

イアトロスキャン分析法
IATROSCAN TLC/FID

25

食品添加物 データ集

Analysis of food additives by the Iatroscan

目 次

A) 試料 Samples

1. 甘味料 Sweetening agent

- 1) サッカリンナトリウム Saccharin Sodium
- 2) グリチルレチン酸 Glycyrrhetic acid
- 3) D-ソルビトール, D-キシロース D-Sorbitol, D-Xylose
- 4) アスパラテーム Aspartame

2. 着色料 Coloring agent

- 1) Tartrazine, Sunset yellow
- 2) Phloxine, Erythrosine, Acid red, Indigo carmine
- 3) Fast green FCF, Acid violet 6B
- 4) Amaranth, Acid red, Erythrosine
- 5) Tartrazine, Acid red, Phloxine B
- 6) New cocchine, Acid red, Rose bengal

3. 保存料 Preservation

p-Hydroxybenzoate ester

4. 酸化防止剤 Antioxidant

BHT, BHA

B) 下記の成分名は略語を用います

Components are expressed in the following abbreviations.

成分名 Component	略語 Abbreviation
Butylated hydroxytoluene	BHT
Butylated hydroxyanisole	BHA

C) 測定条件 Conditions

Stationary phase : CHROMAROD-SIII

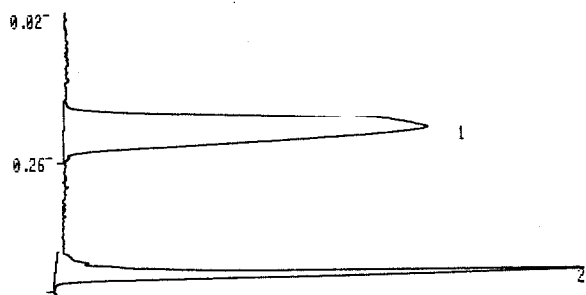
Flow rate of gases : H₂ 160 ml/min

Air 2.0 l/min

Scanning speed : 30 sec/scan

1. 甘味料 Sweetening agent

1) サッカリンナトリウム Saccharin sodium



CAL.	METHOD	00	PA	PB	
		SF			
		.100000 ₁₀ +03	.100000 ₁₀ +01	.100000 ₁₀ +01	
NO.	NAME	RT	A OR H	MK	CONC
1		0.224	42940	M	73.0638
2		0.468	15830	M	26.9361
TOTAL			58770		100.0000

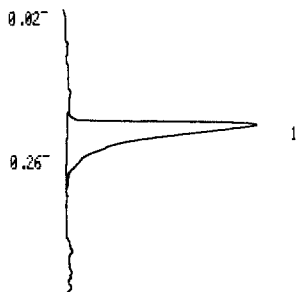
Mobile phase

Benzene : Ethyl acetate : Formic acid 36 : 24 : 2 10cm

Component

1.Saccharin sodium

2) グリチルレチン酸 Glycyrrhetic Acid



CAL.	METHOD	00	PA	PB	
		SF			
		.100000 ₁₀ +03	.100000 ₁₀ +01	.100000 ₁₀ +01	
NO.	NAME	RT	A OR H	MK	CONC
1		0.221	14185		100.0000
TOTAL			14185		100.0000

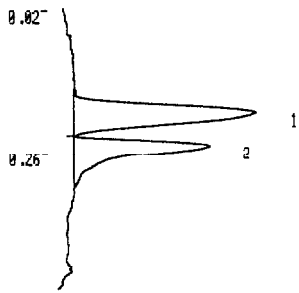
Mobile phase

Chloroform : Methanol 50 : 10 10cm

Component

1.Glycyrrhetic Acid

3) D-ソルビトール, D-キシロース D-Sorbitol, D-Xylose



CAL.	METHOD	00	SF	PA	PB	
			.100000 ₁₀ +03	.100000 ₁₀ +01	.100000 ₁₀ +01	
NO.	NAME	RT	A	OR H	MK	CONC
1		0.201	14614		M	60.0953
2		0.257	9704			39.9046
TOTAL			24319			100.0000

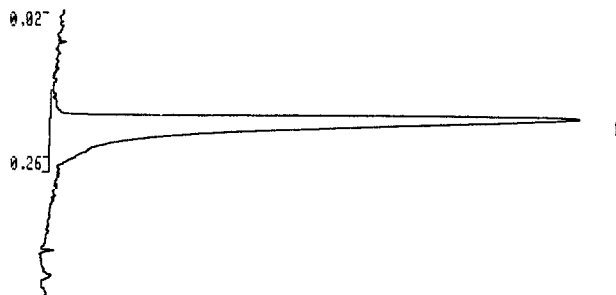
Mobile phase

Chloroform : Methanol 30 : 30 10cm

Component

1.D-Xylose 2.D-Sorbitol

4) アスパラテーム Aspartame



CAL.	METHOD	00	SF	PA	PB	
			.100000 ₁₀ +03	.100000 ₁₀ +01	.100000 ₁₀ +01	
NO.	NAME	RT	A	OR H	MK	CONC
1		0.211	35368		M	100.0000
TOTAL			35368			100.0000

Mobile phase

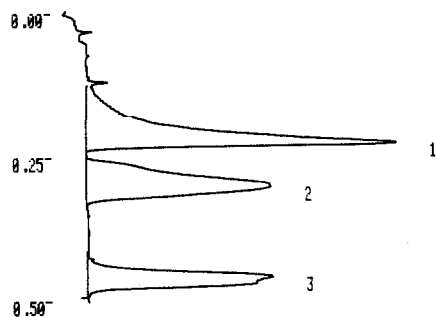
Chloroform : Methanol 15 : 45 10cm

Component

1.Aspartame

2. 着色料 Coloring agent

1) Tartrazine, Sunset yellow



NO.	NAME	RT	A OR H	MK	CONC
1		0.228	11137		42.5411
2		0.301	8726		33.3302
3		0.461	6317	M	24.1286
TOTAL			26181		100.0000

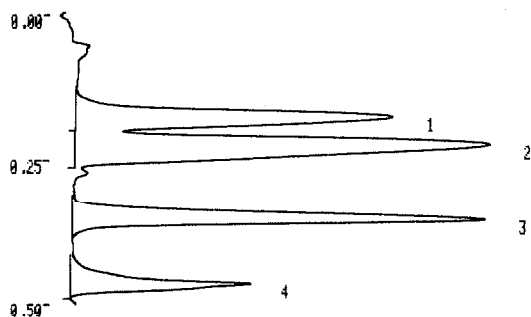
Mobile phase

Ethyl acetate : Methanol : conc Ammonia : Water
 30 : 14 : 8 : 8 10cm

Component

1.Sunset yellow 2.Tartrazine

2) Phloxine. Erythrosine. Acid red. Indigo carmine



NO.	NAME	RT	A OR H	MK	CONC
1		0.178	22198	M	25.1841
2		0.226	35325	M	40.0764
3		0.358	21405		24.2849
4		0.468	9215	M	10.4544
TOTAL			88144		100.0000

Mobile phase

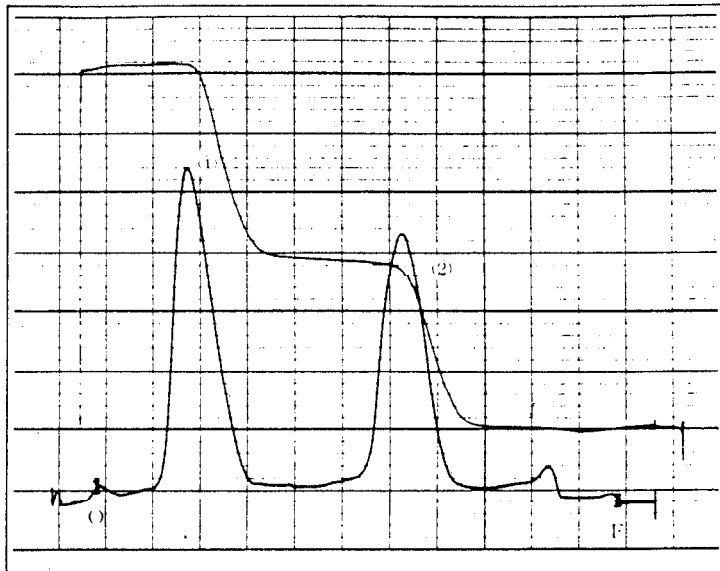
Ethyl acetate : Methanol : conc Ammonia : Water
 50 : 10 : 5 : 5 10cm

double development

Component

1.Phloxine 2.Erythrosine 3.Acid red 4.Indigo carmine

3) Fast green FCF, Acid violet 6B



Mobile phase

Ethyl acetate : Methanol : conc Ammonia : Water
70 : 20 : 10 : 10 10cm

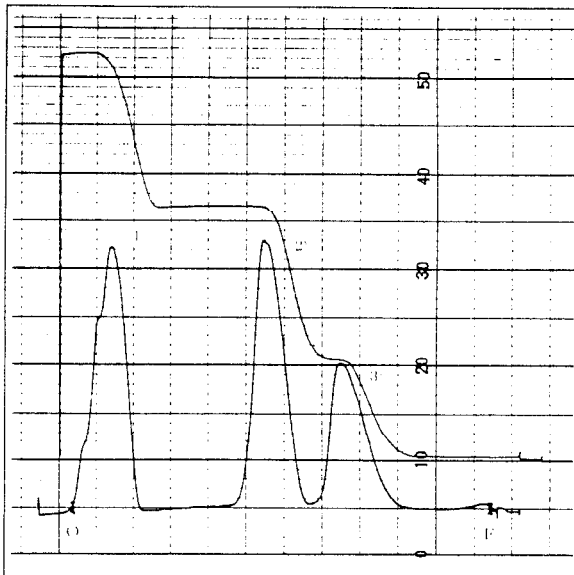
Component

1. Fast green FCF 2. Acid violet 6B

Stationary phase

CHROMAROD-S

4) Amaranth, Acid red, Erythrosine



Mobile phase

Ethyl acetate : Methanol : conc Ammonia : Water
70 : 20 : 10 : 10 10cm

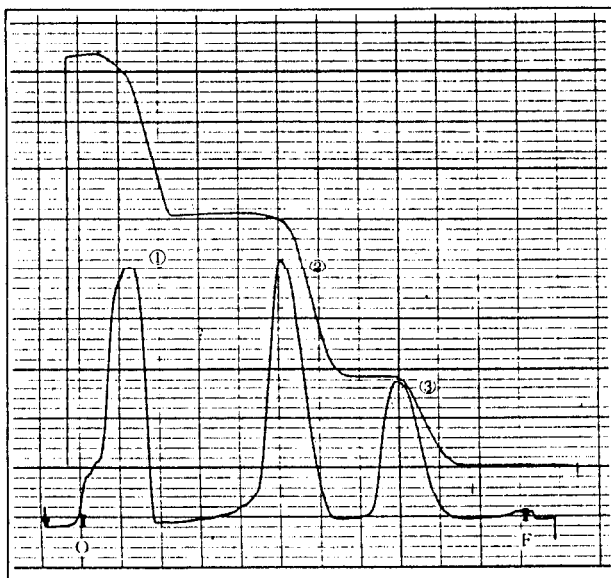
Component

1. Amaranth 2. Acid red 3. Erythrosine

Stationary phase

CHROMAROD-S

5) Tartrazine, Acid red, Phloxine B



Mobile phase

Ethyl acetate : Methanol : conc Ammonia : Water
70 : 20 : 10 : 10 10cm

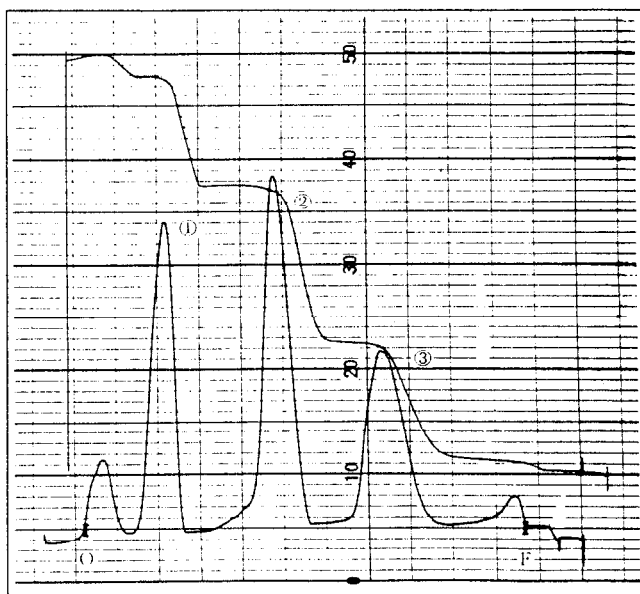
Component

1.Tartrazine 2.Acid red 3.Phloxine B

Stationary phase

CHROMAROD-S

6) New coccine, Acid red, Rose bengal



Mobile phase

Ethyl acetate : Methanol : conc Ammonia : Water
70 : 20 : 10 : 10 10cm

Component

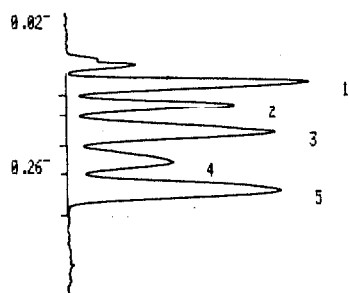
1.New coccine 2.Acid red 3.Rose bengal

Stationary phase

CHROMAROD-S

3. 保存料 Preservation

p-Hydroxybenzoate ester



CAL. METHOD 00					
		SF	PA	PB	
		.100000 ₁₀ +03	.100000 ₁₀ +01	.100000 ₁₀ +01	
NO.	NAME	RT	A OR H	MK	CONC
1		0.138	5301	M	19.8495
2		0.176	4030	M	15.0922
3		0.225	6457	M	24.1778
4		0.273	3606	M	13.5022
5		0.321	7312	M	27.3781
TOTAL			26708		100.0000

Mobile phase

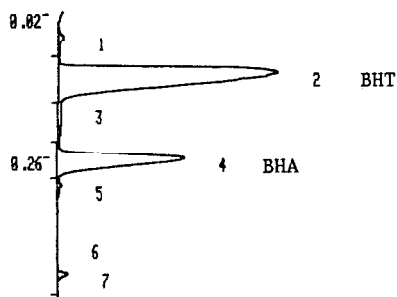
1st.	Benzene	Methanol	Formic acid	60	5	2.5	10cm
2nd.	Hexane	Methanol	Formic acid	30	15	15	10cm
3rd.	Hexane	Methanol	Formic acid	30	15	15	10cm

Component

1.n-Butyl-p-hydroxybenzoate	2.n-Propyl-p-hydroxybenzoate	3.Ethyl-p-hydroxybenzoate
4.Methyl-p-hydroxybenzoate	5.p-Hydroxybenzoate	

4. 酸化防止剤 Antioxidant

BHT, BHA



CAL. METHOD 00					
		SF	PA	PB	
		100000 ₁₀ +03	100000 ₁₀ +01	100000 ₁₀ +01	
NO.	NAME	RT	A OR H	MK	CONC
1		0.061	258	M	1.0029
2		0.127	17692	M	68.7275
3		0.186	428	M	1.6651
4		0.272	6885	M	26.7478
5		0.316	128		0.4975
6		0.412	93		0.3636
7		0.464	256	M	0.9952
TOTAL			25742		100.0000

Mobile phase

1st.	Chloroform	100%	5cm
2nd.	n-Hexane	100%	10cm
3rd.	n-Hexane	100%	10cm

Component

2.BHT	4.BHA
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