

IATROSCAN TLC/FID  
INSTRUMENT APPLICATION

5

Analysis of Lipids by the Iatroscan

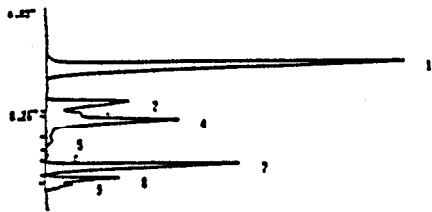
## Content

1. Serum lipid
2. Red blood cell membrane lipid
3. Lipid standard mixture
4. Lipid in amniotic fluid
5. Lecithin
6. Egg yolk lecithin
7. Glycolipid (1)(2)
8. Skin surface lipid
9. Lipid of marine product
10. Lipid of rat liver
11. Lipid of rat sciatic nerve
12. Hepatic microsomal phospholipid of guinea pig
13. Hepatic microsomal neutral lipid of guinea pig
14. Lipid in brain tissue
15. Lipid of fungi (1)(2)(3)

Lipid components are expressed in the following abbreviation.

Component	Abbreviation
Ceramidedihexoside	CDH
Ceramidemonohexoside	CMH
Ceramidetrihexoside	CTH
Cholesterol	Cho
Cholesterol acetate	Cho.A
Cholesterol ester	Cho.E
Diglyceride	DG
Fatty acid	FA
Monoglucерide	MG
Phosphatidyl choline	PC
Phosphatidyl ethanolamine	PE
Phosphatidyl serine	PS
Sphingomyelin	SM
Triglyceride	TC

1. Serum lipid



Component

1. Cho.E 2. TG 4. Cho 7. PC 8. SM

Stationary phase: CHROMAROD-SIII

Mobile phase

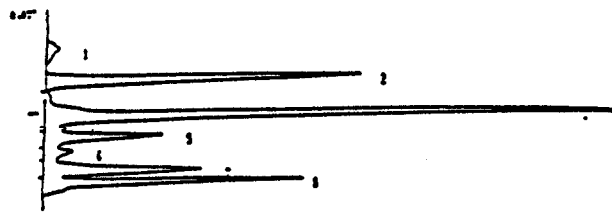
1st Chloroform : Methanol : Water

50 : 20 : 2.5 5 cm

2nd n-Hexane : Diethyl ether : Formic acid

65 : 5 : 0.15 10cm

2. Red blood cell membrane lipid



Component

2. Cho.A(internal standard) 3. Cho 5. PE 6. PS

7. PC 8. SM

Stationary phase: CHROMAROD-SIII

Mobile phase

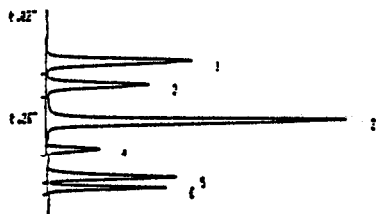
1st Chloroform : Methanol : Water

50 : 20 : 2.5 5 cm

2nd n-Hexane : Diethyl ether : Formic acid

65 : 5 : 0.15 10cm

3. Lipid standard mixture



Component

1. Cho.E 2. Cho.A 3. Cho 4. PE 5. PC 6: SM

Stationary phase: CHROMAROD-SIII

Mobile phase

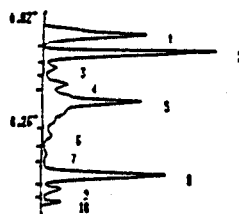
1st Chloroform : Methanol : Water

50 : 20 : 2.5 5 cm

2nd n-Hexane : Diethyl ether : Formic acid

65 : 5 : 0.15 10cm

4. Lipid in amniotic fluid



Component

8. PC 9. SM

Stationary phase: CHROMAROD-SIII

Mobile phase

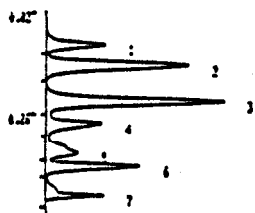
1st Chloroform : Methanol : Water

50 : 20 : 2.5 5 cm

2nd n-Hexane : Diethyl ether : Formic acid

65 : 5 : 0.15 10cm

8. Skin surface lipid



Component

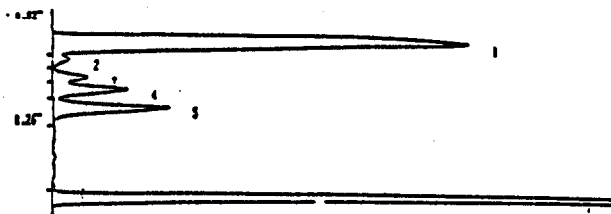
- 1. Squalene 2. Wax ester 3. TG 4. FA 5. DG+Cho
- 6. Anise alcohol(internal standard) 7. Phospholipid

Stationary phase: CHROMAROD-SIII

Mobile phase

- 1st n-Hexane : Diethyl ether : Formic acid  
50 : 20 : 0.3 8 cm
- 2nd n-Hexane : Benzene 1 : 1 10cm

9. Lipid of marine product

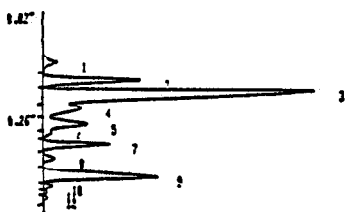


Stationary phase: CHROMAROD-SIII

Mobile phase

- n-Hexane : Diethyl ether : Formic acid  
42 : 28 : 0.3

10. Lipid of rat liver

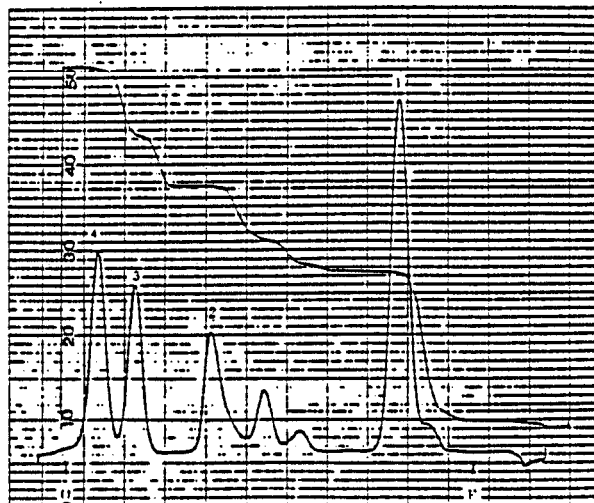


Stationary phase: CHROMAROD-SIII

Mobile phase

- 1st Chloroform : Methanol : Water  
50 : 20 : 2.5 5 cm
- 2nd n-Hexane : Diethyl ether : Formic acid  
65 : 5 : 0.15 10cm

11. Lipid of rat sciatic nerve



Component

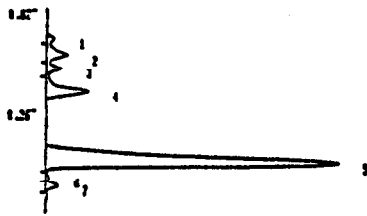
- 1. Neutral lipid 2. PE 3. PC 4. SM

Stationary phase: CHROMAROD-SII

Mobile phase

- Chloroform : Methanol : 14%Ammonia solution  
65 : 25 : 2

5. Lecithin



Component

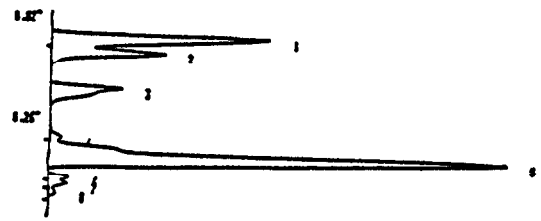
5. PC

Stationary phase: CHROMAROD-SIII

Mobile phase

Chloroform : Methanol : Water 50 : 20 : 2

6. Egg yolk lecithin



Component

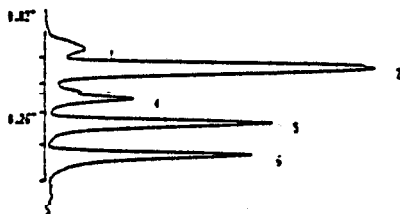
5. PC

Stationary phase: CHROMAROD-SIII

Mobile phase

Chloroform : Methanol : Water 50 : 20 : 2.5

7. Glycolipid (1)



Component

2. CMH 3. CDH 4. CDH 5. CTH 6. Globoside 1

Stationary phase: CHROMAROD-SIII

Mobile phase

Chloroform : Methanol : Water 50 : 20 : 2.5

Glycolipid (2)



Component

1. Ganglioside GM-3 2. Ganglioside GM-2

3. Ganglioside GD-1a 4. Ganglioside GT-1b

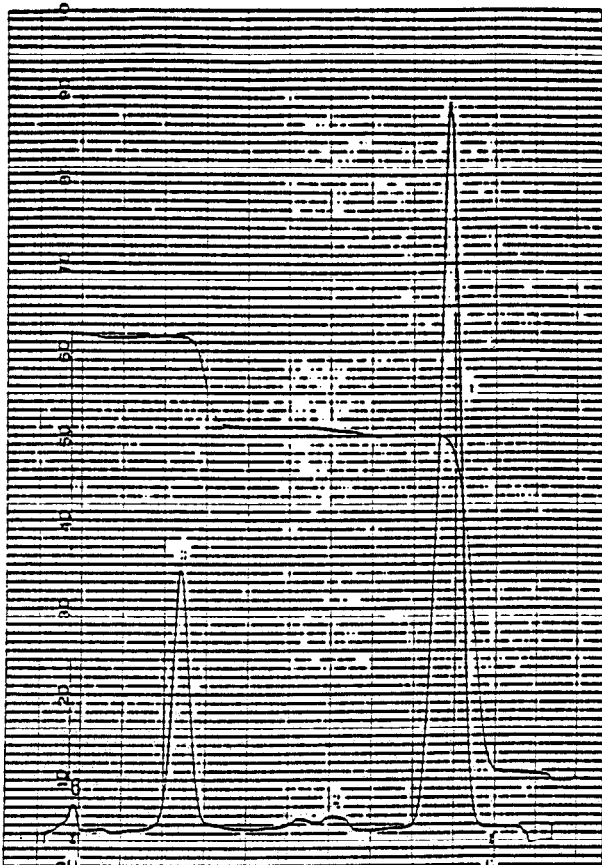
Stationary phase: CHROMAROD-SIII

Mobile phase

Chloroform : Methanol : Water (0.2%CaCl<sub>2</sub>)

30 : 30 : 6

12. Hepatic microsomal  
Phospholipid of guinea pig



Component

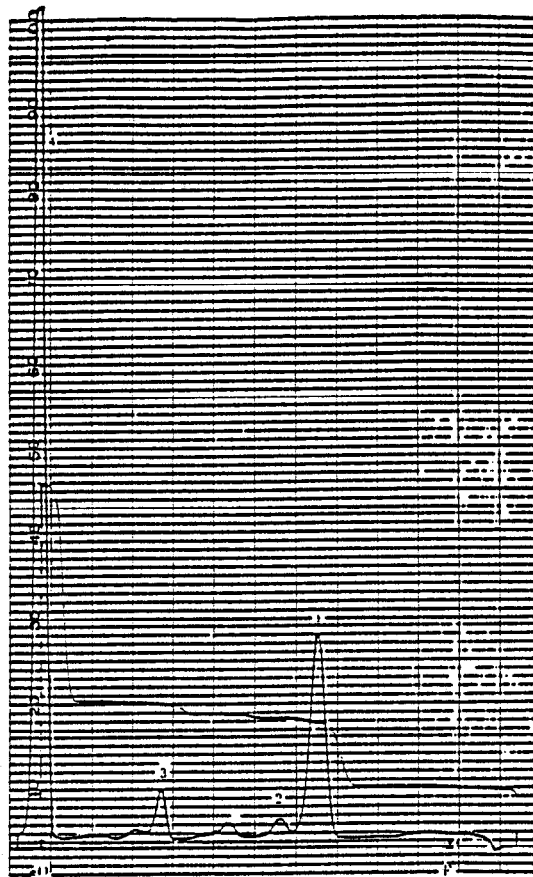
1. Neutral lipid 2. PE 3. PC

Stationary phase: CHROMAROD-SI

Mobile phase

Chloroform : Methanol : Water 40 : 10 : 1

13. Hepatic microsomal  
neutral lipid of guinea pig



Component

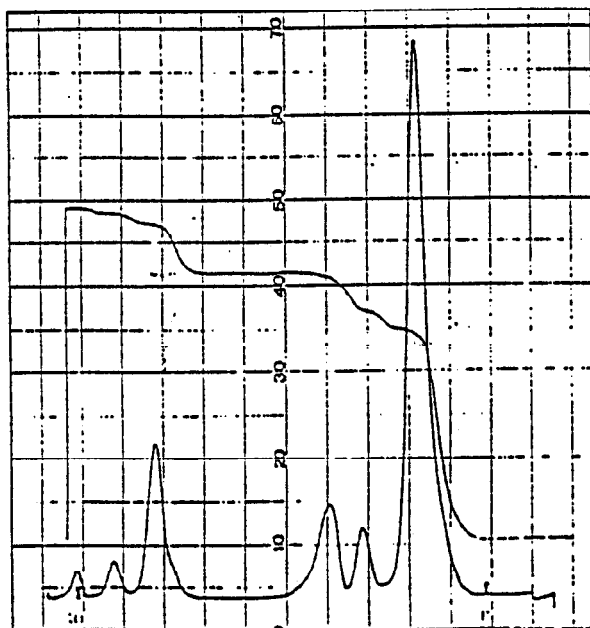
1. TG 2. FA 3. Cho 4. Phospholipid

Stationary phase: CHROMAROD-SI

Mobile phase

Benzene : Chloroform : Formic acid 70 : 30 : 0.5

14. Lipid in brain tissue



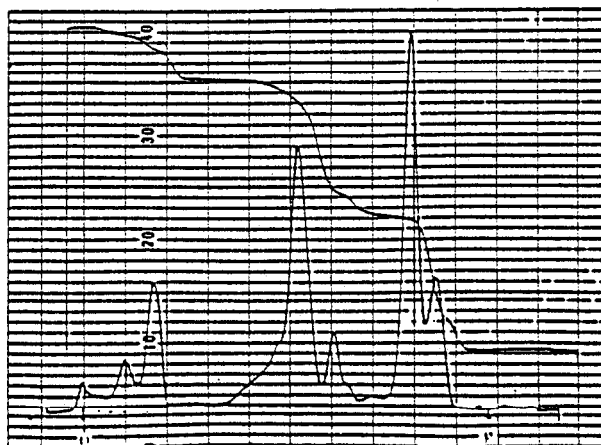
Stationary phase: CHROMAROD-SI

Mobile phase

Chloroform : Methanol : Water 60 : 20 : 2

15. Lipid of fungi (1)

Lipid in the adult stalk of *Fistulina*



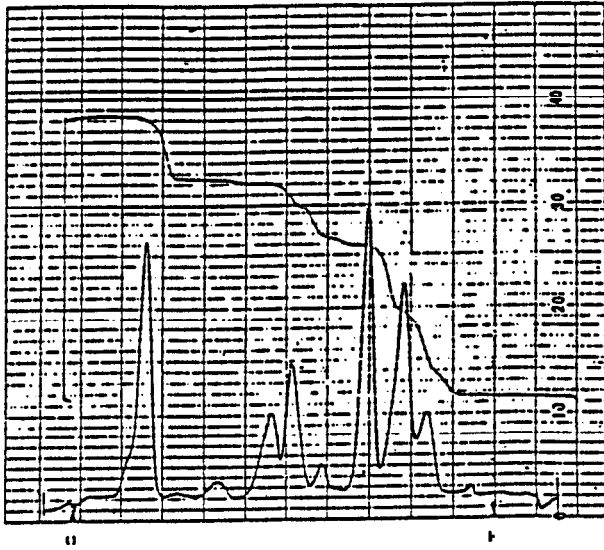
Stationary phase: CHROMAROD-SI

Mobile phase

Chloroform : Methanol : Water 40 : 10 : 1

Lipid of fungi (2)

Lipid in the pileus  
of *Fistulinaceae*



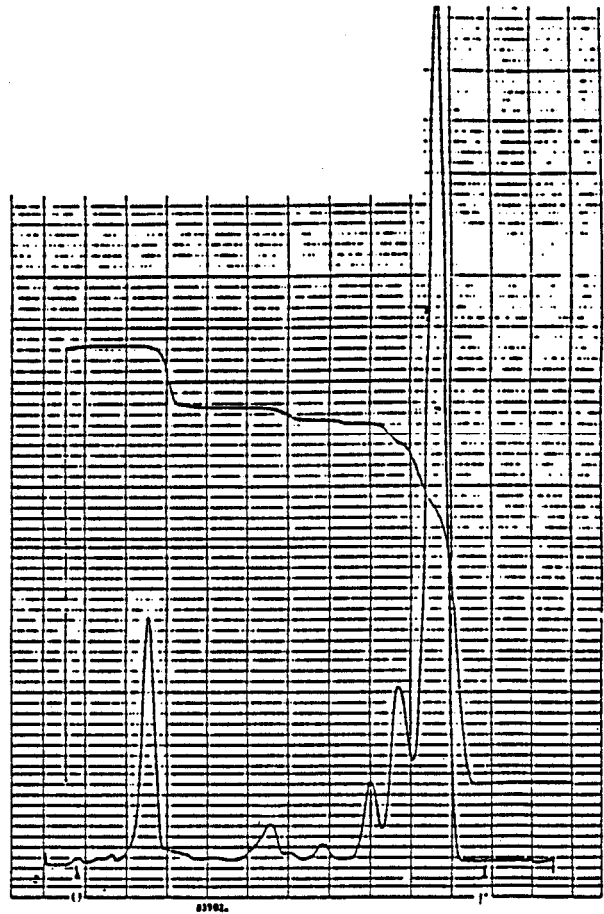
Stationary phase: CHROMAROD-SII

Mobile phase

Chloroform : Methanol : Water 40 : 10 : 1

Lipid of fungi (3)

Lipid in the adult tubular pores  
of *Fistulinaceae*



Stationary phase: CHROMAROD-SII

Mobile phase

Chloroform : Methanol : Water 40 : 10 : 1