CAS No.: [932-52-5]
Molecular formula: $C_4H_5N_3O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV260 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 7.01min
Capacity factor: 1.42



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Amphotericin B
CAS No.: [1397-89-3]
Molecular formula: $C_{47}H_{73}NO_{17}$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 0.25mg/ml
Injection volume: 0.5µl
Retention time: 5.34min
Capacity factor: 0.99



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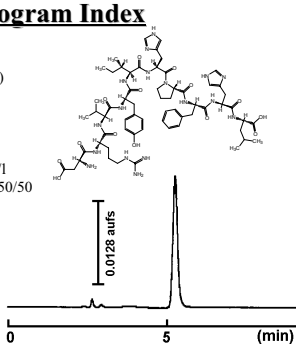
COSMOSIL Chromatogram Index

Sample: Angiotensin I(Human)
CAS No.: [484-42-4]
Molecular formula: $C_{62}H_{89}N_{17}O_{14}$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.4mg/ml
Injection volume: 0.5µl
Retention time: 5.28min
Capacity factor: 0.84



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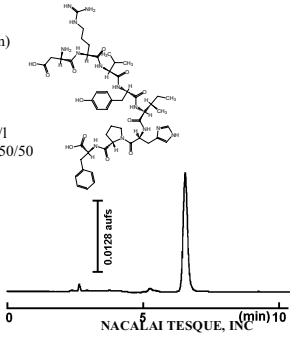
COSMOSIL Chromatogram Index

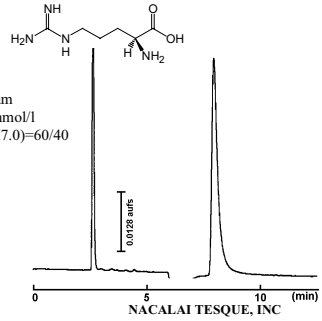
Sample: Angiotensin II(Human)
CAS No.: [4474-91-3]
Molecular formula: $C_{50}H_{71}N_{13}O_{12}$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.4mg/ml
Injection volume: 0.5µl
Retention time: 6.56min
Capacity factor: 1.29



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

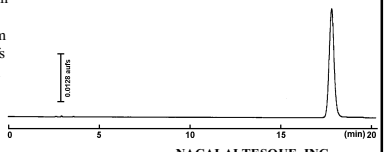
Sample: L-Arginine
CAS No.: [74-79-3]
Molecular formula: $C_6H_{14}N_4O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 7.97min
Capacity factor: 1.95



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

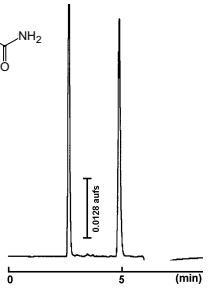
Sample: L(+)-Ascorbic Acid
CAS No.: [50-81-7]
Molecular formula: $C_6H_8O_6$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV245nm
Attenuation: 0.128 aufs
Sample conc.: 0.2mg/ml
Injection volume: 3.0µl
Retention time: 17.80min
Capacity factor: 5.31



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

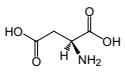
Sample: L-Asparagine
CAS No.: [70-47-3]
Molecular formula: $C_4H_8N_2O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.0µl
Retention time: 4.88min
Capacity factor: 0.80

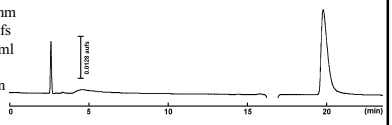


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Aspartic Acid
CAS No.: [56-84-8]
Molecular formula: $C_4H_7NO_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 19.79min
Capacity factor: 6.01

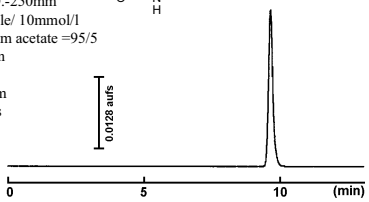




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

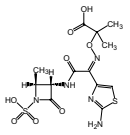
Sample: 6-Azauracil
CAS No.: [461-89-2]
Molecular formula: $C_3H_3N_3O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV260 nm
Attenuation: 0.128 aufs
Sample conc.: 0.3mg/ml
Injection volume: 0.5µl
Retention time: 9.65min
Capacity factor: 2.19

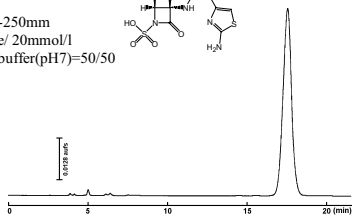


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Aztreonam
CAS No.: [78110-38-0]
Molecular formula: $C_{13}H_{17}N_5O_8S_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 20mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV280 nm
Attenuation: 0.128 aufs
Sample conc.: 2.5mg/ml
Injection volume: 1.0µl
Retention time: 17.57min
Capacity factor: 5.18





NACALAI TESQUE, INC

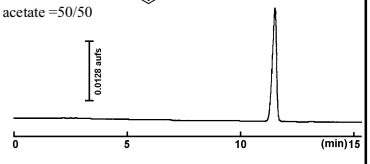
COSMOSIL Chromatogram Index

Sample: Benzamidine
CAS No.: [618-39-3]
Molecular formula: $C_7H_8N_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 1.5mg/ml
Injection volume: 0.5µl
Retention time: 7.16min
Capacity factor: 1.46

NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

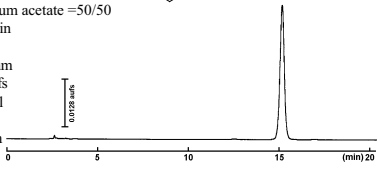
Sample: Benzenesulfonic Acid
CAS No.: [98-11-3]
Molecular formula: $C_6H_6O_3S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.0µl
Retention time: 11.54min
Capacity factor: 3.05



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

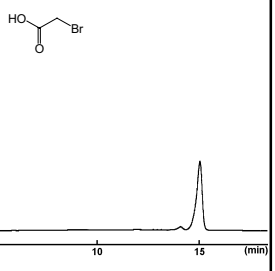
Sample: Benzoic Acid
CAS No.: [65-85-0]
Molecular formula: $C_7H_6O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 0.5µl
Retention time: 15.19min
Capacity factor: 4.29



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

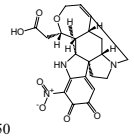
Sample: Bromoacetic Acid
CAS No.: [79-08-3]
Molecular formula: $C_2H_3BrO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 15.04min
Capacity factor: 4.31

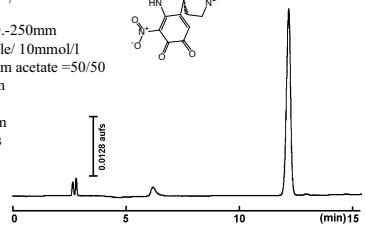


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Cacotheline
CAS No.: [561-20-6]
Molecular formula: $C_{21}H_{21}N_3O_7$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 12.19min
Capacity factor: 3.23

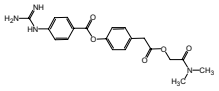


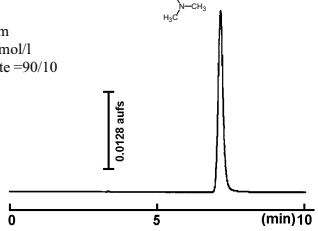


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Camostat
CAS No.: [59721-28-7]
Molecular formula: $C_{20}H_{22}N_4O_5$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV265 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 7.16min
Capacity factor: 1.47

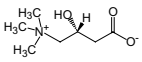


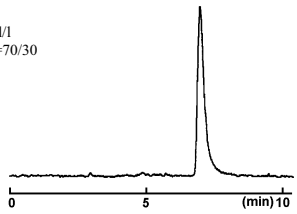


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Carnitine
CAS No.: [541-15-1]
Molecular formula: $C_7H_{15}NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 2.0mg/ml
Injection volume: 1.5µl
Retention time: 6.96min
Capacity factor: 1.78

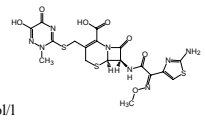


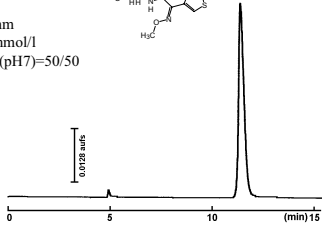


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Ceftriaxone
CAS No.: [73384-59-5]
Molecular formula: $C_{18}H_{18}N_8O_7S_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 1.0µl
Retention time: 11.36min
Capacity factor: 3.05

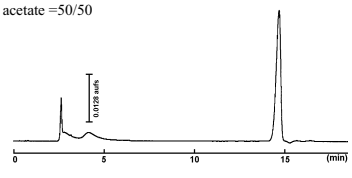




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

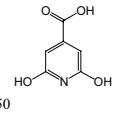
Sample: Chloroacetic Acid
CAS No.: [79-11-8]
Molecular formula: $C_2H_3ClO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 14.69min
Capacity factor: 4.15

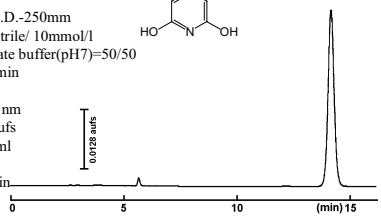


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Citrazinic Acid
CAS No.: [99-11-6]
Molecular formula: $C_6H_5NO_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 14.16min
Capacity factor: 3.98

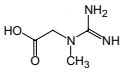


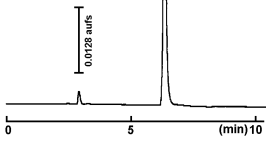


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Creatine
CAS No.: [57-00-1]
Molecular formula: $C_4H_9N_3O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 6.35min
Capacity factor: 1.40

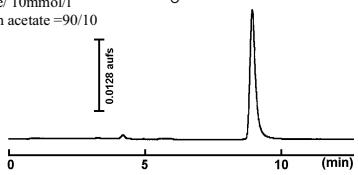




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

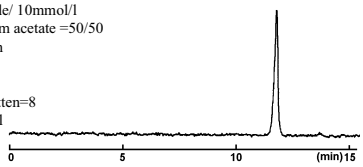
Sample: Creatinine
CAS No.: [60-27-5]
Molecular formula: $C_4H_7N_3O$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 8.93min
Capacity factor: 2.08



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Cyanoacetic Acid
CAS No.: [372-09-8]
Molecular formula: $C_3H_3NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 11.78min
Capacity factor: 3.56



NACALAI TESQUE, INC

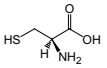
COSMOSIL Chromatogram Index

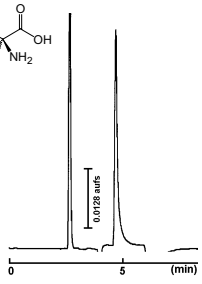
Sample: Cyanuric Acid
CAS No.: [108-80-5]
Molecular formula: $C_3H_3N_3O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 1.0µl
Retention time: 7.61min
Capacity factor: 1.68

NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Cysteine
CAS No.: [52-90-4]
Molecular formula: $C_3H_7NO_2S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 2.0mg/ml
Injection volume: 1.0µl
Retention time: 4.69min
Capacity factor: 0.73

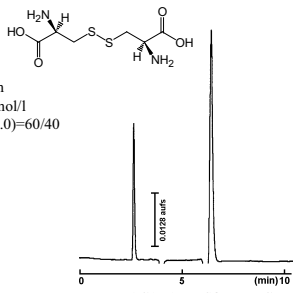




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

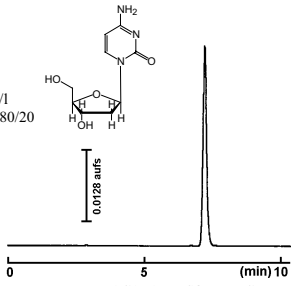
Sample:	L-(-)-Cystine
CAS No.:	[56-89-3]
Molecular formula:	$C_6H_{12}N_2O_4S_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV210 nm
Attenuation:	0.128 aufs
Sample conc.:	5.0mg/ml
Injection volume:	0.5µl
Retention time:	6.42min
Capacity factor:	1.38



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample:	Cytidine
CAS No.:	[65-46-3]
Molecular formula:	$C_9H_{13}N_3O_5$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =80/20
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV260 nm
Attenuation:	0.128 aufs
Sample conc.:	0.5mg/ml
Injection volume:	0.5µl
Retention time:	7.22min
Capacity factor:	1.58



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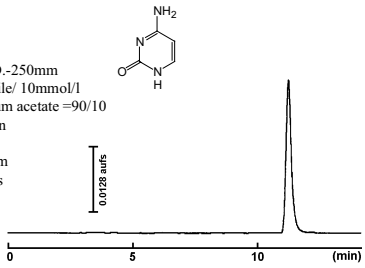
COSMOSIL Chromatogram Index

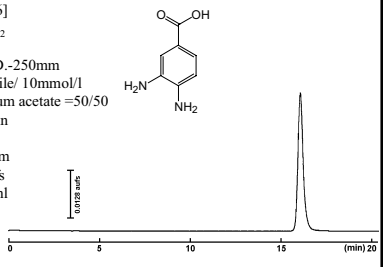
Sample:	Cytosine
CAS No.:	[71-30-7]
Molecular formula:	$C_4H_5N_3O$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV260 nm
Attenuation:	0.128 aufs
Sample conc.:	0.5mg/ml
Injection volume:	0.5µl
Retention time:	11.22min
Capacity factor:	2.87



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample:	3,4-Diaminobenzoic Acid
CAS No.:	[619-05-6]
Molecular formula:	$C_7H_8N_2O_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.10mg/ml
Injection volume:	4.0µl
Retention time:	16.13min
Capacity factor:	4.62



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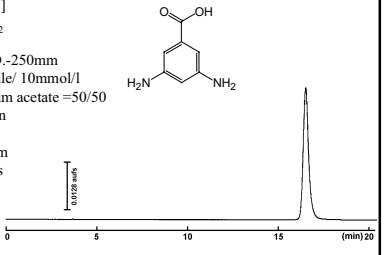
COSMOSIL Chromatogram Index

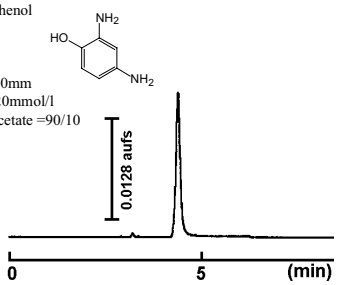
Sample:	3,5-Diaminobenzoic Acid
CAS No.:	[535-87-5]
Molecular formula:	$C_7H_8N_2O_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.1mg/ml
Injection volume:	4.0µl
Retention time:	16.54min
Capacity factor:	4.76



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample:	2,4-Diaminophenol
CAS No.:	[95-86-3]
Molecular formula:	$C_6H_8N_2O$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 20mmol/l Ammonium acetate =90/10
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.5mg/ml
Injection volume:	0.5µl
Retention time:	4.40min
Capacity factor:	0.51



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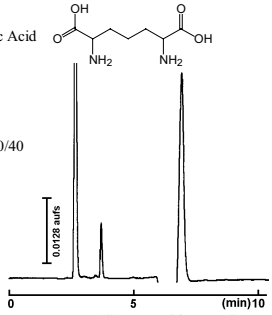
COSMOSIL Chromatogram Index

Sample:	DL-2,6-Diaminopimelic Acid
CAS No.:	[583-93-7]
Molecular formula:	$C_7H_{14}N_2O_4$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV210 nm
Attenuation:	0.128 aufs
Sample conc.:	10.0mg/ml
Injection volume:	1.5µl
Retention time:	6.93min
Capacity factor:	1.56



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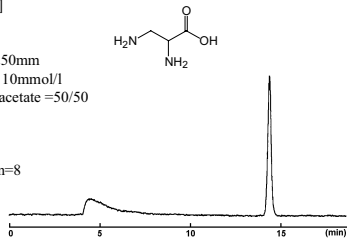
COSMOSIL Chromatogram Index

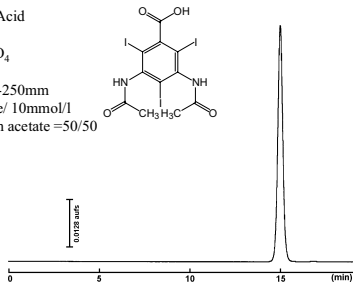
Sample:	DL-2,3-Diaminopropionic Acid
CAS No.:	[54897-59-5]
Molecular formula:	$C_3H_8N_2O_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	ELSD
Attenuation:	Gain=6,Atten=8
Sample conc.:	5.0mg/ml
Injection volume:	2.0µl
Retention time:	14.38min
Capacity factor:	4.52



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

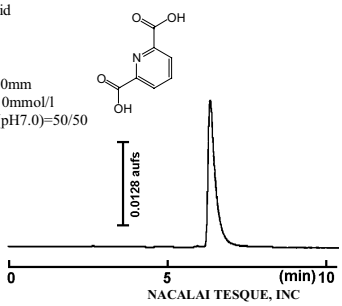
Sample:	Diatrizoic Acid
CAS No.:	[117-96-4]
Molecular formula:	$C_{11}H_9I_3N_2O_4$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.8mg/ml
Injection volume:	1.0µl
Retention time:	14.98min
Capacity factor:	4.26



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample:	Dipicolinic acid
CAS No.:	[499-83-2]
Molecular formula:	$C_7H_5NO_4$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=50/50
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.5mg/ml
Injection volume:	1.0µl
Retention time:	6.37min
Capacity factor:	1.23



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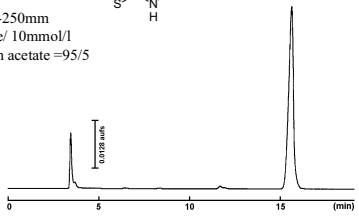
COSMOSIL Chromatogram Index

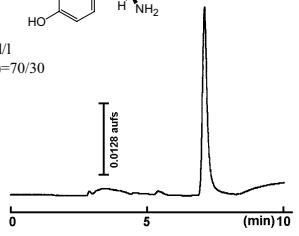
Sample:	Dithiouracil
CAS No.:	[2001-93-6]
Molecular formula:	$C_4H_4N_2S_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV260 nm
Attenuation:	0.128 aufs
Sample conc.:	0.2mg/ml
Injection volume:	1.5µl
Retention time:	15.60min
Capacity factor:	4.15



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

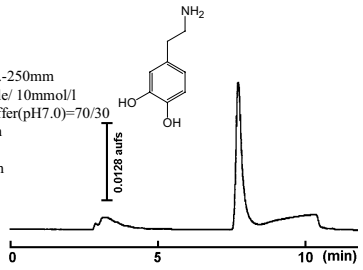
Sample:	L-DOPA
CAS No.:	[59-92-7]
Molecular formula:	$C_9H_{11}NO_4$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	3.0mg/ml
Injection volume:	3.0µl
Retention time:	7.12min
Capacity factor:	1.72



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

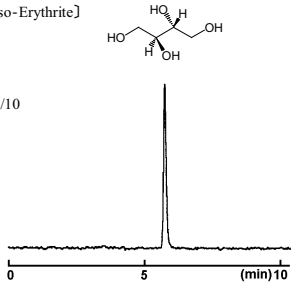
Sample: Dopamine
CAS No.: [51-61-6]
Molecular formula: $C_8H_{11}NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 4.0µl
Retention time: 7.73min
Capacity factor: 1.96



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: meso-Erythritol〔meso-Erythrite〕
CAS No.: [149-32-6]
Molecular formula: $C_4H_{10}O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ H_2O=90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 5.78min
Capacity factor: 1.18



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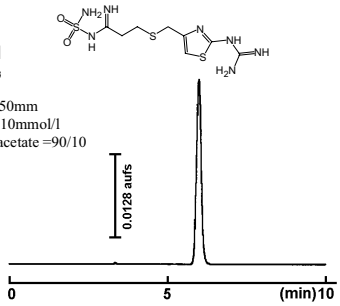
COSMOSIL Chromatogram Index

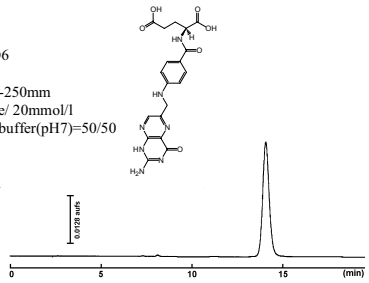
Sample: Famotidin
CAS No.: [76824-35-6]
Molecular formula: $C_8H_{15}N_7O_2S_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.25mg/ml
Injection volume: 2.0µl
Retention time: 5.99min
Capacity factor: 1.06



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

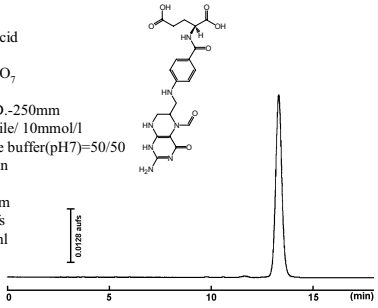
Sample: Folic Acid
CAS No.: [59-30-3]
Molecular formula: $C_{19}H_{19}N_7O6$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 20mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.25mg/ml
Injection volume: 2.0µl
Retention time: 14.09min
Capacity factor: 3.95



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

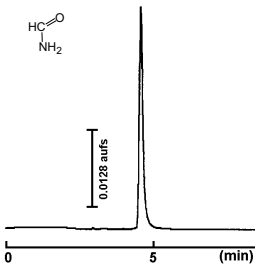
Sample: Folinic Acid
CAS No.: [58-05-9]
Molecular formula: $C_{20}H_{23}N_7O_7$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.25mg/ml
Injection volume: 2.0µl
Retention time: 13.36min
Capacity factor: 3.68



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

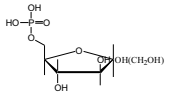
Sample: Formamide
CAS No.: [75-12-7]
Molecular formula: CH_3NO
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ H_2O=95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 4.58min
Capacity factor: 0.52

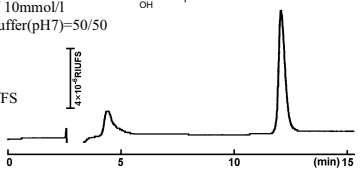


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: D-Fructose-6-phosphate
CAS No.: [643-13-0]
Molecular formula: $C_6H_{13}O_9P$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: RI
Attenuation: 4×10^{-5}RIU/FS
Sample conc.: 10.0mg/ml
Injection volume: 5.0µl
Retention time: 12.16min
Capacity factor: 3.64

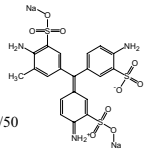


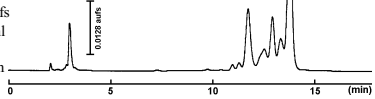


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Fuchsine, Acid
CAS No.: [3244-88-0]
Molecular formula: $C_{20}H_{17}N_3Na_2O_9S_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.5µl
Retention time: 13.82min
Capacity factor: 3.85





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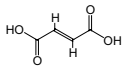
COSMOSIL Chromatogram Index

Sample: Fumaric Acid
CAS No.: [110-17-8]
Molecular formula: $C_4H_4O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 0.2mg/ml
Injection volume: 0.5µl
Retention time: 10.63min
Capacity factor: 2.75



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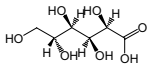
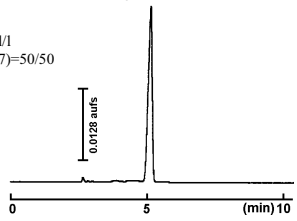
COSMOSIL Chromatogram Index

Sample: Gluconic Acid
CAS No.: [526-95-4]
Molecular formula: $C_6H_{12}O_7$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 5.15min
Capacity factor: 0.81





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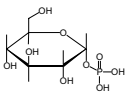
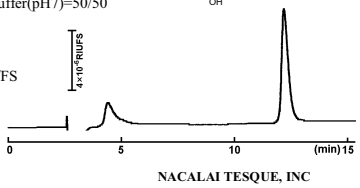
COSMOSIL Chromatogram Index

Sample: α-D-Glucose-1-phosphate
CAS No.: [59-56-3]
Molecular formula: $C_6H_{13}O_9P$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: RI
Attenuation: 4×10^{-5}RIU/FS
Sample conc.: 10.0mg/ml
Injection volume: 5.0µl
Retention time: 12.26min
Capacity factor: 3.68

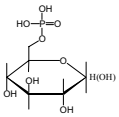


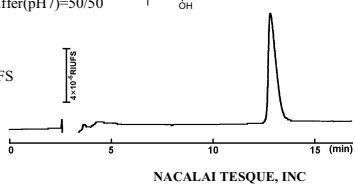


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: D-Glucose-6-phosphate
CAS No.: [56-73-5]
Molecular formula: $C_6H_{13}O_9P$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: RI
Attenuation: 4×10^{-5}RIU/FS
Sample conc.: 10.0mg/ml
Injection volume: 5.0µl
Retention time: 12.95min
Capacity factor: 3.94

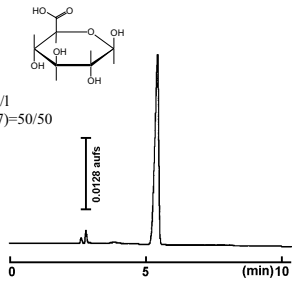




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

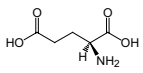
Sample: D-Glucuronic Acid
CAS No.: [6556-12-3]
Molecular formula: $C_6H_{10}O_7$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 5.45min
Capacity factor: 0.92

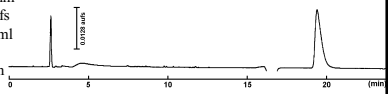


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Glutamic Acid
CAS No.: [56-86-0]
Molecular formula: $C_5H_9NO_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 19.38min
Capacity factor: 5.87

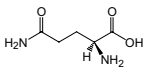




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

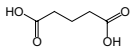
Sample: L-Glutamine
CAS No.: [56-85-9]
Molecular formula: $C_5H_{10}N_2O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 7.50min
Capacity factor: 1.85



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

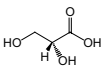
Sample: Glutaric Acid
CAS No.: [110-94-1]
Molecular formula: $C_5H_8O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 10.45min
Capacity factor: 2.68

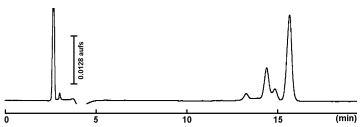


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: DL-Glyceric Acid
CAS No.: [600-19-1]
Molecular formula: $C_3H_6O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 6.0mg/ml
Injection volume: 5.0µl
Retention time: 15.68min
Capacity factor: 4.50





NACALAI TESQUE, INC

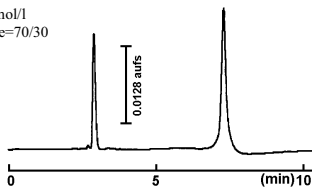
COSMOSIL Chromatogram Index

Sample: Glycinamide
CAS No.: [598-41-4]
Molecular formula: $C_2H_6N_2O$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 1.0mg/ml
Injection volume: 3.0µl
Retention time: 13.35min
Capacity factor: 3.64

NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

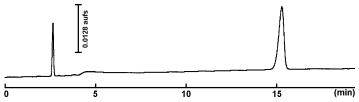
Sample: Glycine
CAS No.: [56-40-6]
Molecular formula: $C_2H_7NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 2.0µl
Retention time: 7.29min
Capacity factor: 1.77



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

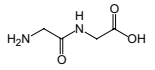
Sample: Glycolic Acid
CAS No.: [79-14-1]
Molecular formula: $C_2H_4O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 15.28min
Capacity factor: 4.39



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

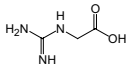
Sample: Glycylglycine
CAS No.: [556-50-3]
Molecular formula: $C_4H_8N_2O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 0.5µl
Retention time: 6.40min
Capacity factor: 1.27

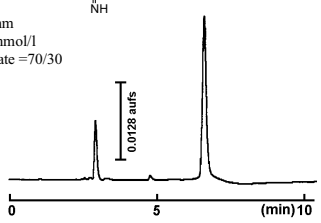


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Guanidoacetic Acid
CAS No.: [352-97-6]
Molecular formula: $C_3H_7N_3O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 1.0µl
Retention time: 6.61min
Capacity factor: 1.51

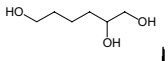


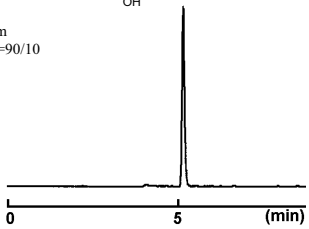


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: 1,2,6-Hexanetriol
CAS No.: [106-69-4]
Molecular formula: $C_6H_{14}O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ H_2O=90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 1.0mg/ml
Injection volume: 2.0µl
Retention time: 5.19min
Capacity factor: 0.80

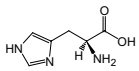


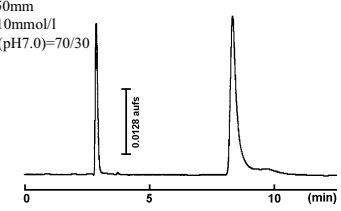


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Histidine
CAS No.: [71-00-1]
Molecular formula: $C_6H_9N_3O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.50mg/ml
Injection volume: 1.0µl
Retention time: 8.38min
Capacity factor: 2.19

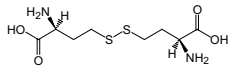


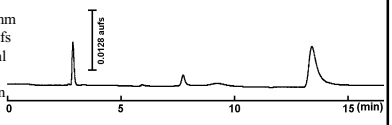


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Homocystine
CAS No.: [626-72-2]
Molecular formula: $C_8H_{16}N_2O_4S_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 2.0mg/ml
Injection volume: 1.0µl
Retention time: 13.41min
Capacity factor: 4.10

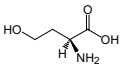


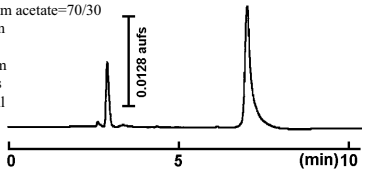


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Homoserine
CAS No.: [672-15-1]
Molecular formula: $C_4H_9NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 7.03min
Capacity factor: 1.67

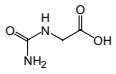


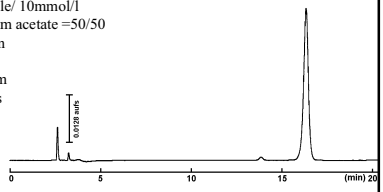


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Hydantoic Acid
CAS No.: [462-60-2]
Molecular formula: $C_3H_6N_2O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.0µl
Retention time: 16.33min
Capacity factor: 4.72

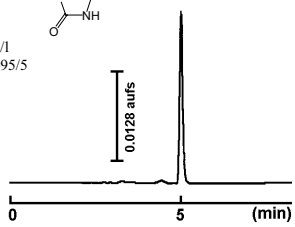




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

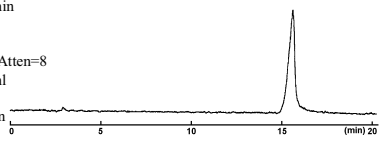
Sample: Hydantoin
CAS No.: [461-72-3]
Molecular formula: $C_3H_4N_2O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 0.5µl
Retention time: 5.01min
Capacity factor: 0.66



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

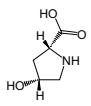
Sample: Hydroxylamine-O-sulfonic Acid
CAS No.: [2950-43-8]
Molecular formula: H_3NO_4S
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 2.0mg/ml
Injection volume: 3.0µl
Retention time: 15.60min
Capacity factor: 5.24

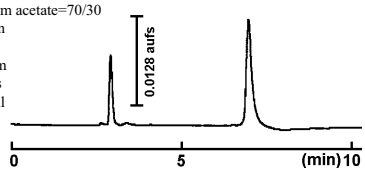


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: cis-4-Hydroxy-D-proline
CAS No.: [2584-71-6]
Molecular formula: $C_5H_9NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 6.96min
Capacity factor: 1.65

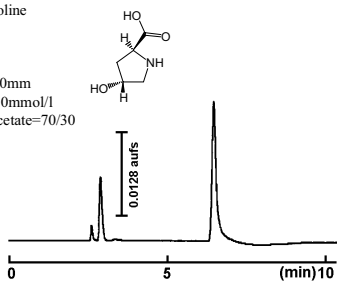




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

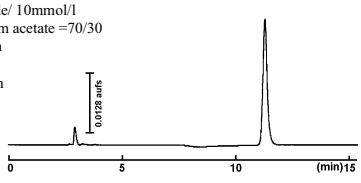
Sample: L-Hydroxyproline
CAS No.: [51-35-4]
Molecular formula: $C_5H_9NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 6.49min
Capacity factor: 1.47



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

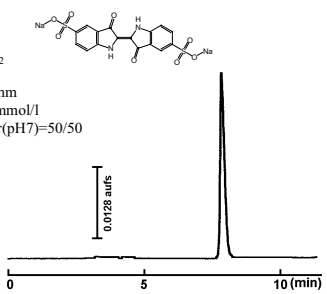
Sample: N-Hydroxysuccinimide
CAS No.: [6066-82-6]
Molecular formula: $C_4H_5NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 1.5µl
Retention time: 11.29min
Capacity factor: 3.22



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

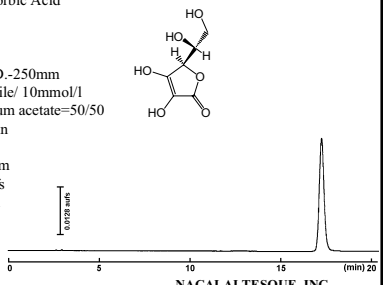
Sample: Indigo carmine
CAS No.: [860-22-0]
Molecular formula: $C_{16}H_8N_2Na_2O_8S_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.2mg/ml
Injection volume: 1.0µl
Retention time: 7.82min
Capacity factor: 1.79



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

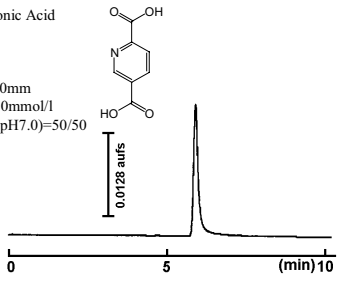
Sample: D-Isoascorbic Acid
CAS No.: [89-65-6]
Molecular formula: $C_6H_8O_6$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 245nm
Attenuation: 0.128 aufs
Sample conc.: 0.2mg/ml
Injection volume: 3.0µl
Retention time: 17.26min
Capacity factor: 5.11



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

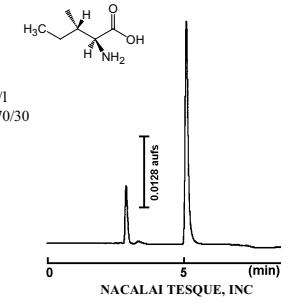
Sample: Isocinchomeronic Acid
CAS No.: [100-26-5]
Molecular formula: $C_7H_5NO_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 5.91min
Capacity factor: 1.07



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

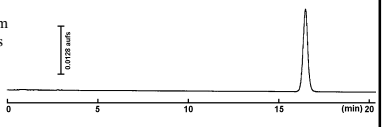
Sample: L-Isoleucine
CAS No.: [73-32-5]
Molecular formula: $C_6H_{13}NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 5.12min
Capacity factor: 0.95



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

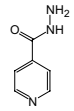
Sample: Isonicotinic Acid
CAS No.: [55-22-1]
Molecular formula: $C_6H_5NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 0.5µl
Retention time: 16.45min
Capacity factor: 4.78

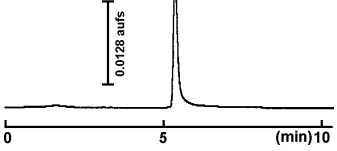


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Isonicotinohydrazide
CAS No.: [54-85-3]
Molecular formula: $C_6H_7N_3O$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV265 nm
Attenuation: 0.128 aufs
Sample conc.: 0.50mg/ml
Injection volume: 0.5µl
Retention time: 5.37min
Capacity factor: 0.85

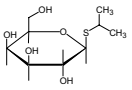


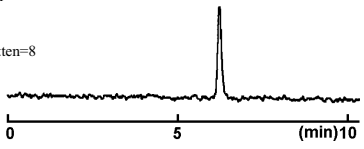


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Isopropyl β-D-1-thiogalactopyranoside
CAS No.: [367-93-1]
Molecular formula: $C_9H_{18}O_5S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ H_2O=90/10
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 0.1mg/ml
Injection volume: 0.5µl
Retention time: 6.23min
Capacity factor: 1.15

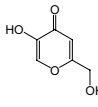


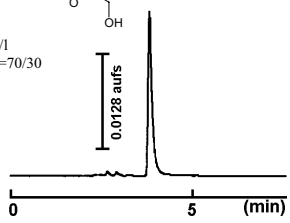


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Kojic Acid
CAS No.: [501-30-4]
Molecular formula: $C_6H_6O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV245 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 1.0µl
Retention time: 3.83min
Capacity factor: 0.46

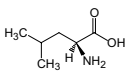


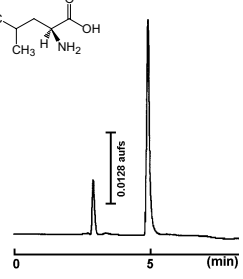


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Leucine
CAS No.: [61-90-5]
Molecular formula: $C_6H_{13}NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 4.91min
Capacity factor: 0.87

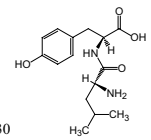


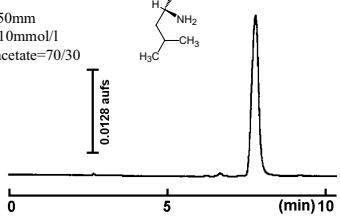


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: D-Leucyl-L-tyrosine
CAS No.: [3303-29-5]
Molecular formula: $C_{15}H_{22}N_2O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 254nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 7.79min
Capacity factor: 1.96

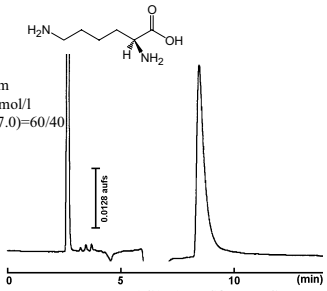




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

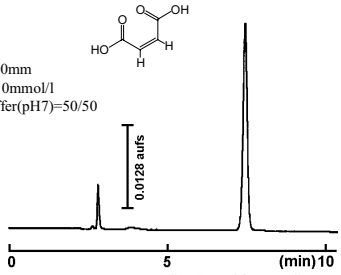
Sample: L-Lysine
CAS No.: [56-87-1]
Molecular formula: $C_6H_{14}N_2O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 8.46min
Capacity factor: 2.13



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

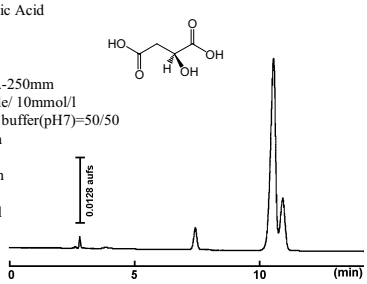
Sample: Maleic Acid
CAS No.: [110-16-7]
Molecular formula: $C_4H_4O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 0.5µl
Retention time: 7.45min
Capacity factor: 1.62



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

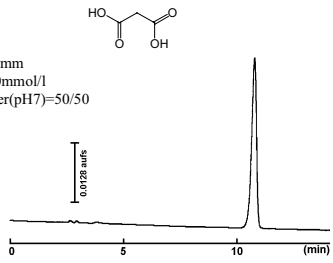
Sample: L-(-)-Malic Acid
CAS No.: [97-67-6]
Molecular formula: $C_4H_6O_5$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 10.55min
Capacity factor: 2.71



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

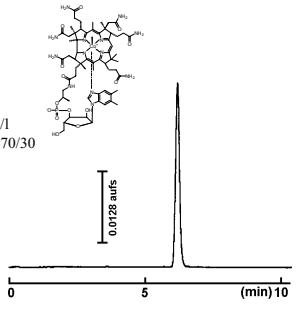
Sample: Malonic Acid
CAS No.: [141-82-2]
Molecular formula: $C_3H_4O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 10.78min
Capacity factor: 2.81



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

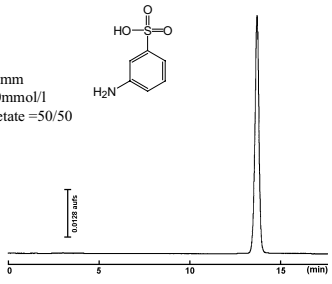
Sample: Mecobalamin
CAS No.: [13422-55-4]
Molecular formula: $C_{63}H_{91}CoN_{13}O_{14}P$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV266 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 1.0µl
Retention time: 6.22min
Capacity factor: 1.35



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

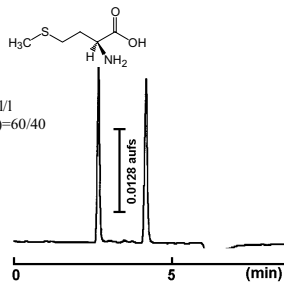
Sample: Metanilic Acid
CAS No.: [121-47-1]
Molecular formula: C6H7NO3S
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 13.68min
Capacity factor: 3.80



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

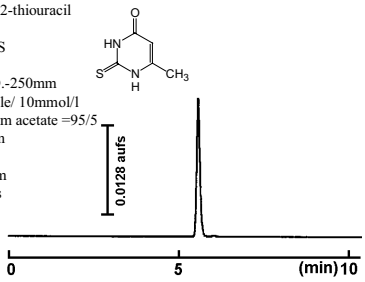
Sample: L-Methionine
CAS No.: [63-68-3]
Molecular formula: $C_5H_{11}NO_2S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 0.5µl
Retention time: 4.15min
Capacity factor: 0.54



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

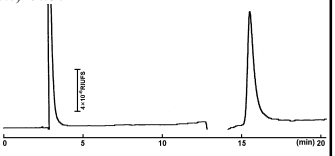
Sample: 6-Methyl-2-thiouracil
CAS No.: [56-04-2]
Molecular formula: $C_5H_6N_2OS$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV260 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 0.5µl
Retention time: 5.58min
Capacity factor: 0.84



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

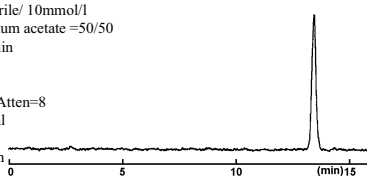
Sample: N-Methylglucamine
CAS No.: [6284-40-8]
Molecular formula: $C_7H_{17}NO_5$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: RI
Attenuation: 4×10^{-5}RIU/FS
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 15.52min
Capacity factor: 4.22



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

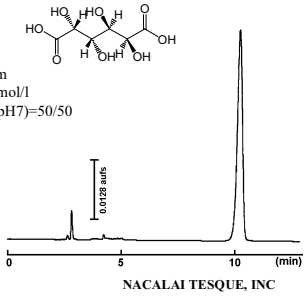
Sample: N-Methylhydroxylamine
CAS No.: [593-77-1]
Molecular formula: CH_5NO_2
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 1.0mg/ml
Injection volume: 2.0µl
Retention time: 13.45min
Capacity factor: 4.21



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

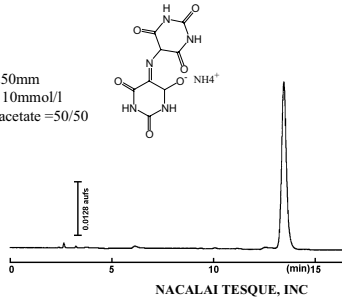
Sample: Mucic Acid
CAS No.: [526-99-8]
Molecular formula: $C_6H_{10}O_8$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 10.27min
Capacity factor: 2.62



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

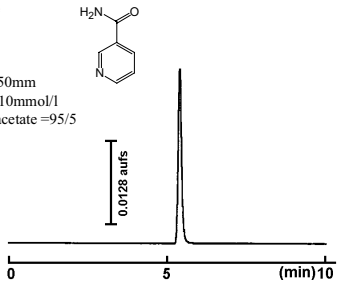
Sample: Murexide
CAS No.: [3051-09-0]
Molecular formula: $C_8H_8N_6O_6$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 0.5µl
Retention time: 13.47min
Capacity factor: 3.69



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

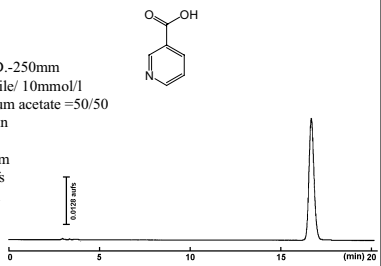
Sample:	Nicotinamide
CAS No.:	[98-92-0]
Molecular formula:	$C_6H_6N_2O$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	0.2mg/ml
Injection volume:	1.0µl
Retention time:	5.40min
Capacity factor:	0.77



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

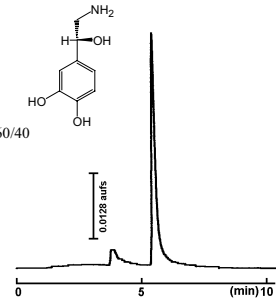
Sample:	Nicotinic Acid
CAS No.:	[59-67-6]
Molecular formula:	$C_6H_5NO_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	1.0mg/ml
Injection volume:	0.5µl
Retention time:	16.67min
Capacity factor:	4.87



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

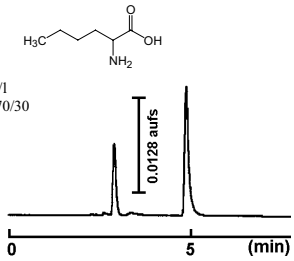
Sample:	L-Noradrenaline
CAS No.:	[51-41-2]
Molecular formula:	$C_8H_{11}NO_3$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV254 nm
Attenuation:	0.128 aufs
Sample conc.:	5.0mg/ml
Injection volume:	1.0µl
Retention time:	5.47min
Capacity factor:	1.07



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

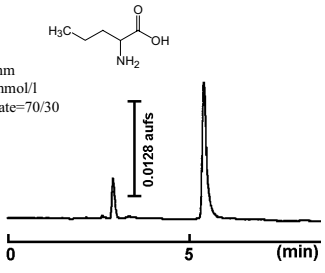
Sample:	DL-Norleucine
CAS No.:	[616-06-8]
Molecular formula:	$C_6H_{13}NO_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV210 nm
Attenuation:	0.128 aufs
Sample conc.:	5.0mg/ml
Injection volume:	1.0µl
Retention time:	4.89min
Capacity factor:	0.86



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

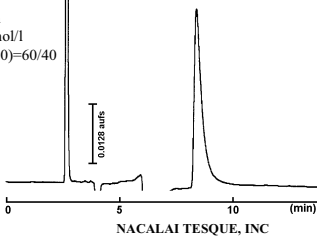
Sample:	DL-Norvaline
CAS No.:	[760-78-1]
Molecular formula:	$C_5H_{11}NO_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV 210nm
Attenuation:	0.128 aufs
Sample conc.:	10.0mg/ml
Injection volume:	0.5µl
Retention time:	5.43min
Capacity factor:	1.07



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

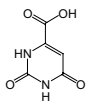
Sample:	L-Ornithine
CAS No.:	[70-26-8]
Molecular formula:	$C_5H_{12}N_2O_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=60/40
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV210 nm
Attenuation:	0.128 aufs
Sample conc.:	10.0mg/ml
Injection volume:	2.0µl
Retention time:	8.39min
Capacity factor:	2.10



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

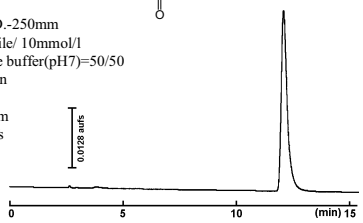
Sample: Orotic Acid
CAS No.: [65-86-1]
Molecular formula: $C_5H_4N_2O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 1.0µl
Retention time: 15.24min
Capacity factor: 4.36



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

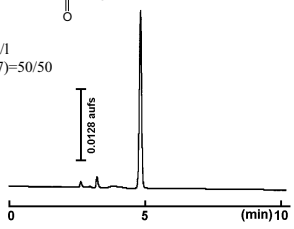
Sample: Oxalic Acid
CAS No.: [144-62-7]
Molecular formula: $C_2H_2O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 0.5µl
Retention time: 12.08min
Capacity factor: 3.27



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

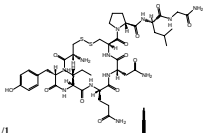
Sample: Oxamic Acid
CAS No.: [471-47-6]
Molecular formula: $C_2H_3NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 1.0µl
Retention time: 4.83min
Capacity factor: 0.71

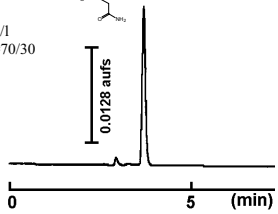


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Oxytocin
CAS No.: [50-56-6]
Molecular formula: $C_{43}H_{66}N_{12}O_{12}S_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 0.4mg/ml
Injection volume: 0.5µl
Retention time: 3.71min
Capacity factor: 0.39

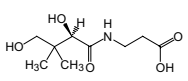




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

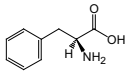
Sample: D-Pantothenic Acid
CAS No.: [79-83-4]
Molecular formula: $C_9H_{17}NO_5$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 13.21min
Capacity factor: 3.60

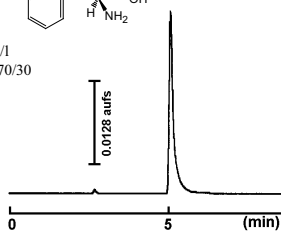


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-(-)-Phenylalanine
CAS No.: [63-91-2]
Molecular formula: $C_9H_{11}NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 254nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 5.10min
Capacity factor: 0.94

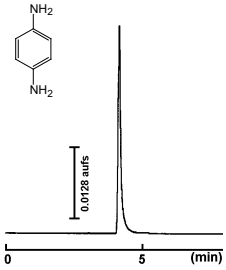




NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

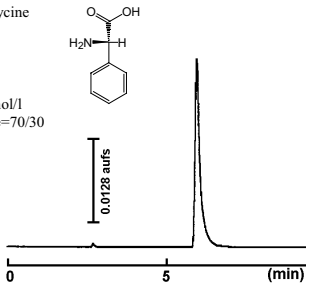
Sample: p-Phenylenediamine
CAS No.: [106-50-3]
Molecular formula: $C_6H_8N_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 0.5µl
Retention time: 4.15min
Capacity factor: 0.36



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

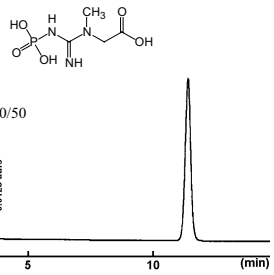
Sample: L-(+)-α-Phenylglycine
CAS No.: [2935-35-5]
Molecular formula: $C_8H_9NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.0µl
Retention time: 5.96min
Capacity factor: 1.27



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

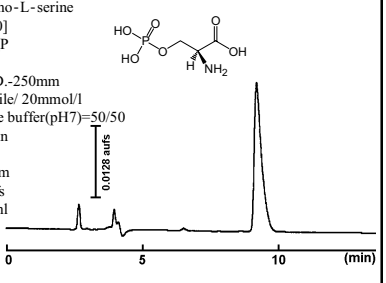
Sample: Phosphocreatine
CAS No.: [67-07-2]
Molecular formula: $C_4H_{10}N_3O_5P$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 11.42min
Capacity factor: 3.00



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

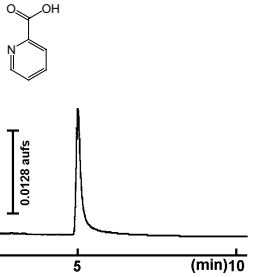
Sample: O-Phospho-L-serine
CAS No.: [407-41-0]
Molecular formula: $C_3H_8NO_6P$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 20mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 3.0µl
Retention time: 9.19min
Capacity factor: 2.24



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

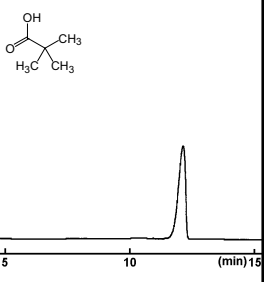
Sample: Picolinic acid
CAS No.: [98-98-6]
Molecular formula: $C_6H_5NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0)=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 5.03min
Capacity factor: 0.92



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

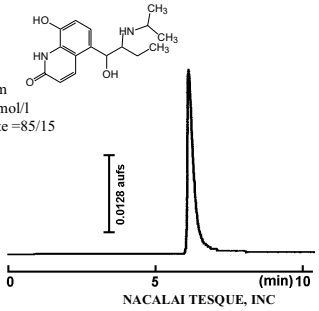
Sample: Pivalic Acid
CAS No.: [75-98-9]
Molecular formula: $C_5H_{10}O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 12.14min
Capacity factor: 3.28



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

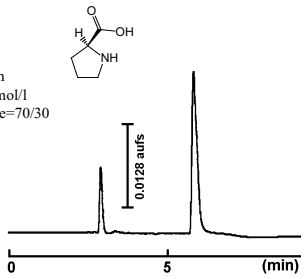
Sample: Procaterol
CAS No.: [72332-33-3]
Molecular formula: $C_{16}H_{22}N_2O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 20mmol/l Ammonium acetate =85/15
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 6.17min
Capacity factor: 1.25



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

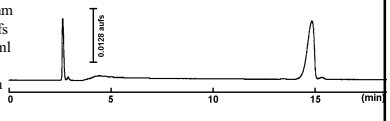
Sample: L-Proline
CAS No.: [147-85-3]
Molecular formula: $C_5H_9NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 5.83min
Capacity factor: 1.22



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

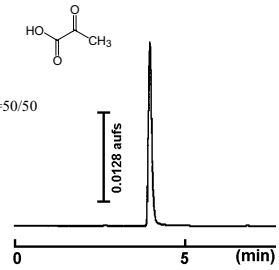
Sample: Propionic Acid
CAS No.: [79-09-4]
Molecular formula: $C_3H_6O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 14.85min
Capacity factor: 4.24



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

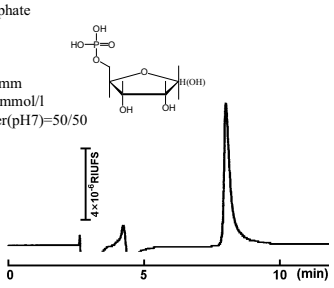
Sample: Pyruvic Acid
CAS No.: [127-17-3]
Molecular formula: $C_3H_4O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 20mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 2.0µl
Retention time: 3.97min
Capacity factor: 0.39



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

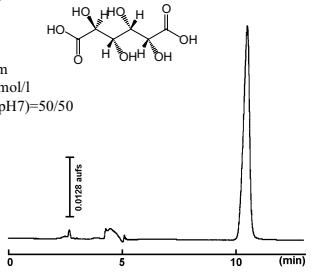
Sample: Ribose-5-phosphate
CAS No.: [4300-28-1]
Molecular formula: $C_5H_{11}O_8P$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 20mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: RI
Attenuation: 4×10^{-5}RIU/FS
Sample conc.: 10.0mg/ml
Injection volume: 5.0µl
Retention time: 8.02min
Capacity factor: 2.06



NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

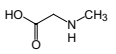
Sample: D-Saccharic Acid
CAS No.: [87-73-0]
Molecular formula: $C_6H_{10}O_8$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 10.48min
Capacity factor: 2.69

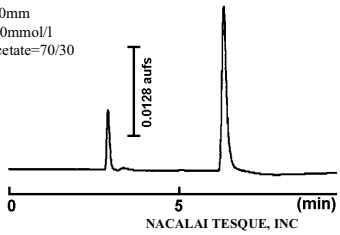


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Sarcosine
CAS No.: [107-97-1]
Molecular formula: $C_3H_7NO_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 210nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.0µl
Retention time: 6.30min
Capacity factor: 1.40

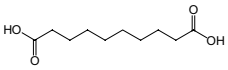


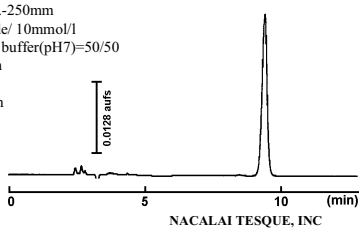


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Sebacic Acid
CAS No.: [111-20-6]
Molecular formula: $C_{10}H_{18}O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.5µl
Retention time: 9.43min
Capacity factor: 2.28

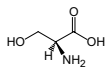


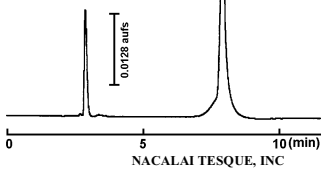


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: L-Serine
CAS No.: [56-45-1]
Molecular formula: $C_3H_7NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 7.92min
Capacity factor: 2.01

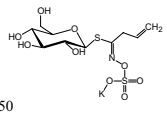


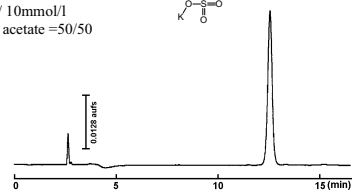


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Sinigrin
CAS No.: [3952-98-5]
Molecular formula: $C_{10}H_{16}KNO_9S_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 12.57min
Capacity factor: 3.38

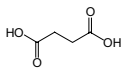


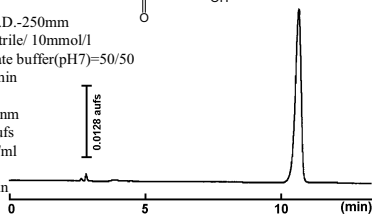


NACALAI TESQUE, INC

COSMOSIL Chromatogram Index

Sample: Succinic Acid
CAS No.: [110-15-6]
Molecular formula: $C_4H_6O_4$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 0.5µl
Retention time: 10.64min
Capacity factor: 2.74





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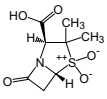
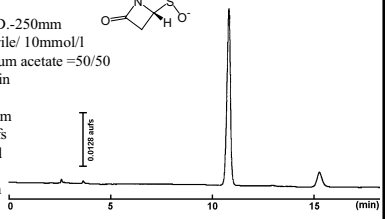
COSMOSIL Chromatogram Index

Sample: Sulbactam
CAS No.: [68373-14-8]
Molecular formula: $C_8H_{11}NO_5S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 0.5µl
Retention time: 10.86min
Capacity factor: 2.81





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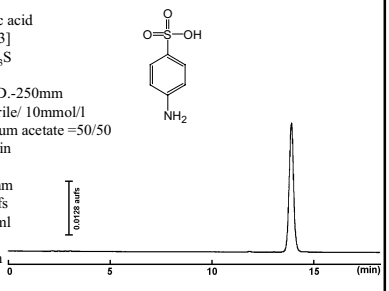
COSMOSIL Chromatogram Index

Sample: Sulfanilic acid
CAS No.: [121-57-3]
Molecular formula: $C_6H_7NO_3S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.10mg/ml
Injection volume: 1.0µl
Retention time: 13.87min
Capacity factor: 3.87



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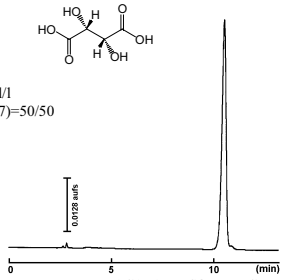
COSMOSIL Chromatogram Index

Sample: L-(+)-Tartaric Acid
CAS No.: [87-69-4]
Molecular formula: $C_4H_6O_6$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 1.5µl
Retention time: 10.52min
Capacity factor: 2.70



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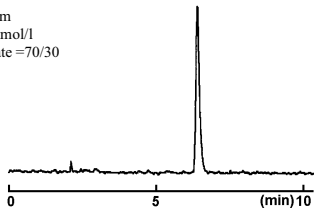
COSMOSIL Chromatogram Index

Sample: Taurine
CAS No.: [107-35-7]
Molecular formula: $C_2H_7NO_3S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 6.40min
Capacity factor: 1.25



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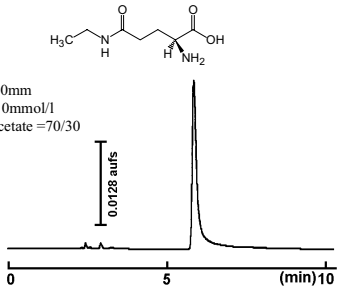
COSMOSIL Chromatogram Index

Sample: L-Theanine
CAS No.: [3081-61-6]
Molecular formula: $C_7H_{14}N_2O_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV220 nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 0.5µl
Retention time: 5.89min
Capacity factor: 1.21



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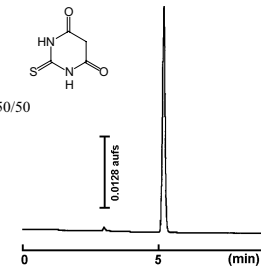
COSMOSIL Chromatogram Index

Sample: 2-Thiobarbituric Acid
CAS No.: [504-17-6]
Molecular formula: $C_4H_4N_2O_2S$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Phosphate buffer(pH7)=50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 0.5µl
Retention time: 5.18min
Capacity factor: 0.82



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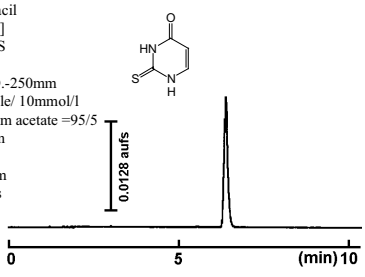
COSMOSIL Chromatogram Index

Sample: 2-Thiouracil
CAS No.: [141-90-2]
Molecular formula: $C_4H_4N_2OS$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV260 nm
Attenuation: 0.128 aufs
Sample conc.: 0.1mg/ml
Injection volume: 0.5µl
Retention time: 6.38min
Capacity factor: 1.11



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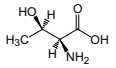
COSMOSIL Chromatogram Index

Sample: L-Threonine
CAS No.: [72-19-5]
Molecular formula: $C_4H_9NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 10.0mg/ml
Injection volume: 2.0µl
Retention time: 7.19min
Capacity factor: 1.73



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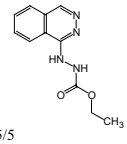
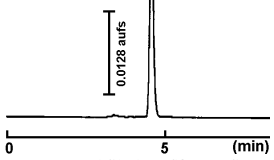
COSMOSIL Chromatogram Index

Sample: Todralazine
CAS No.: [14679-73-3]
Molecular formula: $C_{11}H_{12}N_4O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =95/5
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV240 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 4.56min
Capacity factor: 0.51





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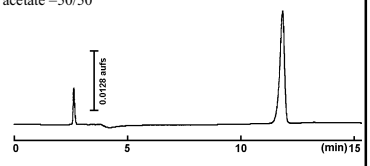
COSMOSIL Chromatogram Index

Sample: Trichloroacetic Acid
CAS No.: [76-03-9]
Molecular formula: $C_2HCl_3O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =50/50
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV210 nm
Attenuation: 0.128 aufs
Sample conc.: 1.0mg/ml
Injection volume: 1.0µl
Retention time: 11.83min
Capacity factor: 3.17



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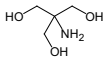
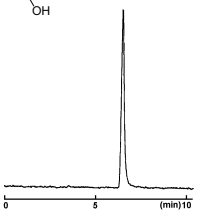
COSMOSIL Chromatogram Index

Sample: Tris(hydroxymethyl)aminomethane
CAS No.: [77-86-1]
Molecular formula: $C_4H_{11}NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate =80/20
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=8
Sample conc.: 2.0mg/ml
Injection volume: 1.0µl
Retention time: 6.47min
Capacity factor: 1.48





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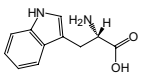
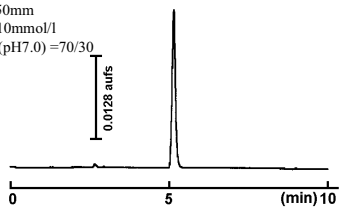
COSMOSIL Chromatogram Index

Sample: L-Tryptophan
CAS No.: [73-22-3]
Molecular formula: $C_{11}H_{12}N_2O_2$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Citrate buffer(pH7.0) =70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV254 nm
Attenuation: 0.128 aufs
Sample conc.: 0.5mg/ml
Injection volume: 0.5µl
Retention time: 5.14min
Capacity factor: 0.95





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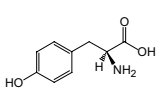
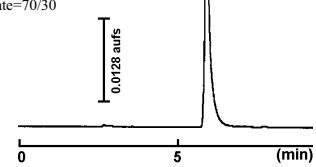
COSMOSIL Chromatogram Index

Sample: L-Tyrosine
CAS No.: [60-18-4]
Molecular formula: $C_9H_{11}NO_3$
Column: HILIC
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: UV 254nm
Attenuation: 0.128 aufs
Sample conc.: 5.0mg/ml
Injection volume: 1.0µl
Retention time: 5.92min
Capacity factor: 1.25





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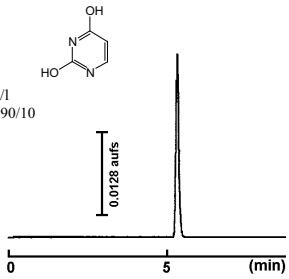
COSMOSIL Chromatogram Index

Sample:	Uracil
CAS No.:	[66-22-8]
Molecular formula:	$C_4H_4N_2O_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV260 nm
Attenuation:	0.128 aufs
Sample conc.:	0.1mg/ml
Injection volume:	0.5µl
Retention time:	5.33min
Capacity factor:	0.84



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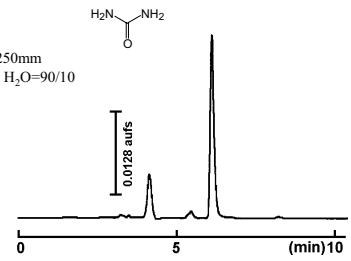
COSMOSIL Chromatogram Index

Sample:	Urea
CAS No.:	[57-13-6]
Molecular formula:	CH_4N_2O
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ H_2O=90/10
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV210 nm
Attenuation:	0.128 aufs
Sample conc.:	10.0mg/ml
Injection volume:	2.0µl
Retention time:	6.12min
Capacity factor:	1.15



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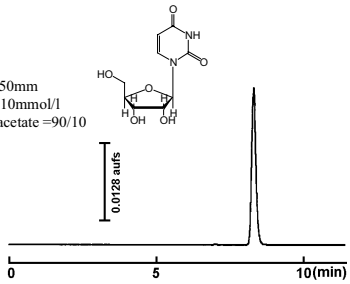
COSMOSIL Chromatogram Index

Sample:	Uridine
CAS No.:	[58-96-8]
Molecular formula:	$C_9H_{12}N_2O_6$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate =90/10
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV260 nm
Attenuation:	0.128 aufs
Sample conc.:	0.1mg/ml
Injection volume:	1.0µl
Retention time:	8.30min
Capacity factor:	1.86



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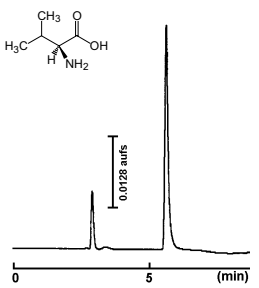
COSMOSIL Chromatogram Index

Sample:	L-Valine
CAS No.:	[72-18-4]
Molecular formula:	$C_5H_{11}NO_2$
Column:	HILIC
Column size:	4.6mmI.D.-250mm
Mobile phase:	Acetonitrile/ 10mmol/l Ammonium acetate=70/30
Flow rate:	1.0 ml/min
Temperature:	30°C
Detection:	UV210 nm
Attenuation:	0.128 aufs
Sample conc.:	10.0mg/ml
Injection volume:	1.0µl
Retention time:	5.63min
Capacity factor:	1.14



NACALAI TESQUE, INC

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