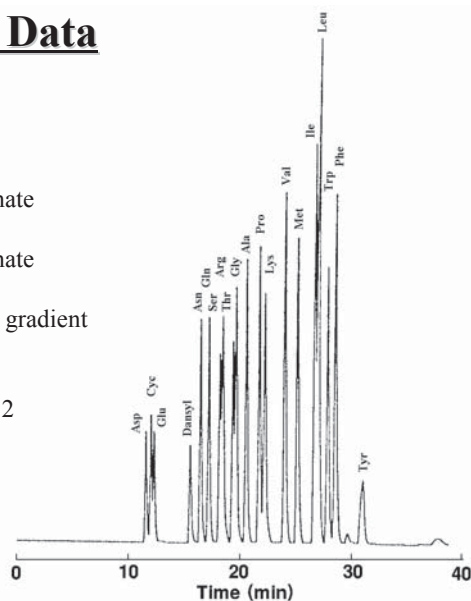


• Dansyl Amino Acids

### COSMOSIL Application Data

Column: 5C<sub>18</sub>-MS-II  
 Column size: 4.6mmI.D.-150mm  
 Mobile phase: A; Acetonitrile/ 20mmol Phosphate buffer(pH7.0) =10/90  
 B; Acetonitrile/ 20mmol Phosphate buffer(pH7.0) =40/60  
 B conc. 0→100% 30min Linear gradient  
 Flow rate: 1.0 ml/min  
 Temperature: 30°C  
 Detection: Ex.365nm Em.530nm RANGE 2  
 Sample: Dansyl Amino Acids (1.0 μg each)



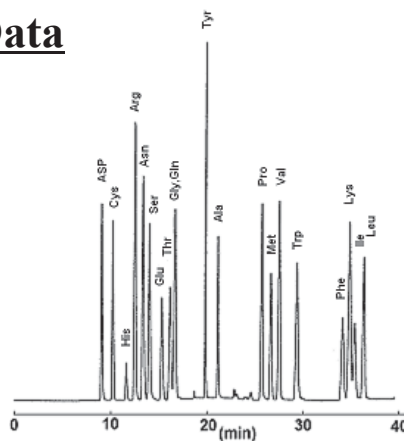
NACALAI TESQUE, INC

AP-0003

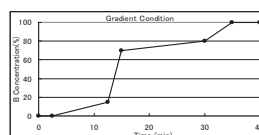
• PTH-Amino Acids

### COSMOSIL Application Data

Column: 5C<sub>18</sub>-AR-II  
 Column size: 4.6mmI.D.-150mm  
 Mobile phase: A; Acetonitrile/ 20mmol/l Acetate buffer(pH4.8) =10/90  
 B; Acetonitrile/ 20mmol/l Acetate buffer(pH4.8) =50/50  
 Step wise gradient  
 Flow rate: 1.0 ml/min  
 Temperature: 60°C  
 Detection: UV270nm, 0.16AUFS  
 Sample: PTH-Asp (0.4mg/ml)  
 PTH-His (0.3mg/ml)  
 PTH-Arg (0.5mg/ml)  
 PTH-Ser (0.3mg/ml)  
 PTH-Trp (0.25mg/ml)  
 PTH-Lys (0.35mg/ml)  
 Others (0.2mg/ml)  
 Injection 2.0 μl



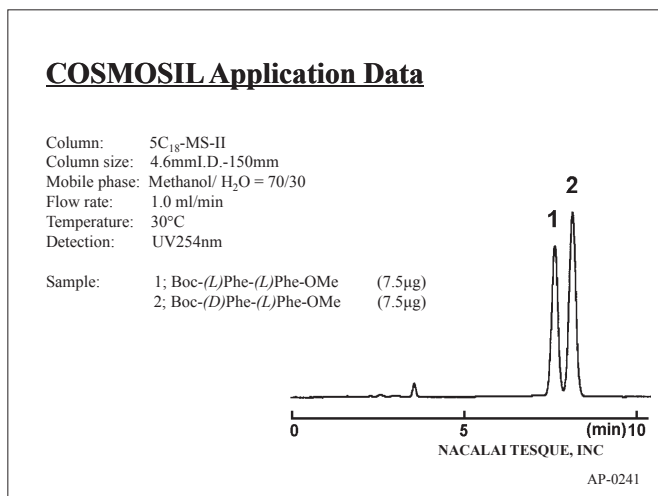
Time (min)	B Conc.(%)
0	0
2.5	0
12.5	15
15	70
30	80
35	100
40	100



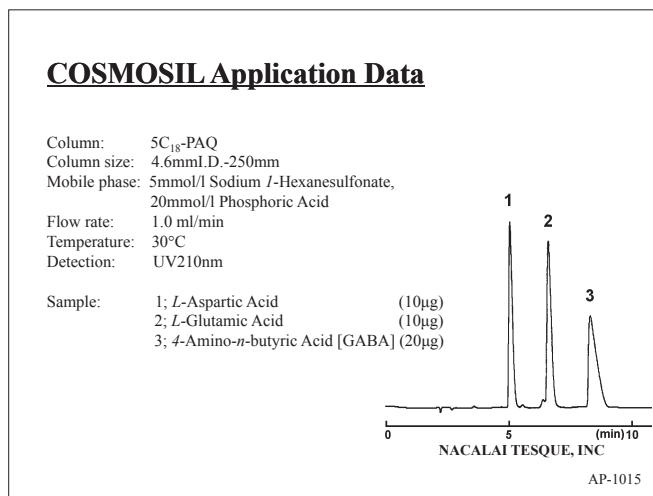
NACALAI TESQUE, INC

AP-0004

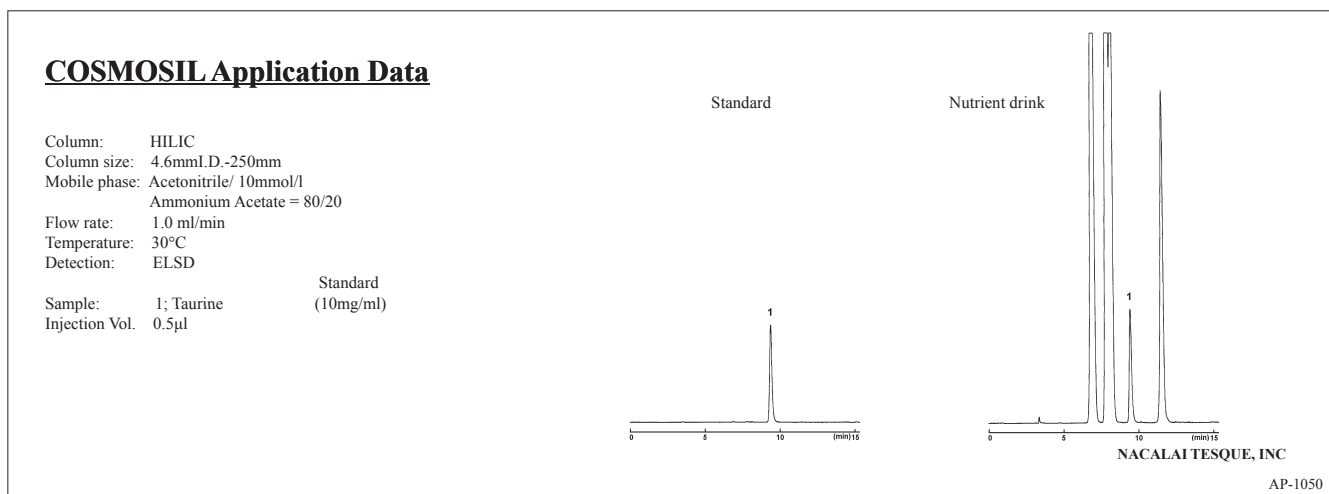
● Amino-Acid Derivatives (Diastereomer)



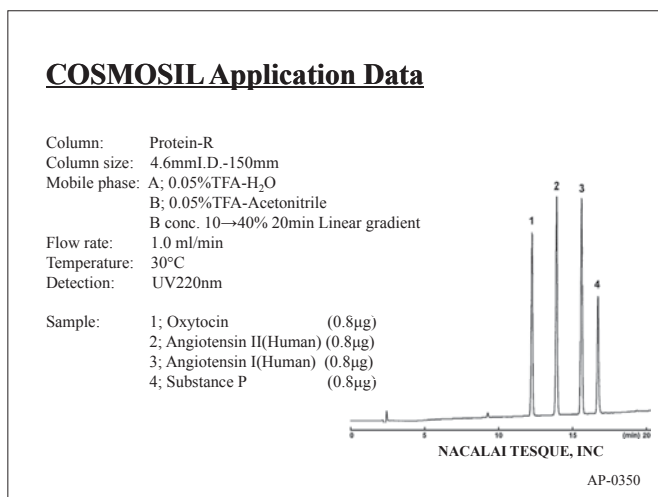
● The umami of Vesitables



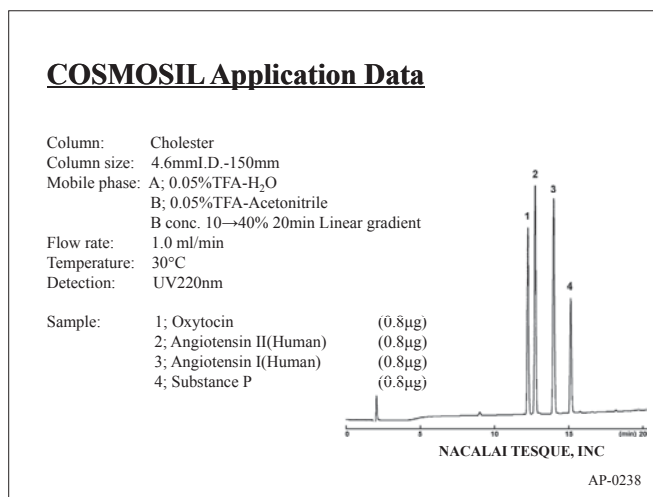
● Energy Drink



● Peptides



● Peptides



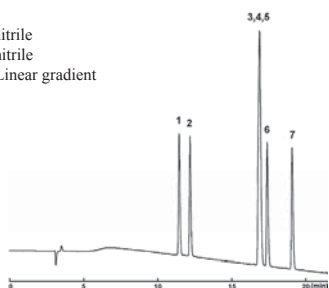
● Peptides

**COSMOSIL Application Data**

Column: 5C<sub>18</sub>-AR-II  
Column size: 4.6mmI.D.-250mm  
Mobile phase: A; 0.05%TFA-10%Acetonitrile  
B; 0.05%TFA-30%Acetonitrile  
B conc. 0→100% 20min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm

Sample:  
1; Angiotensin II, [Sar<sup>1</sup>,Thr<sup>8</sup>] (0.49µg)  
2; Angiotensin II, [Sar<sup>1</sup>,Ala<sup>8</sup>] (0.49µg)  
3; Angiotensin II, Des-Asp<sup>1</sup>-[Ile<sup>8</sup>] (0.49µg)  
4; Angiotensin II, [Sar<sup>1</sup>,Ile<sup>8</sup>] (0.49µg)  
5; Angiotensin II, [Asn<sup>1</sup>,Val<sup>7</sup>] (0.49µg)  
6; Angiotensin II, [Val<sup>7</sup>] (0.49µg)  
7; Angiotensin II (Human) (0.49µg)



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AP-1005

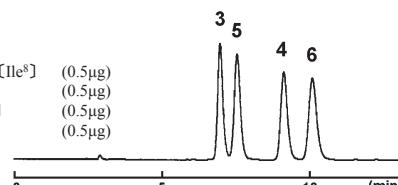
● Peptides

**COSMOSIL Application Data**

Column: HILIC  
Column size: 4.6mmI.D.-250mm  
Mobile phase: Acetonitrile/ 10mmol/l Phosphate  
Buffer(pH7.0) = 70/30

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm

Sample:  
3; Angiotensin II, Des-Asp<sup>1</sup>-[Ile<sup>8</sup>] (0.5µg)  
4; Angiotensin II, [Sar<sup>1</sup>,Ile<sup>8</sup>] (0.5µg)  
5; Angiotensin II, [Asn<sup>1</sup>,Val<sup>7</sup>] (0.5µg)  
6; Angiotensin II, [Val<sup>7</sup>] (0.5µg)



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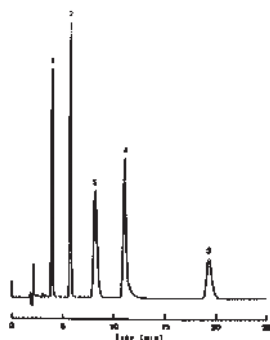
AP-0316

● Peptides

**COSMOSIL Application Data**

Column: 5C<sub>18</sub>-AR-300  
Column size: 4.6mmI.D.-150mm  
Mobile phase: 0.05%TFA-22%Acetonitrile  
Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.16AUFS

Sample:  
1; Bradykinin (1.0µg)  
2; Angiotensin II (1.0µg)  
3; Neurotensin (1.0µg)  
4; Bombesin (1.0µg)  
5; Substance P (1.0µg)



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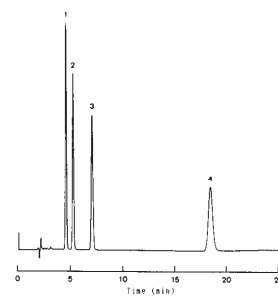
AP-0009

● Peptides

**COSMOSIL Application Data**

Column: 5C<sub>18</sub>-AR-300  
Column size: 4.6mmI.D.-150mm  
Mobile phase: 0.05%TFA-22%Acetonitrile  
Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.16AUFS

Sample:  
1; Methionine-Enkephalin (0.5µg)  
2; [Ala<sup>2</sup>]-Methionine-Enkephalin (0.5µg)  
3; Leucine-Enkephalin (0.5µg)  
4; [Ala<sup>2</sup>]-Leucine-Enkephalin (0.5µg)



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AP-0005

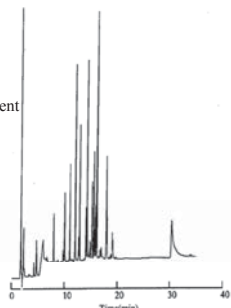
● Peptide Mappings

**COSMOSIL Application Data**

Column: 5C<sub>18</sub>-AR-II  
Column size: 4.6mmI.D.-250mm  
Mobile phase: A; 5mmol/l TFA-H<sub>2</sub>O  
B; 5mmol/l TFA-60%Acetonitrile  
B conc. 0→100% 30min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV210nm, 0.32AUFS

Sample: Cytochrome C  
Lysyl Endopeptidase digested  
(2.5µl)



NACALAI TESQUE, INC

AP-0002

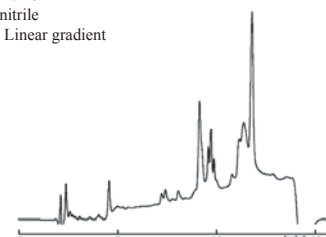
● Semi-purified Myosin

**COSMOSIL Application Data**

Column: Protein-R  
Column size: 4.6mmI.D.-150mm  
Mobile phase: A:0.05%TFA-20%Acetonitrile  
B:0.05%TFA-60%Acetonitrile  
B conc. 0→100% 10min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.256AUFS

Sample: Myosin (20µg)



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AP-0346

● Milk Protein

**COSMOSIL Application Data**

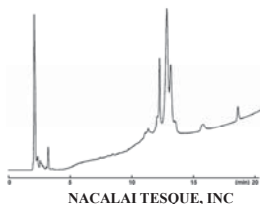
Column: Protein-R  
Column size: 4.6mm I.D.-150mm  
Mobile phase: A: 0.05%TFA-H<sub>2</sub>O  
B: 0.05%TFA-Acetonitrile  
B conc. 20→80% 20min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm

Sample: Milk

Sample Preparation:  
• Ultracentrifuged at 90,000 g for 1 hr.  
• Clear supernatant solution was injected.

Injection vol.: 1.0µl



AP-1079

● Soy milk Protein

**COSMOSIL Application Data**

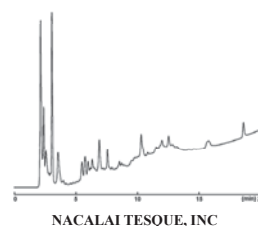
Column: Protein-R  
Column size: 4.6mm I.D.-150mm  
Mobile phase: A: 0.05%TFA-H<sub>2</sub>O  
B: 0.05%TFA-Acetonitrile  
B conc. 20→80% 20min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm

Sample: Soybean milk

Sample Preparation:  
• Ultracentrifuged at 90,000 g for 1 hr.  
• Clear supernatant solution was injected.

Injection vol.: 1.0µl



AP-1080

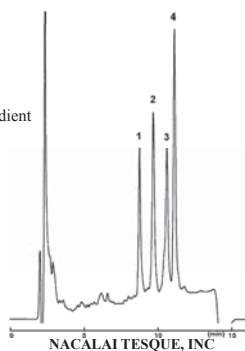
● Bacteria-derived Proteins

**COSMOSIL Application Data**

Column: Protein-R  
Column size: 4.6mm I.D.-150mm  
Mobile phase: A: 0.05%TFA-20%Acetonitrile  
B: 0.05%TFA-60%Acetonitrile  
B conc. 0→100% 10min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.256AUFS

Sample: 1; Choline Oxidase (6.0µg)  
2; α-Amylase (3.0µg)  
3; Glucose Oxidase (6.0µg)  
4; Thermolysin (9.0µg)



AP-0337

● Bacteria-derived Proteins

**COSMOSIL Application Data**

Column: Protein-R  
Column size: 4.6mm I.D.-150mm  
Mobile phase: A: 0.05%TFA-20%Acetonitrile  
B: 0.05%TFA-60%Acetonitrile  
B conc. 0→100% 10min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.256AUFS

Sample: 1; Actinase E (13.4µg)  
2; Alcohol Dehydrogenase (6.6µg)



AP-0338

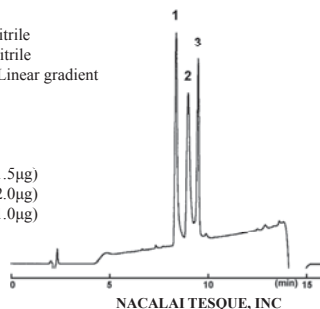
● Human-derived Proteins

**COSMOSIL Application Data**

Column: Protein-R  
Column size: 4.6mm I.D.-150mm  
Mobile phase: A: 0.05%TFA-20%Acetonitrile  
B: 0.05%TFA-60%Acetonitrile  
B conc. 0→100% 10min Linear gradient

Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.256AUFS

Sample: 1; Transferrin (1.5µg)  
2; Albumin, Human (2.0µg)  
3; Carbonic Anhydrase (1.0µg)



AP-0339

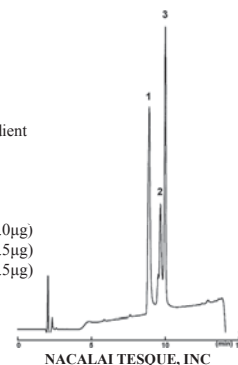
● Bovine-derived Proteins

**COSMOSIL Application Data**

Column: Protein-R  
Column size: 4.6mm I.D.-150mm  
Mobile phase: A: 0.05%TFA-20%Acetonitrile  
B: 0.05%TFA-60%Acetonitrile  
B conc. 0→100% 10min Linear gradient

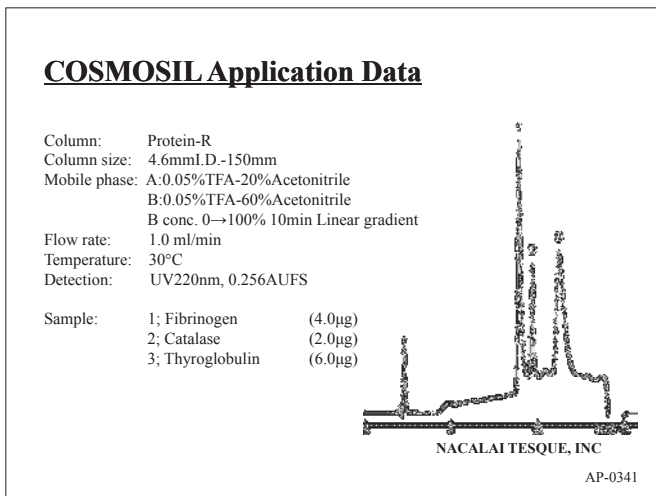
Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.256AUFS

Sample: 1; Albumin, Bovine [BSA] (2.0µg)  
2; L-Glutamic Dehydrogenase (1.5µg)  
3; Carbonic Anhydrase (1.5µg)

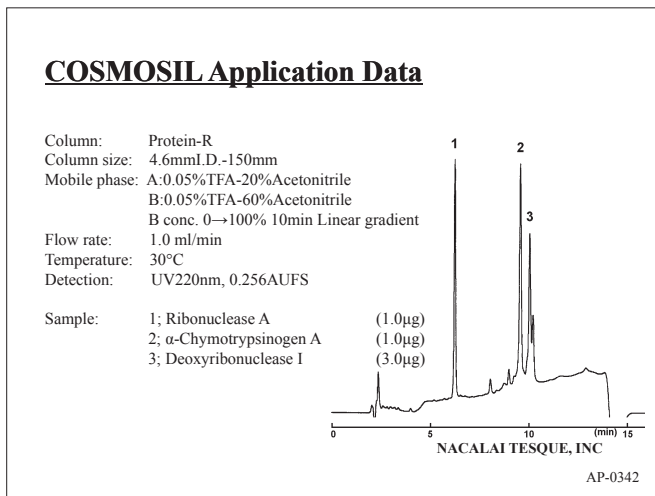


AP-0340

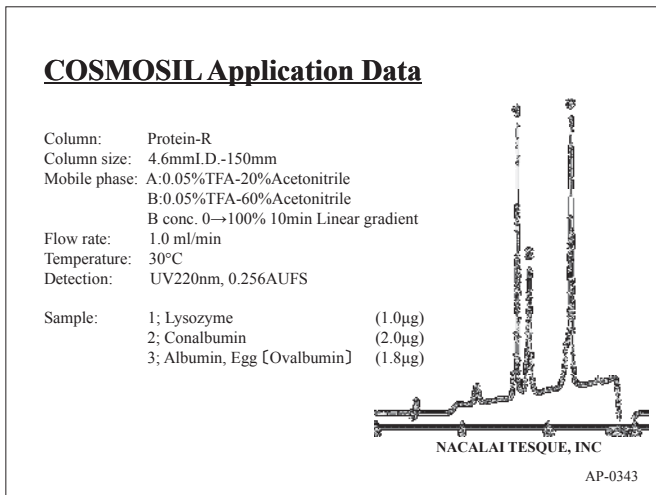
● Bovine-derived Proteins



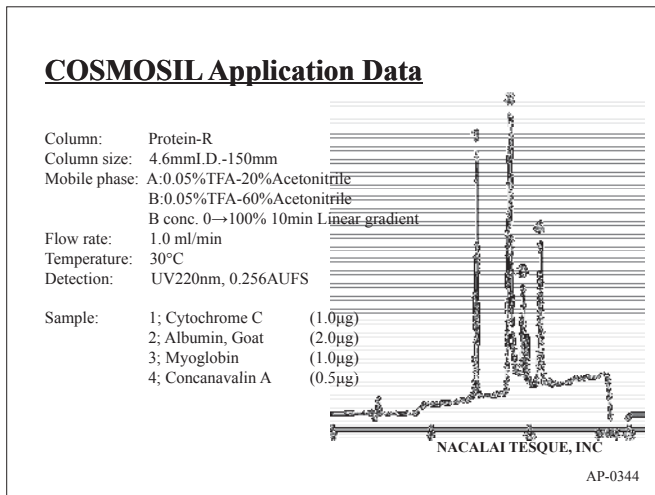
● Bovine Spleen-derived Proteins



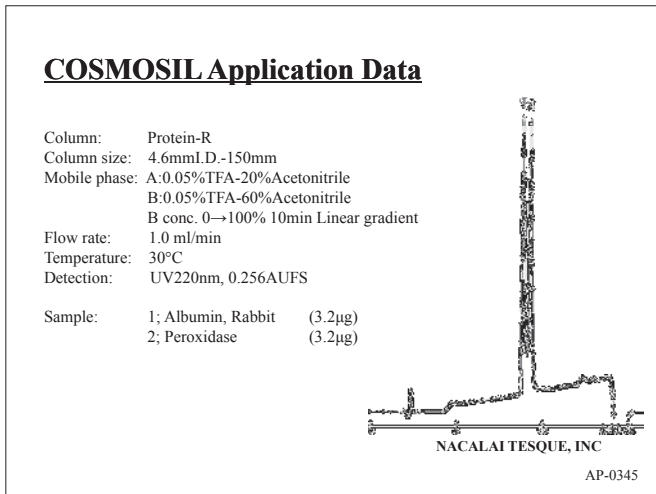
● Bovine Spleen-derived Proteins



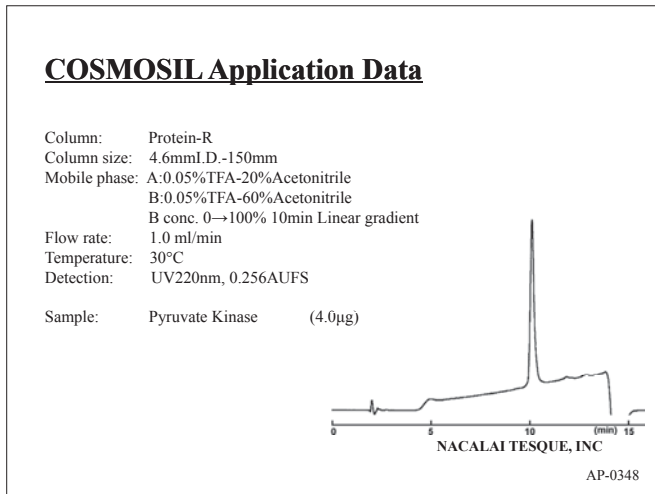
● Other Proteins



● Other Proteins



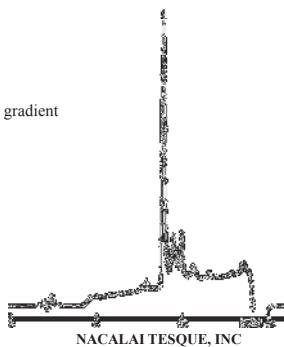
● Pyruvate Kinase



● Semi-purified Diaphorase

**COSMOSIL Application Data**

Column: Protein-R  
Column size: 4.6mmI.D.-150mm  
Mobile phase: A:0.05%TFA-20%Acetonitrile  
B:0.05%TFA-60%Acetonitrile  
B conc. 0→100% 10min Linear gradient  
Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm, 0.256AUFS  
Sample: Diaphorase (6.0µg)

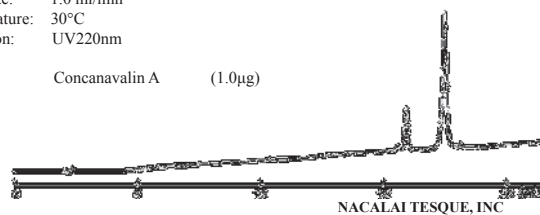


AP-0347

● Glycoproteins

**COSMOSIL Application Data**

Column: Protein-R  
Column size: 4.6mmI.D.-150mm  
Mobile phase: A; 0.05%TFA-20%Acetonitrile  
B; 0.05%TFA-60%Acetonitrile  
B conc. 0→100% 20min Linear gradient  
Flow rate: 1.0 ml/min  
Temperature: 30°C  
Detection: UV220nm  
Sample: Concanavalin A (1.0µg)

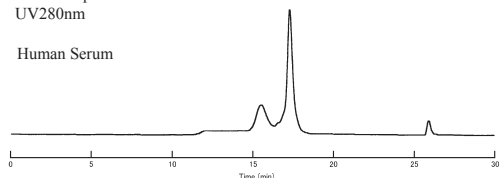


AP-0352

● Human Serum

**COSMOSIL Application Data**

Column: 5Diol-300-II  
Column size: 7.5mmI.D.-600mm  
Mobile phase: 20mmol/l Phosphate Buffer(pH 7.0)  
+100mmol/l Na<sub>2</sub>SO<sub>4</sub>  
Flow rate: 1.0 ml/min  
Temperature: Room temperature  
Detection: UV280nm  
Sample: Human Serum

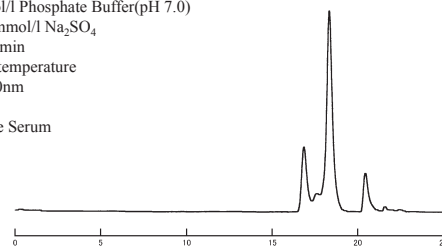


AP-0383

● Bovine Serum

**COSMOSIL Application Data**

Column: 5Diol-300-II  
Column size: 7.5mmI.D.-600mm  
Mobile phase: 20mmol/l Phosphate Buffer(pH 7.0)  
+100mmol/l Na<sub>2</sub>SO<sub>4</sub>  
Flow rate: 1.0 ml/min  
Temperature: Room temperature  
Detection: UV280nm  
Sample: Bovine Serum

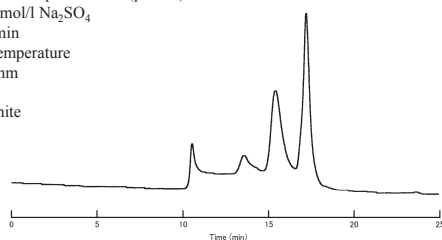


AP-0387

● Egg White

**COSMOSIL Application Data**

Column: 5Diol-300-II  
Column size: 7.5mmI.D.-600mm  
Mobile phase: 20mmol/l Phosphate Buffer(pH 7.0)  
+100mmol/l Na<sub>2</sub>SO<sub>4</sub>  
Flow rate: 1.0 ml/min  
Temperature: Room temperature  
Detection: UV280nm  
Sample: Egg White

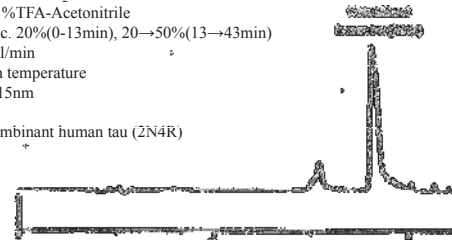


AP-0385

● Tau Protein

**COSMOSIL Application Data**

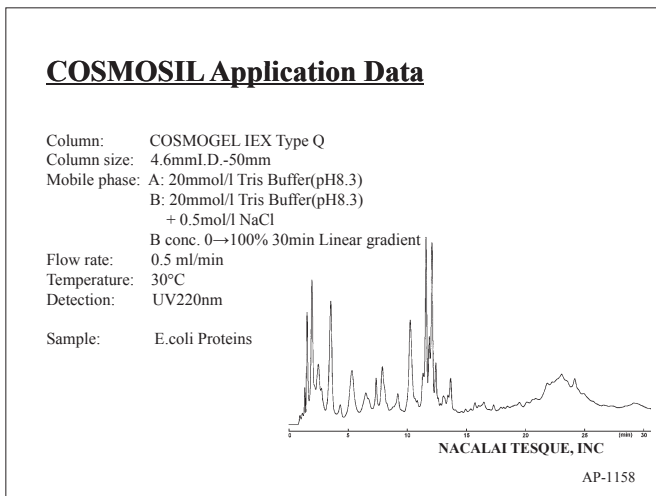
Column: Protein-R  
Column size: 20mmI.D.-250mm  
Mobile phase: A; 0.1%TFA-H<sub>2</sub>O  
B; 0.1%TFA-Acetonitrile  
B conc. 20%(0-13min), 20→50%(13→43min)  
Flow rate: 9.0 ml/min  
Temperature: Room temperature  
Detection: UV215nm  
Sample: Recombinant human tau (2N4R)



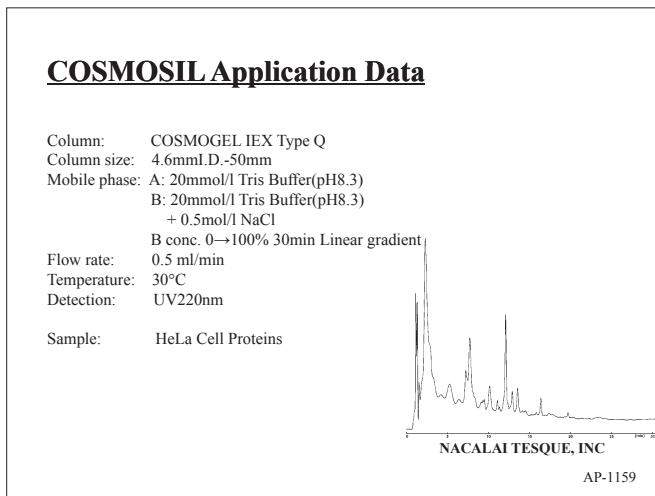
Data courtesy of Akihiko Takashima, Ph.D.  
Laboratory for Alzheimer's Disease, RIKEN Brain Science Institute

AP-1150

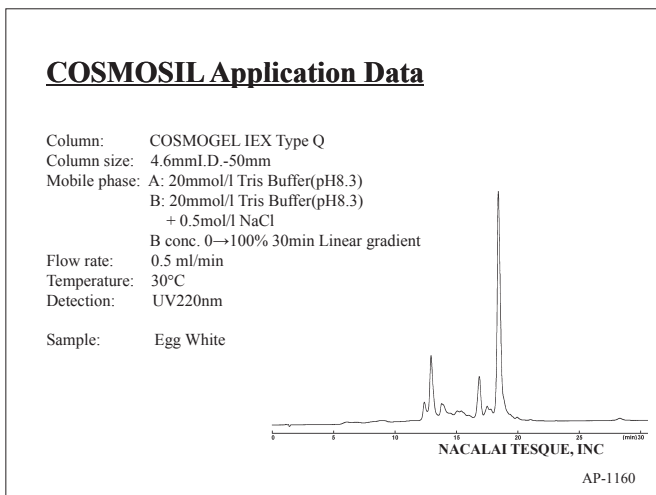
● E. coli Proteins



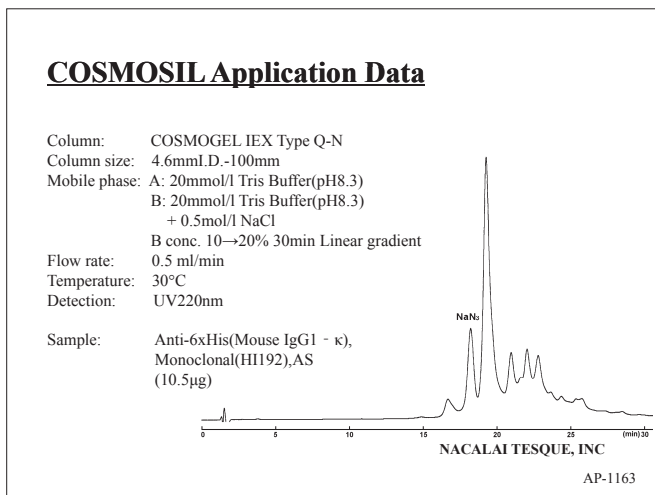
● HeLa Cell Proteins



● Egg White



● IgG



● Urease

