TABLES AND GRAPHS OF RESULTS

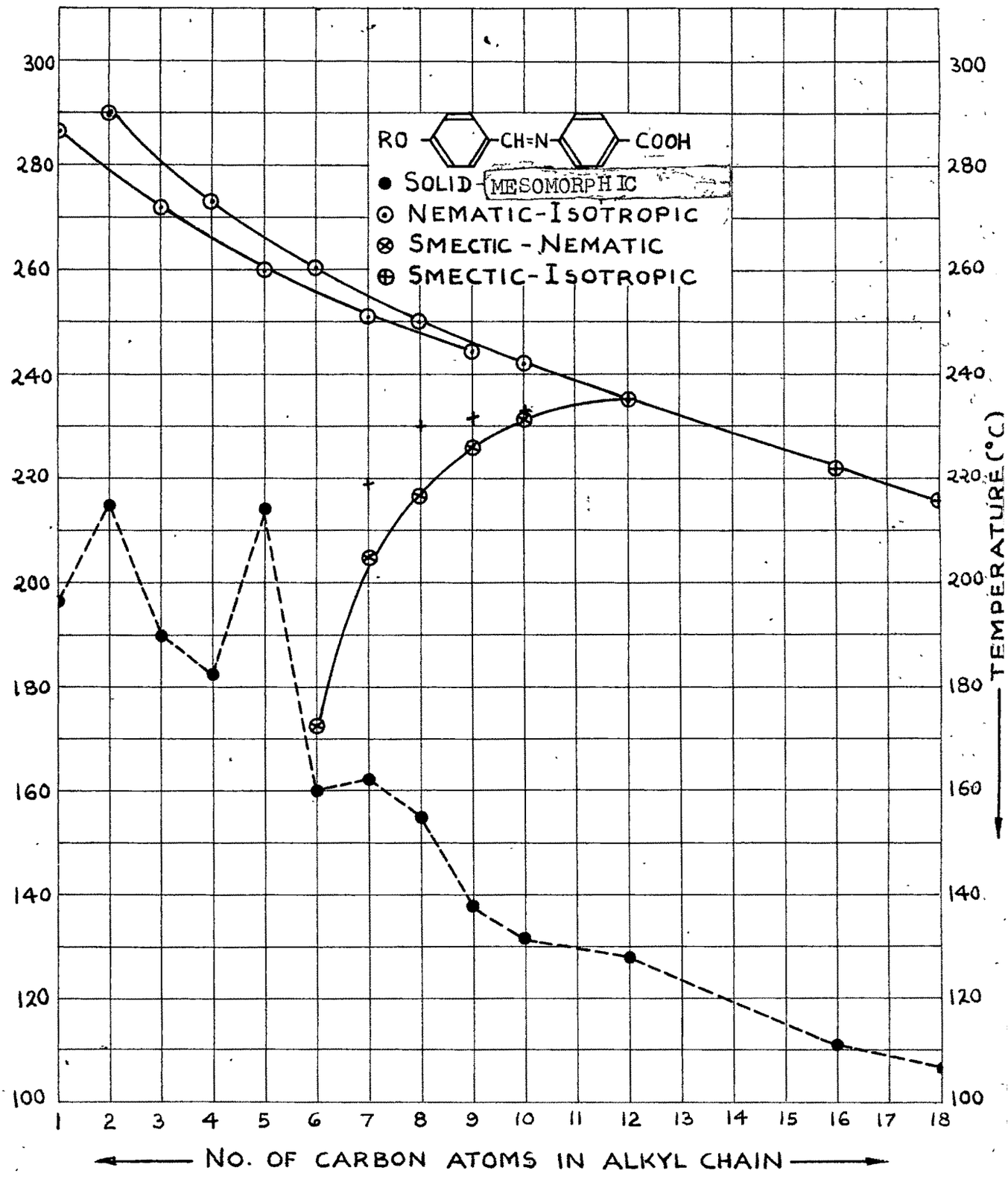
RO
CH=N
COOH
● SOLID
MESOMORPHIC
⊙ NEMATIC-ISOTROPIC
⊗ SMECTIC - NEMATIC
⊕ SMECTIC-ISOTROPIC
300
280
260
240
220
200
180
160
140
120
100
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
TEMPERATURE (°C)
NO. OF CARBON ATOMS IN ALKYL CHAIN

FIG. 4

TABLE - 11

Series I : p-n-Alkoxybenzylidene-p-aminobenzoic acids

Alkyl group	Temperature (°C) of transition to		
	Smectic	Nematic	Isotropic
1. Methyl	-	196.5	286.5
2. Ethyl	-	215.0	290.0
3. Propyl	-	190.0	272.0
4. Butyl	-	182.5	273.0
5. Amyl	-	214.0	260.0
6. Hexyl	160.0	172.5	260.5
7. Heptyl	162.0	205.0	251.0
8. Octyl	155.0	216.5	250.0
9. Nonyl	137.5	226.5	244.5
10. Decyl	131.5	231.5	242.0
11. Dodecyl	128.0	-	235.0
12. Hexadecyl	111.0	-	222.0
13. Octadecyl	106.5	-	216.0

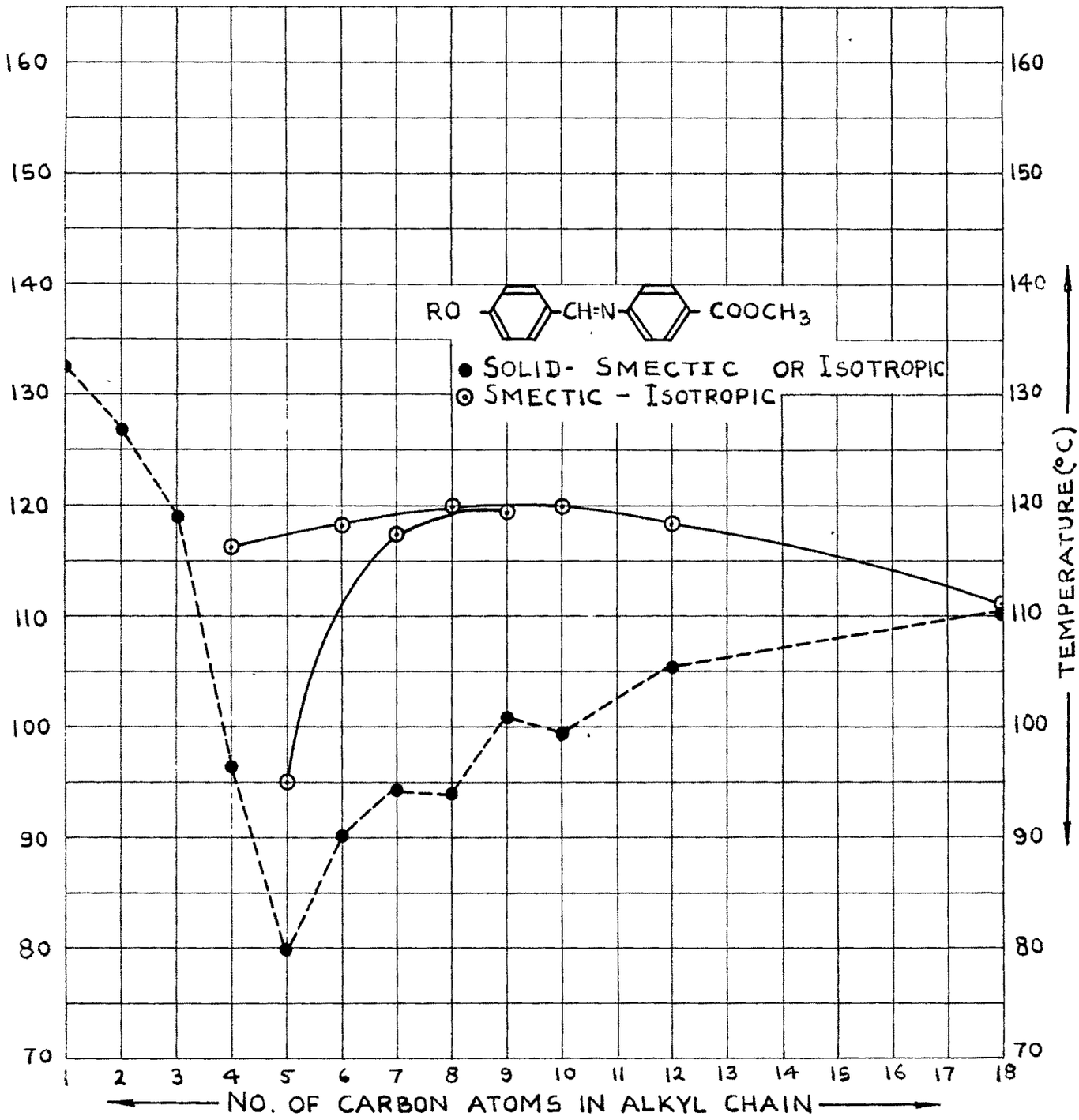
160
150
140
130
120
110
100
90
80
70
RO
CH=N
COOCH3
● SOLID- SMECTIC OR ISOTROPIC
⊙ SMECTIC - ISOTROPIC
TEMPERATURE (°C)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
NO. OF CARBON ATOMS IN ALKYL CHAIN

FIG. 5

TABLE - 12

Series II : Methyl p-n-alkoxybenzylidene-p-aminobenzoates

Alkyl group	Temperature (°C) of transition to	
	Smectic	Isotropic
1. Methyl	-	132.5
2. Ethyl	-	127.0
3. Propyl	-	119.0
4. Butyl	96.5	116.5
5. Amyl	79.5	95.0
6. Hexyl	90.0	118.5
7. Heptyl	94.5	117.5
8. Octyl	94.0	120.0
9. Nonyl	101.0	119.5
10. Decyl	99.5	120.0
11. Dodecyl	105.5	118.5
12. Octadecyl	110.5	111.0

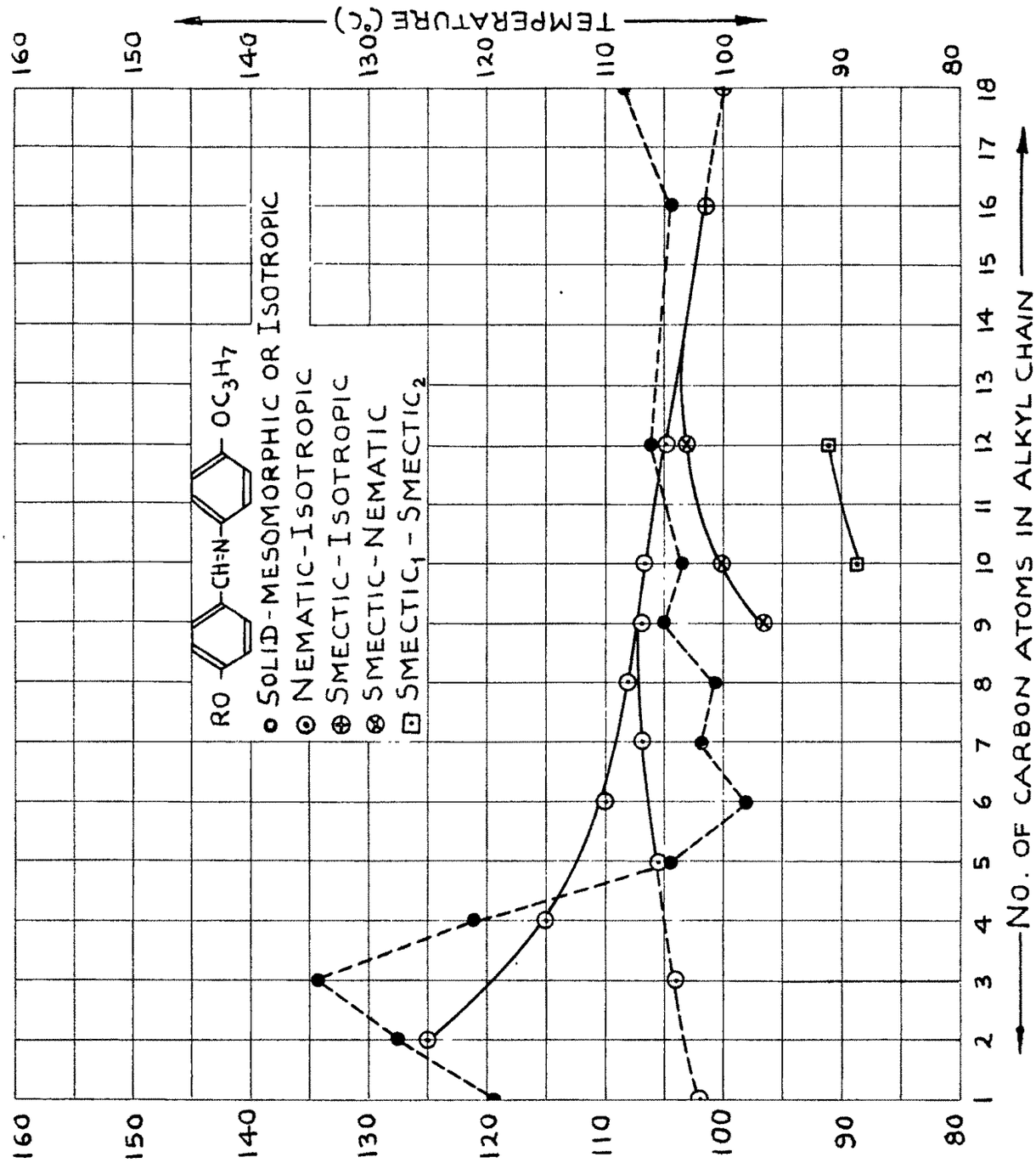
TEMPERATURE (°C)
NO. OF CARBON ATOMS IN ALKYL CHAIN
RO
CH=N
OC3H7
• SOLID-MESOMORPHIC OR ISOTROPIC
⊙ NEMATIC-ISOTROPIC
⊕ SMECTIC-ISOTROPIC
⊗ SMECTIC-NEMATIC
⊡ SMECTIC1 - SMECTIC2

FIG. 6

TABLE - 13

Series IIIa : p-n-Alkoxybenzylidene-p-n-propoxyanilines

Alkyl group	Temperature (°C) of transition to			
	$Smectic_2$	$Smectic_1$	Nematic	Isotropic
1. Methyl	-	-	(102.0)+	119.5
2. Ethyl	-	-	(125.0)	127.5
3. Propyl	-	-	(104.0)+	134.5
4. Butyl	-	-	(115.0)*	121.0
5. Amyl	-	-	104.5	105.5
6. Hexyl	-	-	98.0	110.0
7. Heptyl	-	-	102.0	107.0
8. Octyl	-	-	100.5	108.0
9. Nonyl	-	(96.5)	105.0	107.0
10. Decyl	(88.5)	(100.0)	103.5	106.7
11. Dodecyl	(91.0)	(103.0)	(104.7)	106.0
12. Hexadecyl	-	(101.5)	-	104.5
13. Octadecyl	-	(100.0)+	-	108.5

* Values in the parenthesis indicate monotropy.

\+ Values obtained by extrapolating the curve.

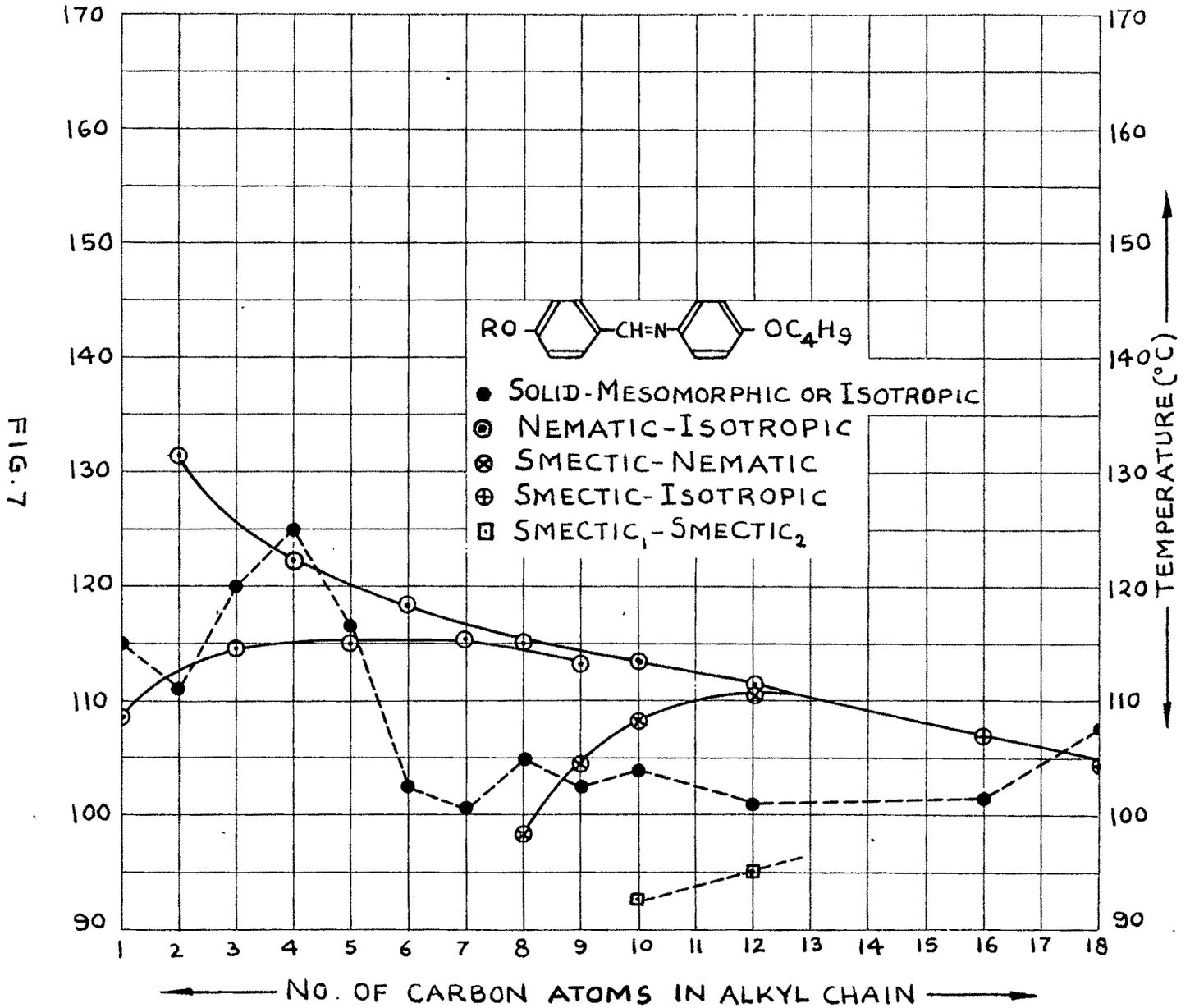
170
160
150
140
130
120
110
100
90
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
RO — CH=N — OC4H9
● SOLID-MESOMORPHIC OR ISOTROPIC
◉ NEMATIC-ISOTROPIC
⊗ SMECTIC-NEMATIC
⊕ SMECTIC-ISOTROPIC
⊡ SMECTIC1-SMECTIC2
TEMPERATURE (°C)
NO. OF CARBON ATOMS IN ALKYL CHAIN

FIG. 7

TABLE - 14

Series IIIb : p-n-Alkoxybenzylidene-p-n-butoxyanilines

Alkyl group	Temperature (°C) of transition to			
	$Smectic_2$	$Smectic_1$	Nematic	Isotropic
1. Methyl	-	-	(108.5)*	115.0
2. Ethyl	-	-	111.0	131.5
3. Propyl	-	-	(114.5)	120.0
4. Butyl	-	-	(122.0)	125.0
5. Amyl	-	-	(115.0)	116.5
6. Hexyl	-	-	102.5	118.5
7. Heptyl	-	-	100.5	115.5
8. Octyl	-	(98.5)	105.0	115.0
9. Nonyl	-	102.0	104.5	113.5
10. Decyl	(92.5)	104.0	108.5	113.0
11. Dodecyl	(95.0)	101.0	111.0	111.5
12. Hexadecyl	-	101.5	-	107.0
13. Octadecyl	-	(104.5)	-	107.5

* Values in the parenthesis indicate monotropy.

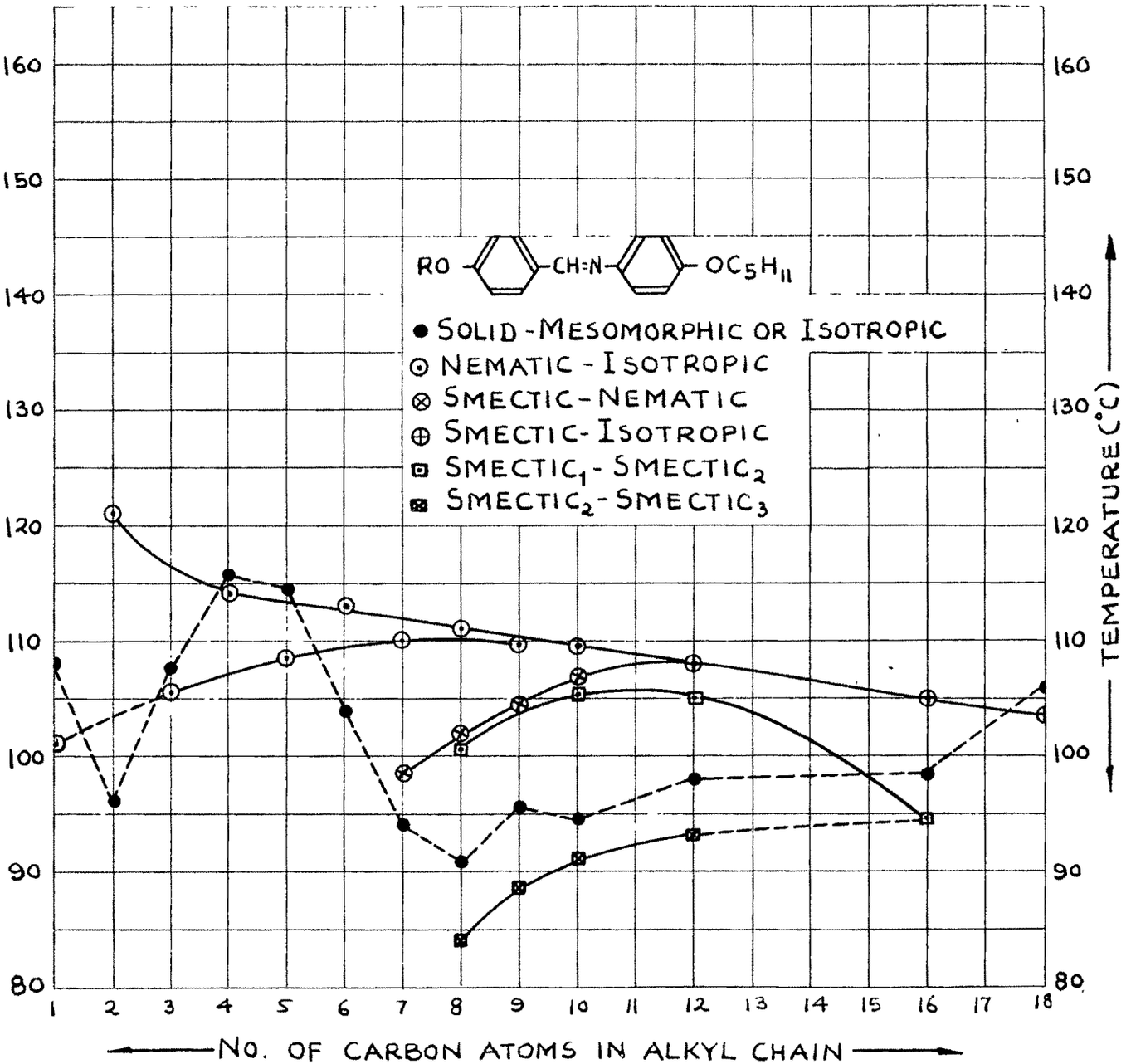
RO
CH=N
OC5H11
● SOLID - MESOMORPHIC OR ISOTROPIC
⊙ NEMATIC - ISOTROPIC
⊗ SMECTIC - NEMATIC
⊕ SMECTIC - ISOTROPIC
⊡ SMECTIC1 - SMECTIC2
⊠ SMECTIC2 - SMECTIC3
160
150
140
130
120
110
100
90
80
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
NO. OF CARBON ATOMS IN ALKYL CHAIN
TEMPERATURE (°C)

FIG. 8

TABLE - 15

Series IIIc : p-n-Alkoxybenzylidene-p-n-amyloxyanilines

Alkyl group	Temperature (°C) of transition to				
	Smectic$_3$	Smectic$_2$	Smectic$_1$	Nematic	Isotropic
1. Methyl	-	-	-	(101.0)+	108.0
2. Ethyl	-	-	-	96.0	121.0
3. Propyl	-	-	-	(105.5)*	107.5
4. Butyl	-	-	-	(114.0)	115.5
5. Amyl	-	-	-	(108.5)+	114.5
6. Hexyl	-	-	-	104.0	113.0
7. Heptyl	-	-	94.0	98.5	110.0
8. Octyl	(84.0)	91.0	100.5	102.0	111.2
9. Nonyl	(88.5)	-	95.5	104.5	109.7
10. Decyl	(91.0)	94.5	105.5	107.0	109.5
11. Dodecyl	(93.0)	98.0	105.0	-	108.0
12. Hexadecyl	-	(94.5)	98.5	-	105.0
13. Octadecyl	-	-	(103.5)	-	106.0

* Values in the parenthesis indicate monotropy.

\+ Values obtained by extrapolating the curve.

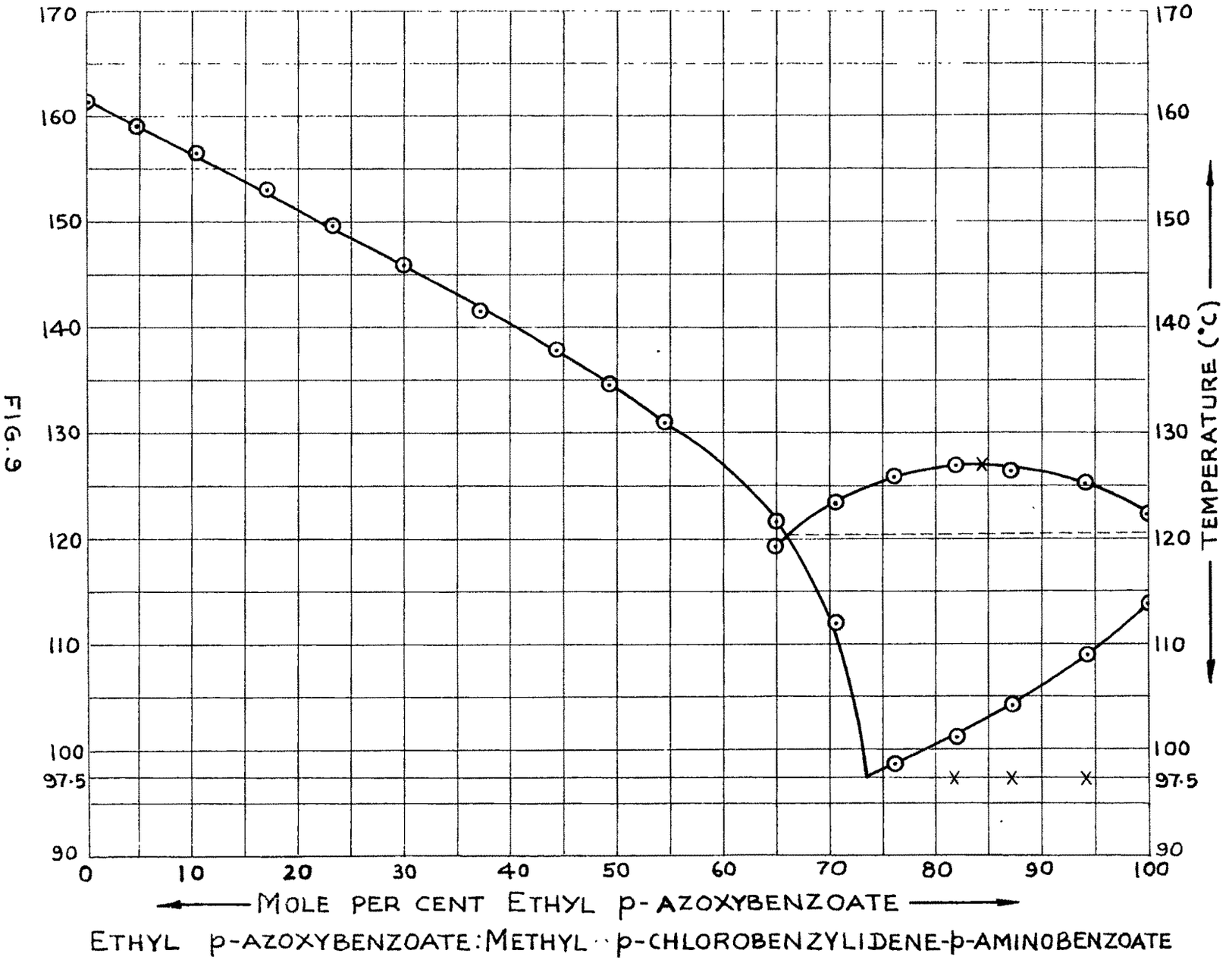
170
160
150
140
130
120
110
100
97·5
90
0
10
20
30
40
50
60
70
80
90
100
TEMPERATURE (°C)
MOLE PER CENT ETHYL p-AZOXYBENZOATE
ETHYL p-AZOXYBENZOATE:METHYL p-CHLOROBENZYLIDENE-p-AMINOBENZOATE

FIG. 9

TABLE - 16

Ethyl p-azoxybenzoate : Methyl p-chlorobenzylidene-p-aminobenzoate

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.25	94.26	109.0	125.5
90.25	87.04	104.5	126.5
85.30	82.31	101.5	127.0
79.70	75.84	99.0	126.0
75.20	70.66	112.0	123.5
70.30	65.06	(119.5)*	121.5
60.20	54.59	-	131.0
55.05	49.33	-	134.5
49.90	44.26	-	138.0
42.65	37.08	-	141.5
34.75	29.95	-	146.0
27.50	23.28	-	149.5
20.75	17.20	-	153.0
12.65	10.33	-	156.5
5.70	4.56	-	159.0
0.00	0.00	-	161.5

Sintering point : 97.5°C.

* Values in the parenthesis in tables 16 to 36 indicate monotropy.

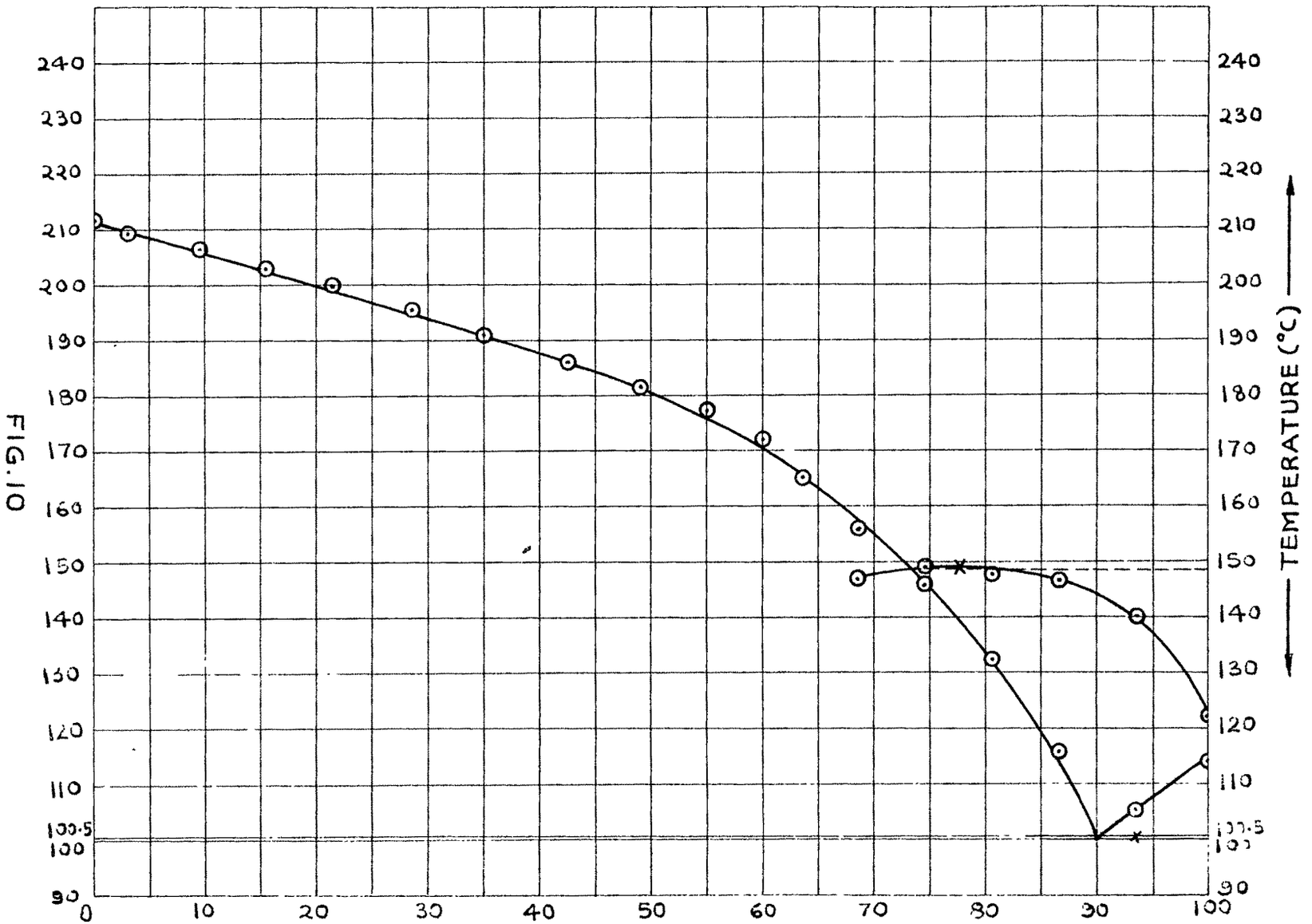

FIG. 10

ETHYL p-AZOXYBENZOATE : METHYL p-NITROBENZYLIDENE-p-AMINOBENZOATE

TABLE - 17

Ethyl p-azoxybenzoate: Methyl p-nitrobenzylidene-p-aminobenzoate

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.90	93.33	105.5	140.0
90.05	86.74	116.0	146.5
85.10	80.71	132.5	148.0
80.00	74.63	146.0	149.0
74.75	68.42	(147.0)	156.0
70.35	63.46	-	165.0
64.90	57.75	-	172.0
59.85	52.41	-	177.5
55.25	47.50	-	181.5
50.00	42.40	-	186.0
42.40	35.05	-	191.0
35.05	28.51	-	195.5
27.35	21.68	-	200.0
20.20	15.68	-	203.0
12.35	9.40	-	206.5
4.25	3.18	-	209.5
0.00	0.00	-	211.5

Sintering point : 100.5°C.

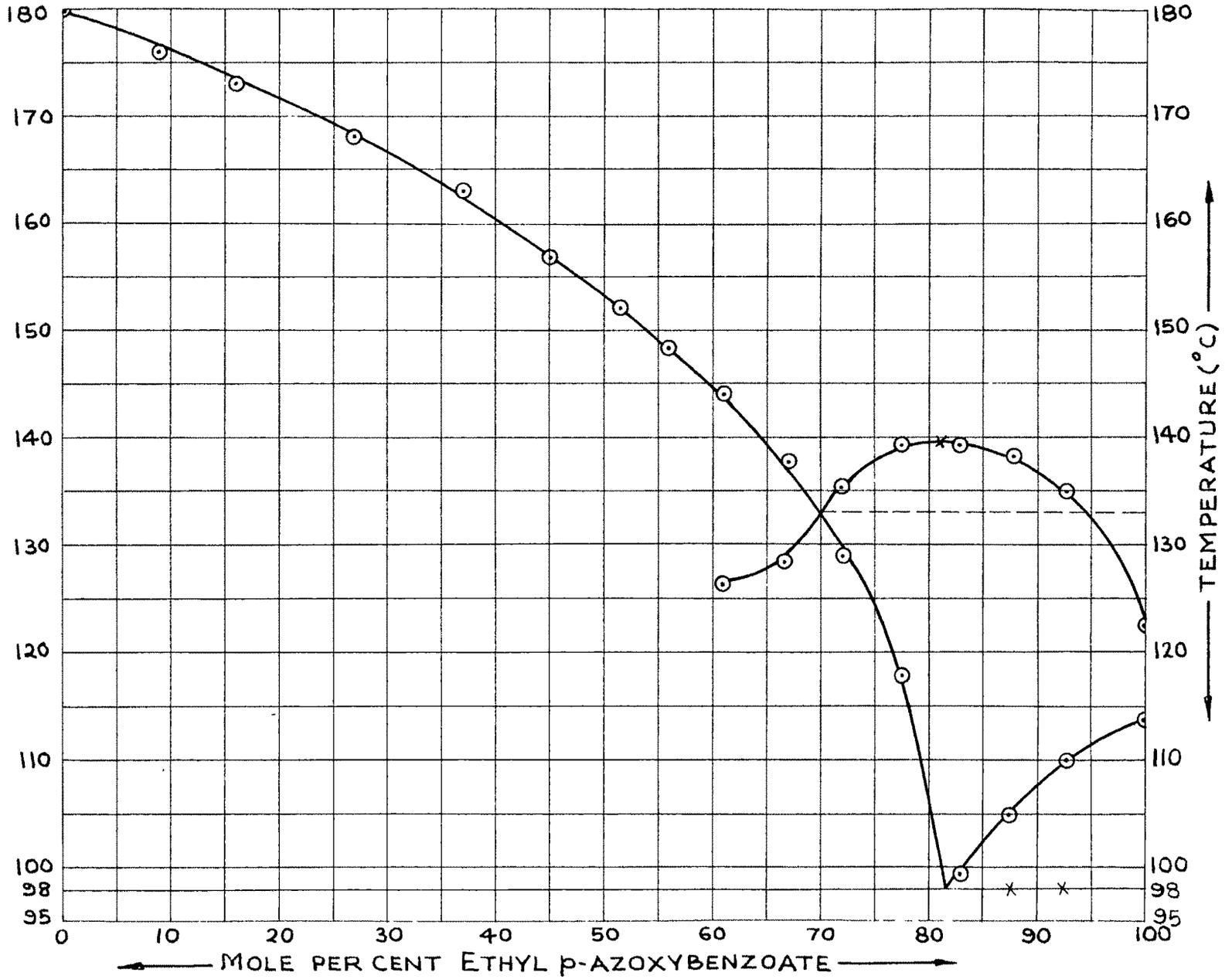

FIG. 11

ETHYL p-AZOXYBENZOATE : ETHYL p-NITROBENZYLIDENE-p-AMINOBENZOATE.

TABLE - 18

Ethyl p-azoxybenzoate : Ethyl p-nitrobenzylidene-p-aminobenzoate

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.75	92.60	110.0	135.0
89.30	87.80	105.0	138.5
84.75	82.73	99.5	139.5
80.25	77.45	118.0	139.5
74.75	71.97	129.0	135.5
70.00	67.10	(128.5)	138.0
65.60	61.16	(126.5)	144.0
59.40	55.88	-	148.5
55.20	51.35	-	152.0
50.00	44.99	-	157.0
40.70	37.07	-	163.0
29.80	26.94	-	168.0
19.60	16.15	-	173.0
10.20	9.20	-	176.0
00.00	0.00	-	180.0

Sintering point : 98.0°C.

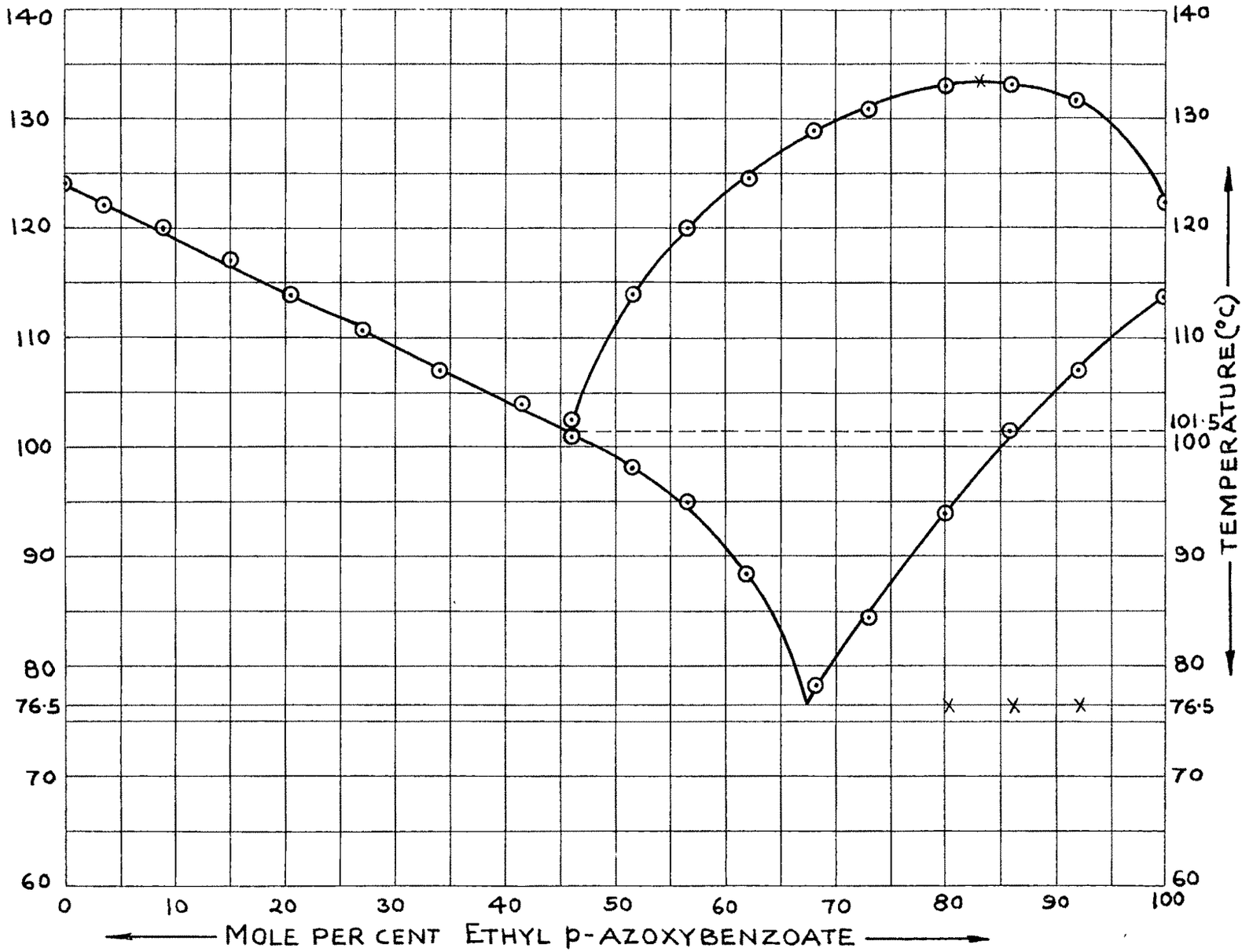
140
130
120
110
100
90
80
76·5
70
60
0
10
20
30
40
50
60
70
80
90
100
101·5
TEMPERATURE (°C)
← MOLE PER CENT ETHYL p-AZOXYBENZOATE →
ETHYL p-AZOXYBENZOATE: p- NITROBENZYLIDENE-p- TOLUIDINE

FIG. 12

TABLE - 19

Ethyl p-azoxybenzoate : p-Nitrobenzylidene-p-toluidine.

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.80	91.91	107.0	132.0
90.40	86.14	101.5	133.5
85.45	80.19	94.0	133.0
79.60	73.07	84.5	131.0
75.80	67.89	78.0	129.0
69.85	61.83	88.5	124.5
64.90	56.65	95.0	120.0
60.25	51.40	98.0	114.0
54.55	46.08	101.0	102.5
50.25	41.35	-	104.0
42.70	34.10	-	107.0
34.40	27.03	-	111.0
27.00	20.52	-	114.0
20.15	15.07	-	117.0
12.15	8.23	-	120.0
5.05	3.60	-	122.0
0.00	0.00	-	124.0

Sintering point : 76.5°C.

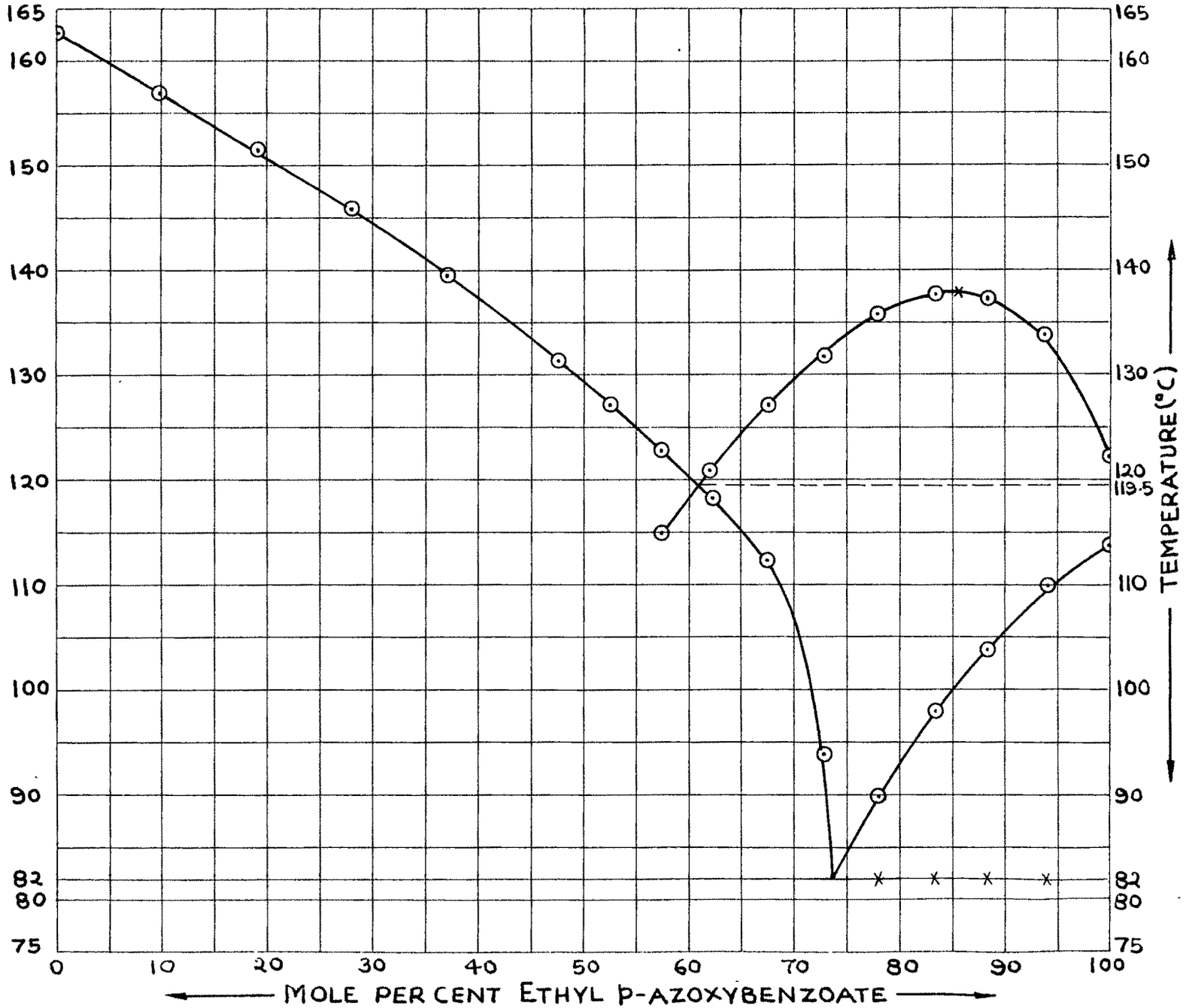
165
160
150
140
130
120
110
100
90
82
80
75
119.5
0
10
20
30
40
50
60
70
80
90
100
TEMPERATURE (°C)
MOLE PER CENT ETHYL P-AZOXYBENZOATE
ETHYL-P-AZOXYBENZOATE : P-NITROBENZYLIDENE-P-BROMOANILINE

FIG. 13

TABLE - 20

Ethyl p-azoxybenzoate : p-Nitrobenzylidene-p-bromoaniline

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.25	94.06	110.0	134.0
89.60	88.47	104.0	137.5
85.10	83.75	98.0	138.0
79.90	78.16	90.0	136.0
69.85	67.61	112.5	127.5
64.50	62.34	118.5	121.0
60.50	57.36	(115.0)	123.0
54.75	52.66	-	127.0
50.55	47.46	-	131.5
39.75	37.04	-	139.5
30.40	27.89	-	146.0
21.00	19.13	-	151.5
10.70	9.58	-	157.0
00.00	0.00	-	163.0

Sintering point : 82.0°C.

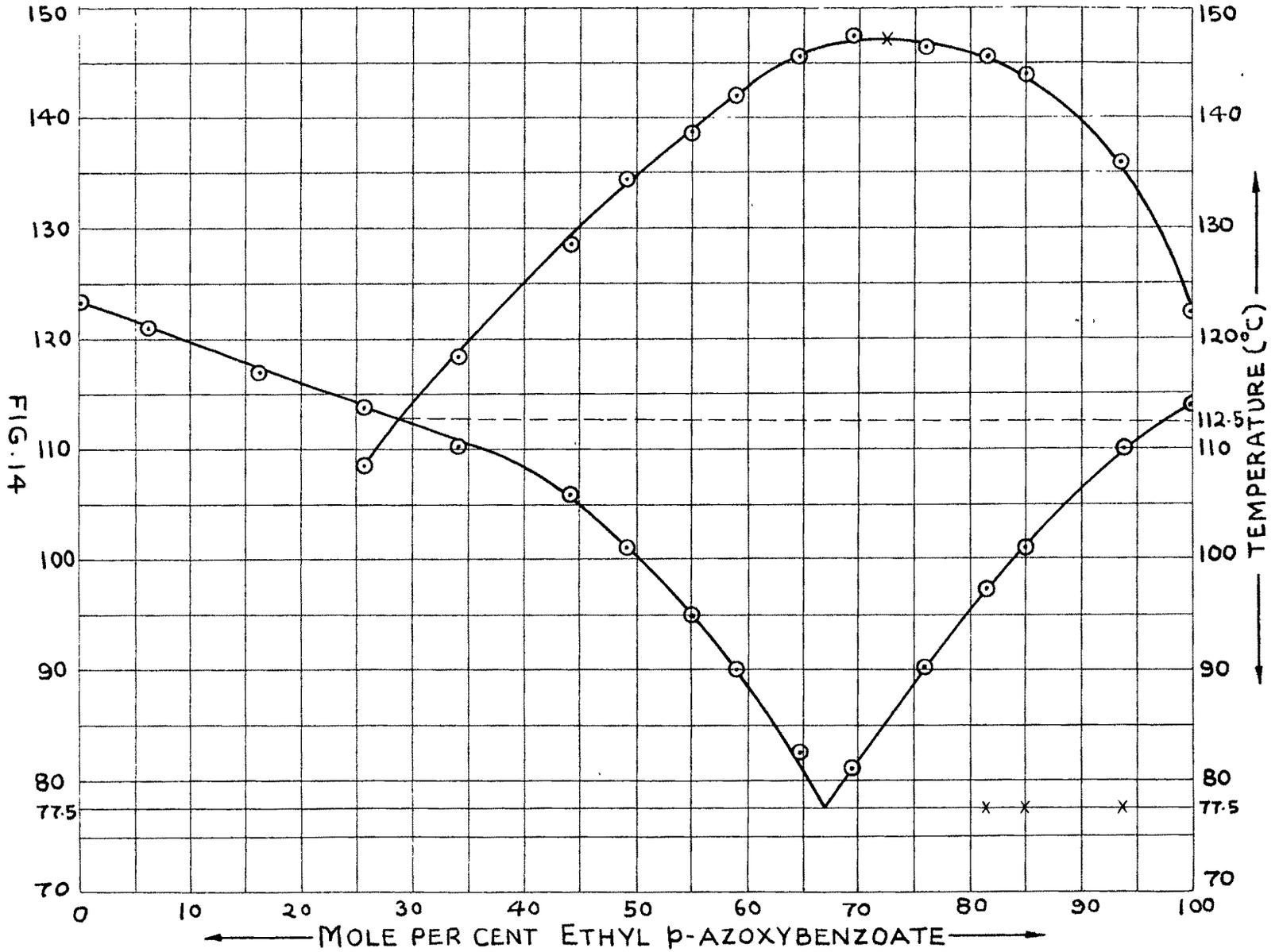

FIG. 14

ETHYL p-AZOXYBENZOATE: p-NITROBENZYLIDENE-p-PHENETIDINE.

TABLE - 21

Ethyl p-azoxybenzoate : p-Nitrobenzylidene-p-phenetidine.

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.10	93.76	110.0	136.0
91.85	85.00	101.0	144.0
84.75	81.79	97.5	145.5
80.05	75.97	90.5	146.5
75.60	69.74	81.0	147.5
64.60	59.30	90.0	142.0
60.80	54.92	95.0	138.5
54.55	49.17	101.5	134.5
50.15	44.18	106.0	128.5
39.60	34.26	110.5	118.5
30.35	25.59	(108.5)	114.0
20.00	16.39	-	117.0
9.60	6.22	-	121.0
0.00	0.00	-	123.5

Sintering point : 77.5°C.

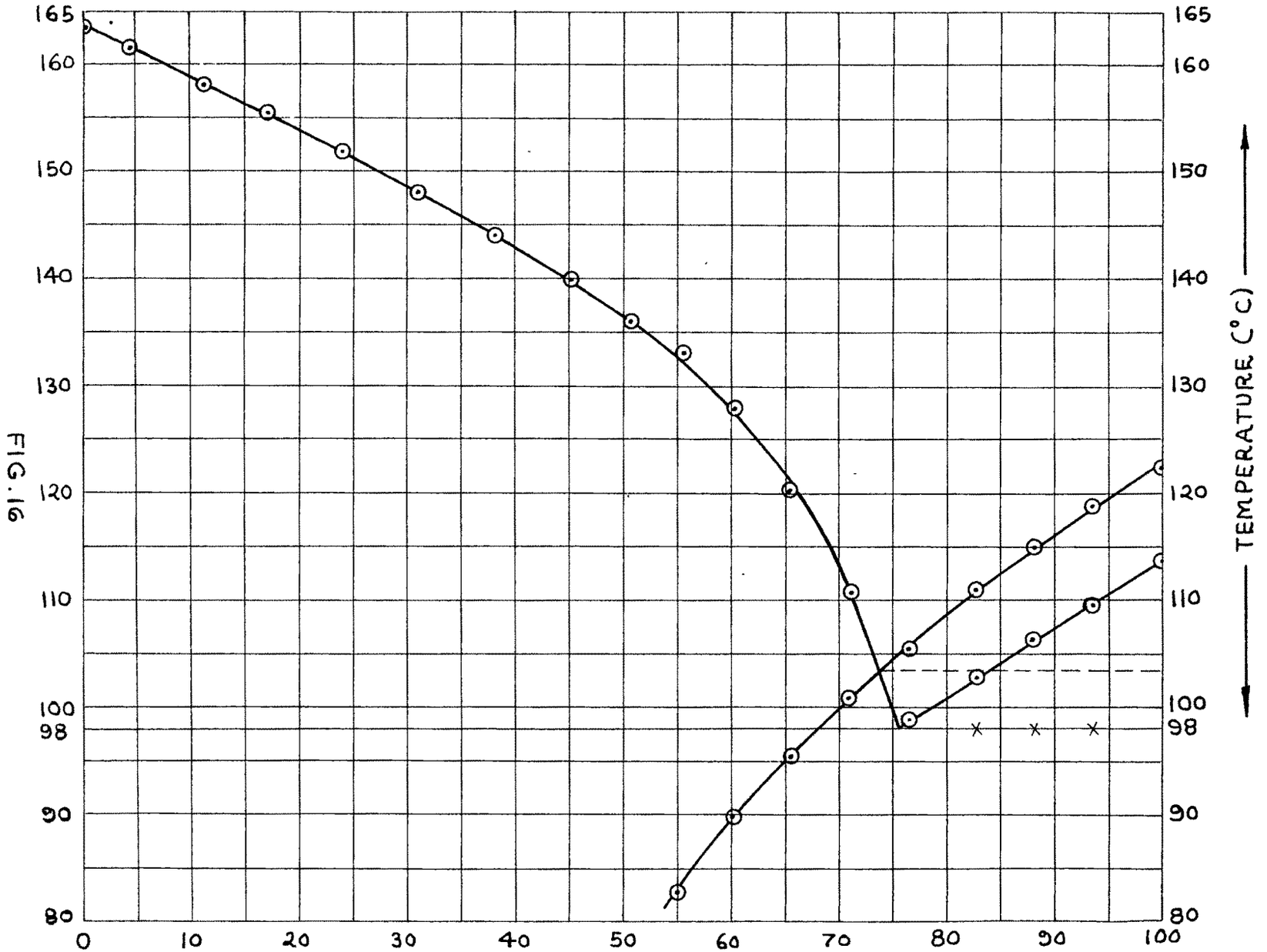

FIG. 16

ETHYL p-AZOXYBENZOATE : METHYL p-DIMETHYLAMINOBENZYLIDENE-p-AMINOBENZOATE

TABLE - 22

Ethyl p-azoxybenzoate : Methyl p-anisylidene-p-aminobenzoate

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
99.31	93.37	109.5	120.0
94.43	86.32	104.0	117.5
85.35	81.08	99.0	115.5
79.66	74.24	93.0	112.5
75.39	70.41	90.0	110.5
69.50	65.00	84.0	108.0
65.25	59.60	86.5	104.0
56.84	50.60	96.5	99.0
52.50	45.98	(95.5)	100.5
41.46	35.47	-	111.0
37.10	31.48	-	114.0
31.00	25.66	-	118.0
26.65	20.29	-	121.0
20.50	16.63	-	123.5
14.25	11.56	-	126.5
11.50	9.28	-	128.0
00.00	0.00	-	132.5

Sintering point : 82.0°C.

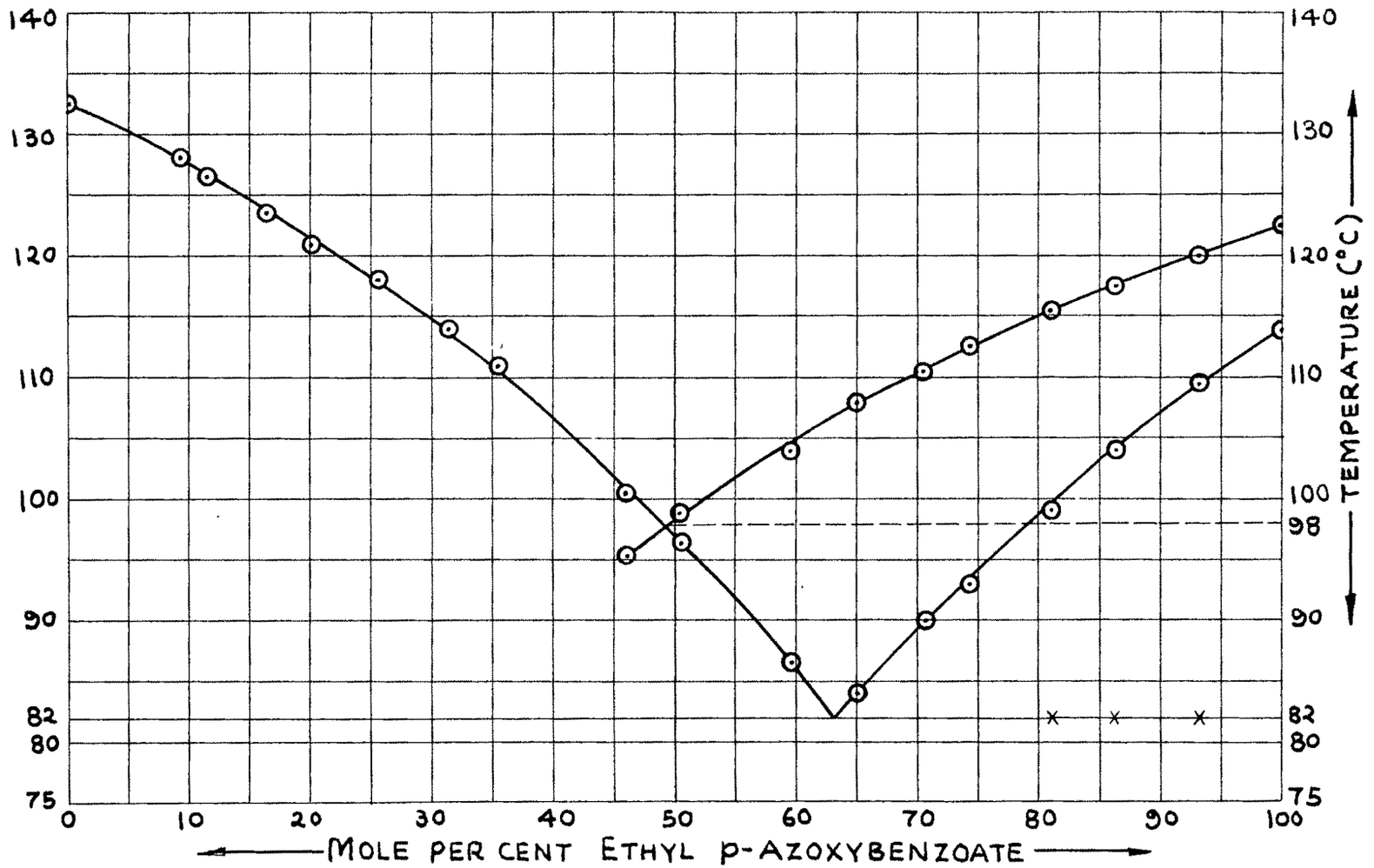

FIG. 15

ETHYL p-AZOXYBENZOATE : METHYL p-ANISYLIDENE-p-AMINOBENZOATE.

TABLE - 23

Ethyl p-azoxybenzoate : Methyl p-dimethylaminobenzylidene-p-aminobenzoate.

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.06	93.35	109.5	119.0
90.01	87.70	106.5	115.0
85.00	82.62	103.0	111.0
80.40	76.58	99.0	105.5
75.40	71.14	(101.0)	111.0
70.05	65.61	(95.5)	102.5
65.55	60.36	(90.0)	128.0
60.55	55.58	(89.0)	133.0
55.60	50.86	(<85.0)	136.0
50.00	45.30	-	140.0
42.55	37.86	-	144.0
35.10	30.81	-	148.0
27.55	23.89	-	152.0
19.85	16.94	-	155.5
12.90	10.85	-	158.0
5.05	4.18	-	161.5
0.00	0.00	-	163.5

Sintering point : 98.0°C.

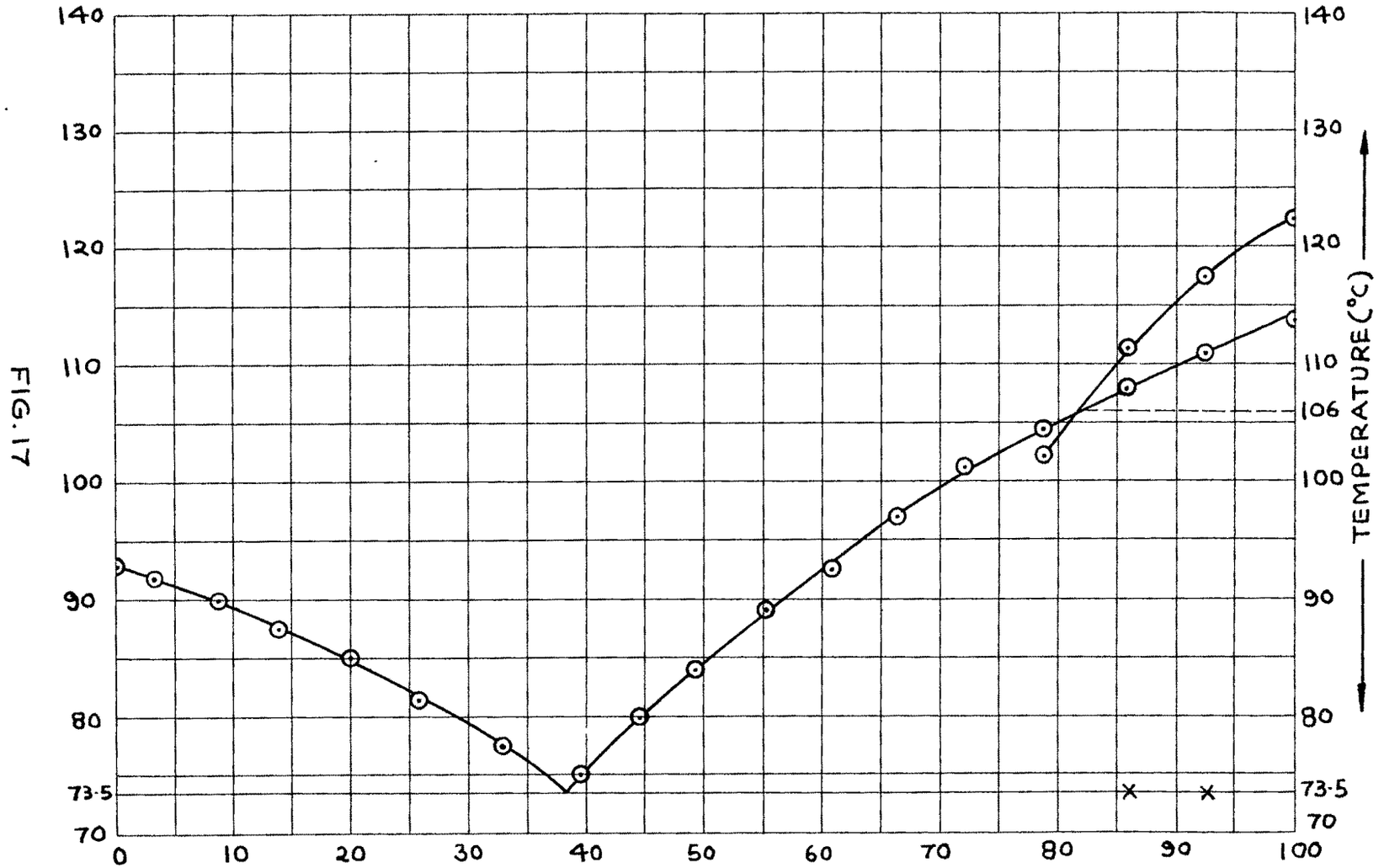

FIG. 17

ETHYL p-AZOXYBENZOATE : p-ANISYLIDENE-p-TOLUIDINE .

TABLE - 24

Ethyl p-azoxybenzoate : p-Anisylidene-p-toluidine

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.65	92.43	111.0	117.5
90.25	86.04	108.0	111.5
85.00	78.81	(102.5)	104.5
80.45	72.31	-	101.5
74.75	66.56	-	97.0
70.15	60.68	-	92.5
65.40	55.31	-	89.0
60.45	49.44	-	84.0
55.10	44.58	-	80.0
49.85	39.54	-	75.0
42.90	33.02	-	77.5
34.50	25.74	-	81.5
27.40	20.04	-	85.0
20.00	14.08	-	87.5
12.65	8.71	-	90.0
4.90	3.28	-	92.0
0.00	0.00	-	93.0

Sintering point : 73.5°C.

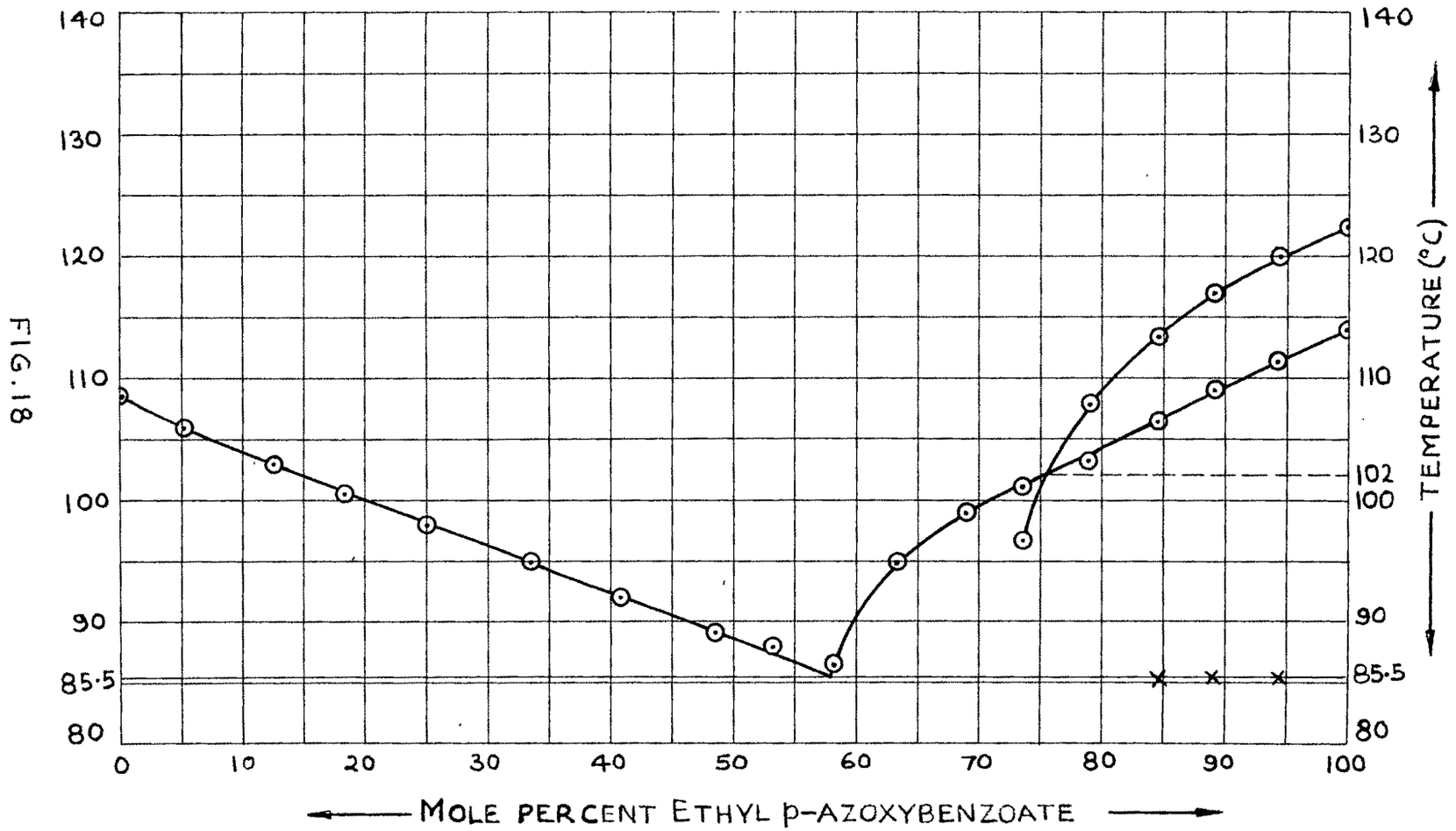

FIG. 18

ETHYL p-AZOXYBENZOATE : p-ACETOXYBENZYLIDENE-p- BROMOANILINE .

TABLE - 25

Ethyl p-azoxybenzoate : p-Acetoxybenzylidene-p-bromoaniline

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.15	94.26	111.5	120.0
90.35	88.90	109.0	117.0
85.35	84.47	106.5	113.5
79.65	78.98	103.0	108.0
74.85	73.45	(96.5)	101.0
70.60	69.15	-	99.0
65.40	63.25	-	95.0
60.10	58.32	-	86.5
54.70	53.32	-	87.5
50.50	48.56	-	89.0
42.50	40.88	-	92.0
35.55	33.51	-	95.0
26.70	25.37	-	98.0
19.80	18.26	-	100.5
13.40	12.53	-	103.0
5.60	5.19	-	106.0
0.00	0.00	-	108.5

Sintering point : 85.5°C.

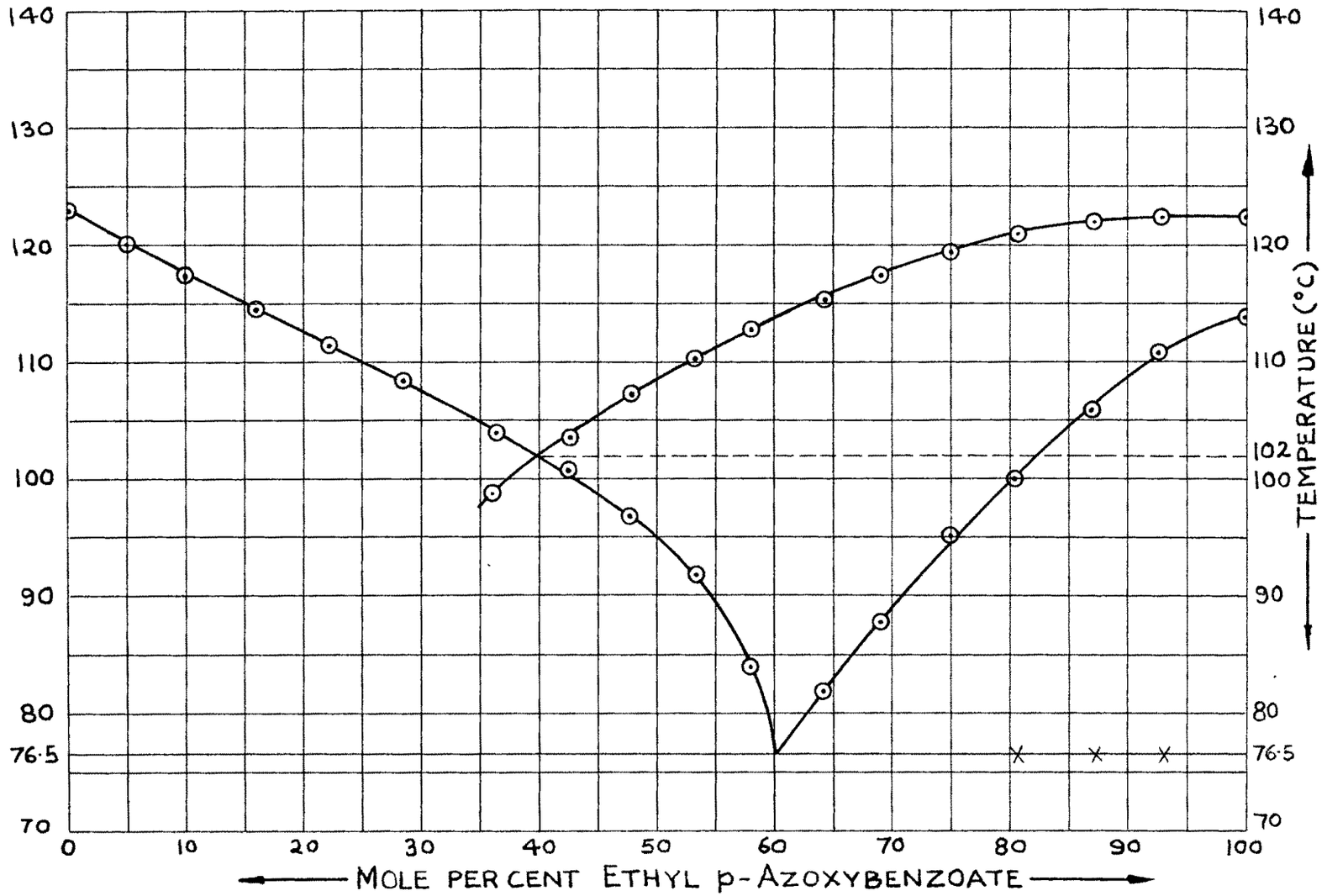

FIG. 19

ETHYL p-AZOXYBENZOATE : p-CHLOROBENZYLIDENE-p-PHENETIDINE

TABLE - 26

Ethyl p-azoxybenzoate : p-chlorobenzylidene-p-phenetidine

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.80	92.83	111.0	122.5
90.40	87.28	106.0	122.0
84.55	80.56	100.0	121.0
80.55	75.21	95.5	119.5
75.35	69.23	88.0	117.5
70.85	64.27	82.0	115.5
64.50	58.13	84.0	113.0
59.70	53.25	92.0	110.5
54.85	47.73	97.0	107.5
49.50	42.52	101.0	103.5
43.00	36.34	(99.0)	104.0
34.35	28.62	-	108.5
27.25	22.15	-	111.5
19.90	15.93	-	114.5
12.75	9.98	-	117.5
6.55	5.07	-	120.0
0.00	0.00	-	123.0

Sintering point : 76.5°C.


130
120
110
100
90
80
74
70
60
105·5
0
10
20
30
40
50
60
70
80
90
100
TEMPERATURE (°C)
MOLE PER CENT ETHYL p-AZOXYBENZOATE
ETHYL p-AZOXYBENZOATE : p-METHYLBENZYLIDENE-p-TOLUIDINE

FIG. 20

TABLE - 27

Ethyl p-azoxybenzoate : p-Methylbenzylidene-p-toluidine

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.70	91.05	108.0	113.0
90.00	84.76	105.0	106.5
84.65	77.23	(98.5)	103.0
79.75	70.50	-	100.5
75.10	64.06	-	96.5
70.05	59.26	-	93.5
64.85	53.10	-	90.0
60.40	48.29	-	87.0
55.25	43.07	-	81.0
49.80	37.40	-	75.0
40.80	29.60	-	78.0
29.80	20.57	-	83.0
19.70	13.11	-	86.5
10.00	6.35	-	90.5
5.10	3.28	-	92.0
0.00	0.00	-	93.5

Sintering point : 74.0°C.


160
150
140
130
120
110
100
99
90
0
10
20
30
40
50
60
70
80
90
100
TEMPERATURE (°C)
104
MOLE · PER CENT ETHYL p-AZOXYBENZOATE
ETHYL p-AZOXYBENZOATE : p-DIMETHYLAMINOBENZYLIDENE-p-CHLOROANILINE

FIG. 21

TABLE - 28

Ethyl p-azoxybenzoate : p-Dimethylaminobenzylidene-p-chloroaniline

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (^{0}C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.65	92.34	109.5	118.5
89.85	86.50	106.5	115.0
85.56	81.08	103.0	112.0
80.50	74.27	100.0	108.5
75.10	69.66	103.0	105.0
70.50	63.57	(100.0)	109.0
65.75	58.75	(96.0)	113.5
59.55	53.02	-	118.0
55.50	48.43	-	122.0
50.45	43.90	-	126.5
39.45	33.11	-	133.0
30.20	24.57	-	138.0
20.15	15.93	-	143.0
10.05	7.73	-	147.5
0.00	0.00	-	152.0

Sintering point : 99.0^{0}C.

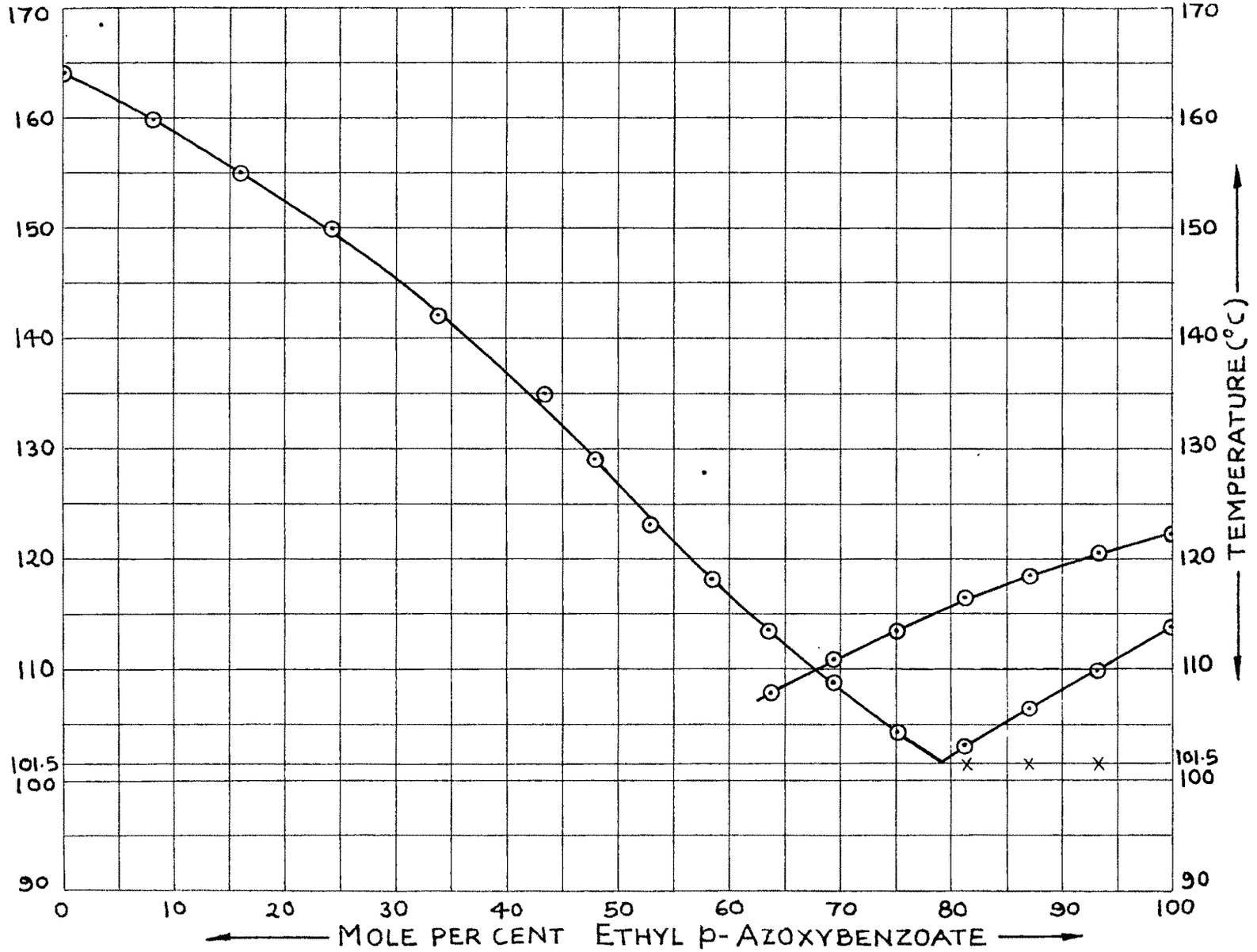
170
160
150
140
130
120
110
101.5
100
90
0
10
20
30
40
50
60
70
80
90
100
TEMPERATURE (°C)
MOLE PER CENT ETHYL p-AZOXYBENZOATE
ETHYL p-AZOXYBENZOATE : p-CHLOROBENZYLIDENE-p-DIMETHYAMINOANILINE

FIG. 22

TABLE - 29

Ethyl p-azoxybenzoate : p-Chlorobenzylidene-p-dimethylaminoaniline

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (^{o}C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.90	93.24	110.0	120.5
90.45	87.18	106.5	118.5
85.55	81.21	103.0	116.5
79.85	75.23	104.5	113.5
74.85	69.77	109.0	111.0
69.40	63.83	(108.0)	113.5
64.80	58.45	-	118.0
60.55	53.11	-	123.0
54.90	48.18	-	129.0
50.00	43.27	-	135.0
40.20	33.77	-	142.0
29.85	24.40	-	150.0
20.05	16.03	-	155.0
10.50	8.13	-	160.0
00.00	0.00	-	164.0

Sintering point : 101.5^{o}C.

FIG. 23

ETHYL p-AZOXYBENZOATE : p-CHLOROBENZYLIDENE-p-TOLUIDINE

TABLE - 30

Ethyl p-azoxybenzoate : p-Chlorobenzylidene-p-toluidine

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (^{o}C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.45	91.56	108.5	119.5
90.70	84.63	103.0	115.5
85.35	79.21	98.5	111.5
80.20	72.57	93.0	107.0
74.80	66.65	88.5	101.0
70.20	60.68	90.0	94.0
65.20	56.71	(87.5)	92.0
59.75	49.53	-	96.0
55.95	46.08	-	98.0
50.30	40.47	-	102.5
40.60	31.27	-	108.5
31.15	22.97	-	114.0
19.10	13.56	-	119.0
11.40	9.34	-	122.5
00.00	0.00	-	128.0

Sintering point : 86.5^{o}C.

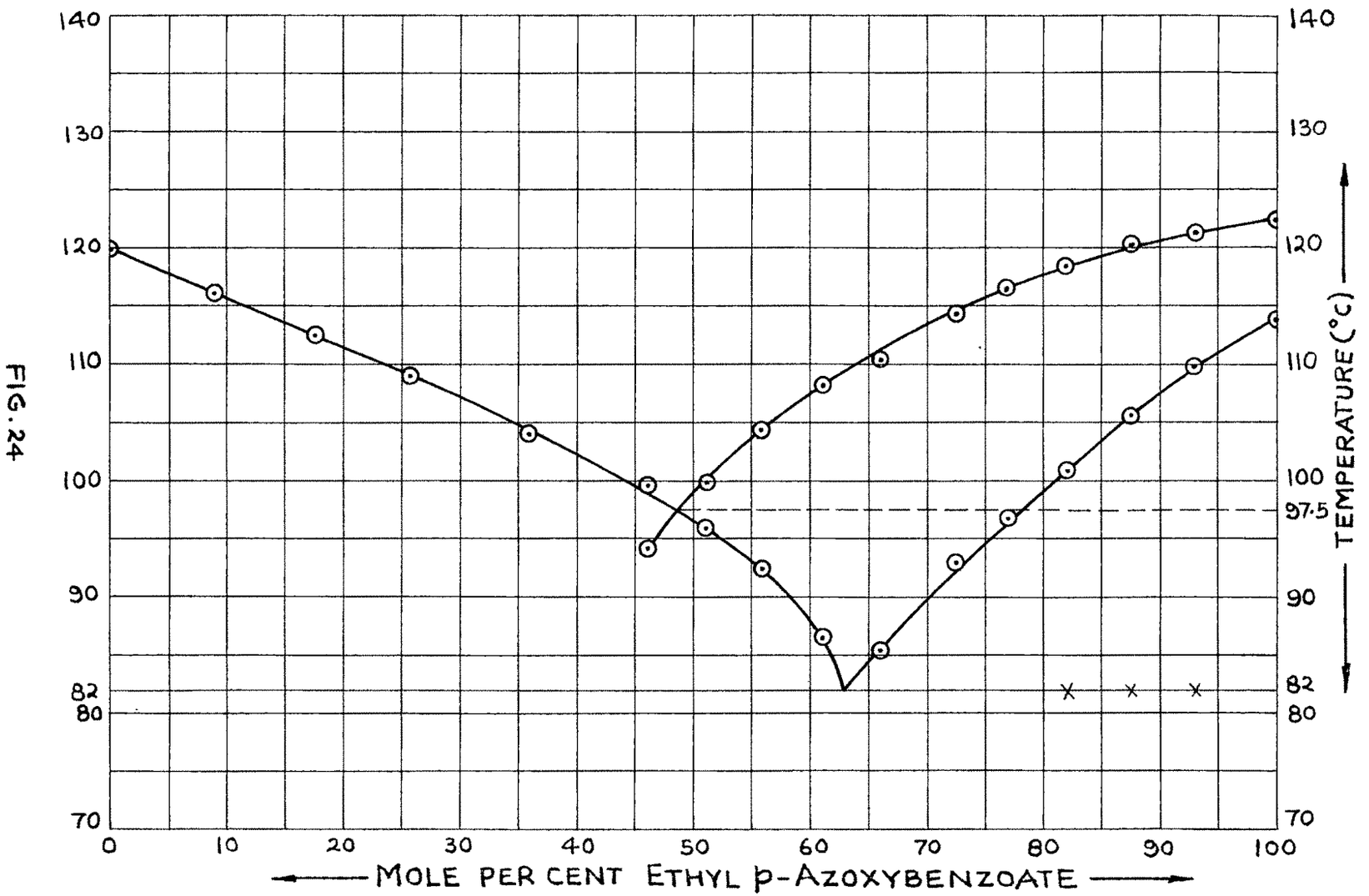

FIG. 24

ETHYL p-AZOXYBENZOATE : ETHYL p-CHLOROBENZYLIDENE-p-AMINOBENZOATE.

TABLE - 31

Ethyl p-azoxybenzoate : Ethyl p-chlorobenzylidene-p-aminobenzoate

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (^{o}C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.85	93.22	110.0	121.5
90.80	87.66	105.5	120.0
85.85	82.13	101.0	118.5
80.55	76.78	97.0	116.5
75.40	72.44	93.0	114.5
71.00	66.01	85.5	110.5
65.40	61.06	86.5	108.5
60.45	55.94	92.5	104.5
55.85	51.04	96.0	100.0
50.50	45.84	(94.0)	99.5
40.35	36.11	-	104.0
29.65	26.22	-	109.0
20.60	17.67	-	112.5
10.50	8.93	-	116.0
00.00	0.00	-	120.0

Sintering point : 82.0^{o}C.

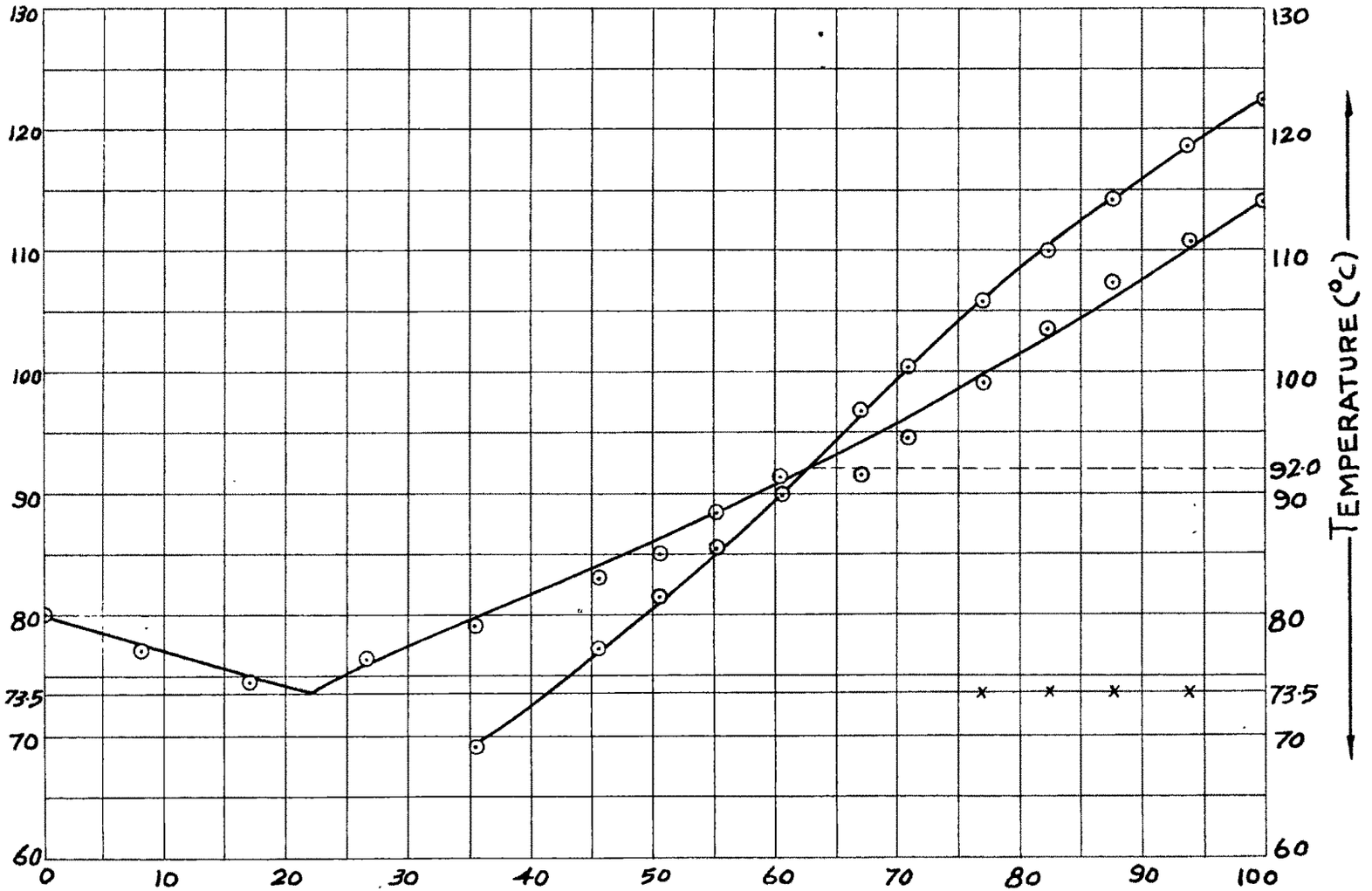
130
120
110
100
90
80
73·5
70
60
0
10
20
30
40
50
60
70
80
90
100
92·0
TEMPERATURE (°C)
MOLE PER CENT ETHYL p-AZOXYBENZOATE
ETHYL p-AZOXYBENZOATE : ETHYL p-ANISYLIDENE-p-AMINOBENZOATE

FIG. 25

TABLE - 32

Ethyl p-azoxybenzoate : Ethyl p-anisylidene-p-aminobenzoate

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (^{o}C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
95.15	93.74	111.0	118.5
90.55	87.68	107.5	114.0
85.15	82.30	103.5	110.0
79.85	76.81	99.0	106.0
75.35	71.14	94.5	100.5
69.75	67.07	91.5	97.0
64.90	60.50	(90.0)	91.5
59.60	55.25	(85.5)	88.5
55.50	50.62	(81.5)	85.0
50.35	45.63	(77.0)	83.0
40.00	35.41	(69.0)	79.0
30.85	26.61	-	76.5
19.85	16.94	-	74.5
9.90	8.32	-	77.0
0.00	0.00	-	80.0

Sintering point : 73.5^{o}C.

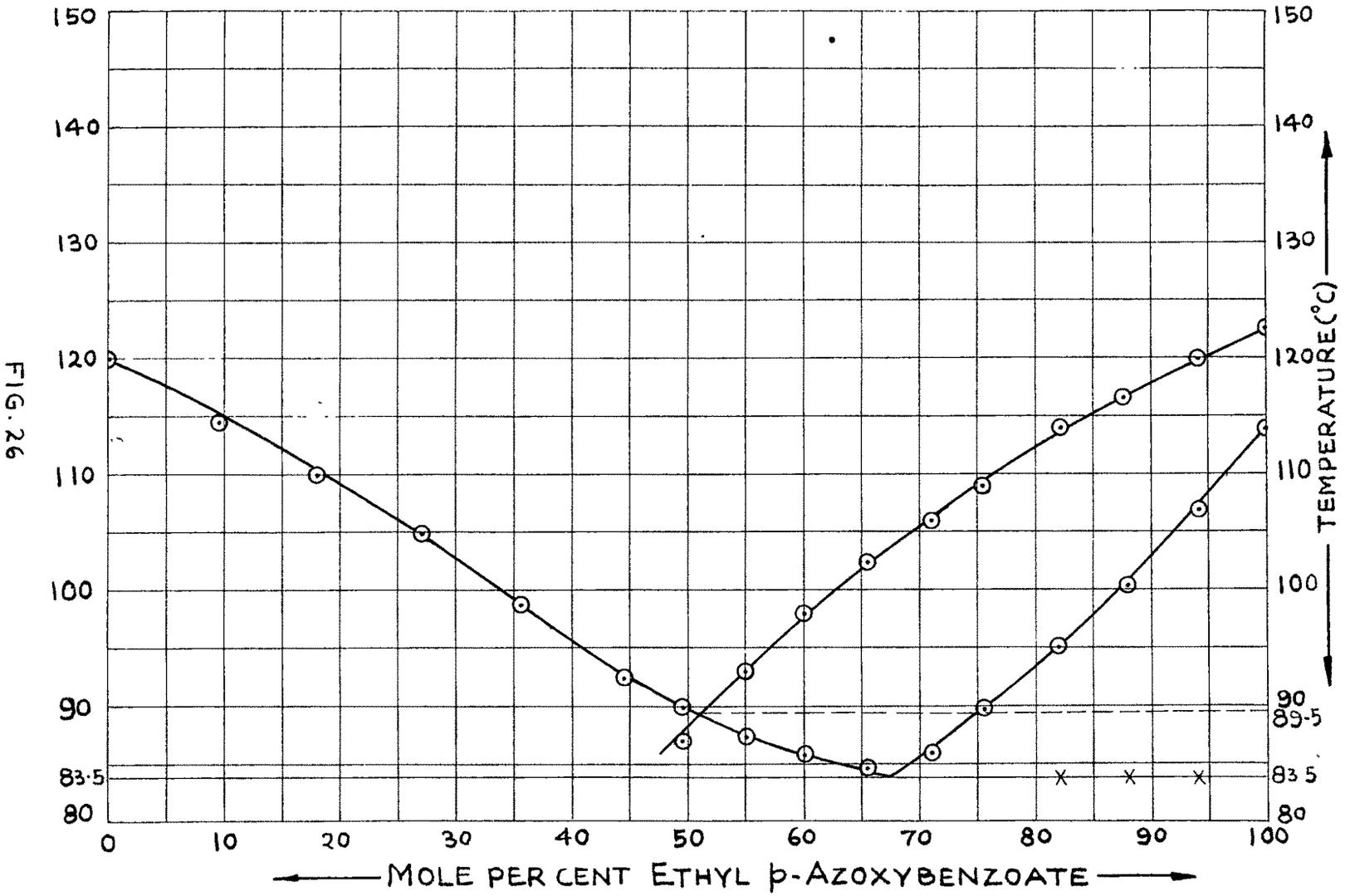

FIG. 26

ETHYL p-AZOXYBENZOATE : p- ANISYLIDENE-p-BROMOANILINE .

TABLE - 33

Ethyl p-azoxybenzoate : p-Anisylidene-p-bromoaniline

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.36	93.76	107.0	120.0
90.40	88.16	100.5	116.5
85.45	82.13	95.0	113.8
79.91	75.58	90.0	109.0
75.16	71.41	86.0	106.0
70.20	65.63	85.0	102.5
63.96	60.24	86.0	98.0
59.95	55.30	87.5	93.0
56.40	49.74	(87.0)	90.0
49.35	44.59	-	92.5
40.61	35.88	-	99.0
31.20	27.09	-	105.0
21.45	18.07	-	110.0
12.15	9.81	-	114.5
00.00	0.00	-	120.0

Sintering point : 83.5°C.

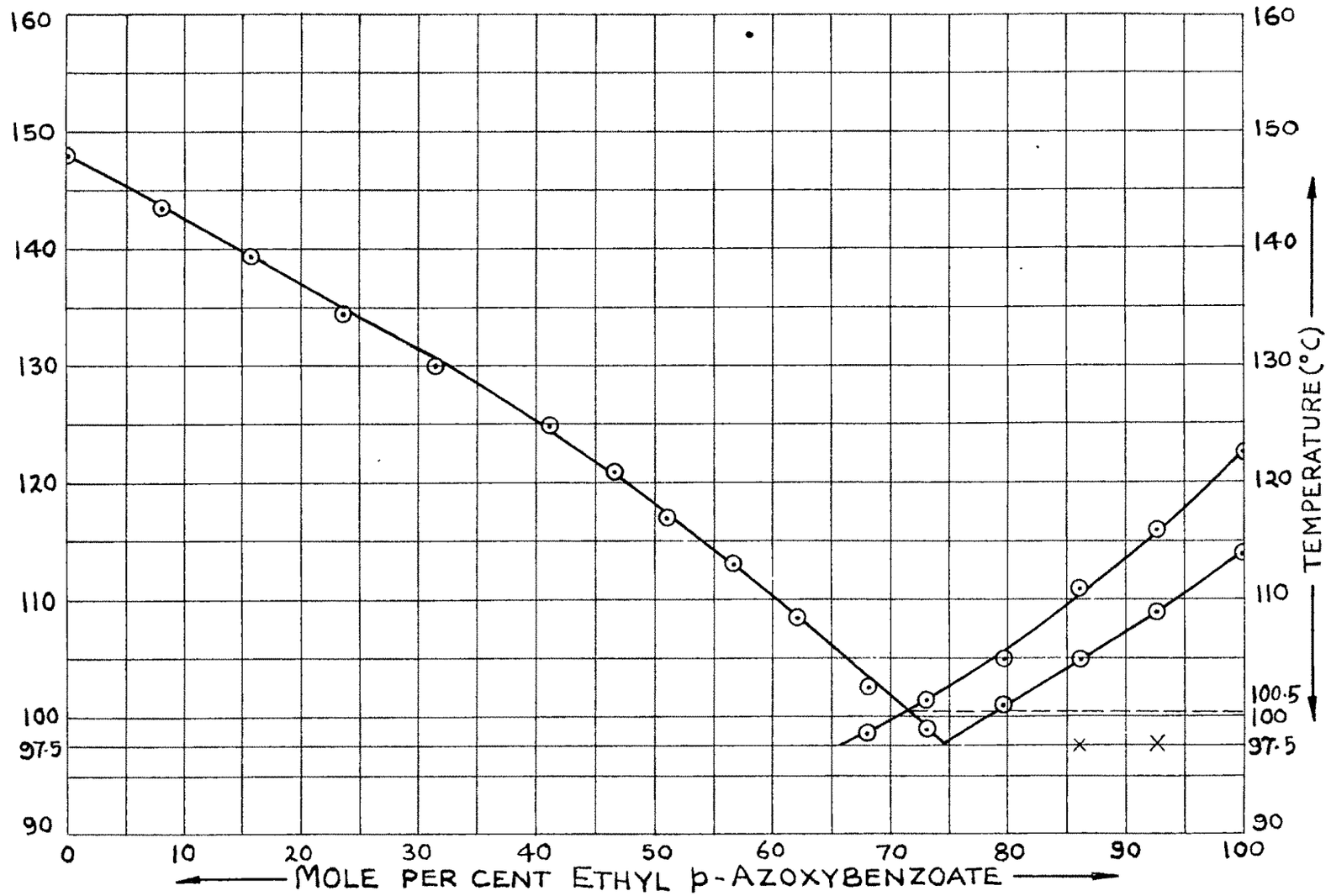
160
150
140
130
120
110
100
97·5
90
0
10
20
30
40
50
60
70
80
90
100
MOLE PER CENT ETHYL p-AZOXYBENZOATE
TEMPERATURE (°C)
100·5
ETHYL p-AZOXYBENZOATE : p-ANISYLIDENE -p- ANISIDINE

FIG. 27

TABLE - 34

Ethyl p-azoxybenzoate : p-Anisylidene-p-anisidine

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (^{o}C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.91	92.68	109.0	116.0
90.84	86.32	105.0	111.0
84.35	79.89	101.0	105.0
79.56	73.45	99.0	101.5
76.50	68.14	(98.5)	102.5
69.90	62.30	-	108.5
65.51	56.87	-	113.0
59.65	51.05	-	117.0
55.30	46.62	-	121.0
50.30	41.22	-	125.0
39.56	31.68	-	130.0
30.45	23.53	-	134.5
21.35	15.70	-	139.5
11.60	8.33	-	143.5
00.00	0.00	-	148.0

Sintering point : 97.5^{o}C.

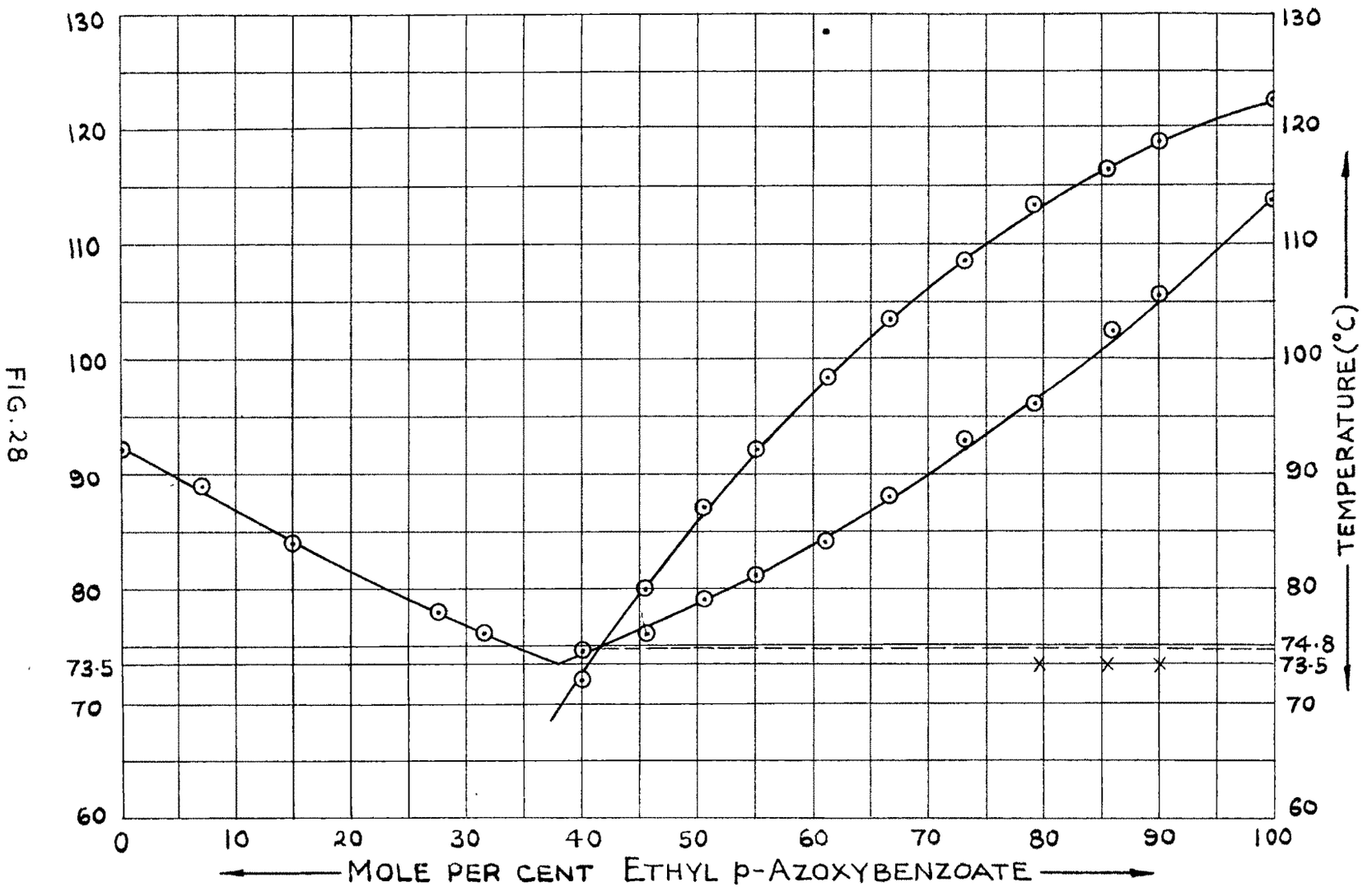
130
120
110
100
90
80
73·5
70
60
0
10
20
30
40
50
60
70
80
90
100
74·8
73·5
TEMPERATURE(°C)
MOLE PER CENT ETHYL p-AZOXYBENZOATE
ETHYL p-AZOXYBENZOATE : p-ANISYLIDENE -p- CHLOROANILINE .

FIG. 28

TABLE - 35

Ethyl p-azoxybenzoate : p-Anisylidene-p-chloroaniline

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (°C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
94.95	90.38	105.5	119.0
90.60	85.88	102.5	116.5
86.20	79.39	96.0	113.5
80.70	73.02	93.0	108.5
75.30	66.80	88.0	103.5.
69.95	60.67	84.0	98.5
65.15	54.91	81.0	92.0
60.34	50.97	79.0	87.0
55.66	45.55	75.5	80.0
50.00	40.42	(72.0)	74.5
41.05	31.78	-	76.0
31.75	27.89	-	78.0
21.45	15.21	-	84.0
10.30	7.12	-	89.0
00.00	0.00	-	92.0

Sintering point : 73.5°C.

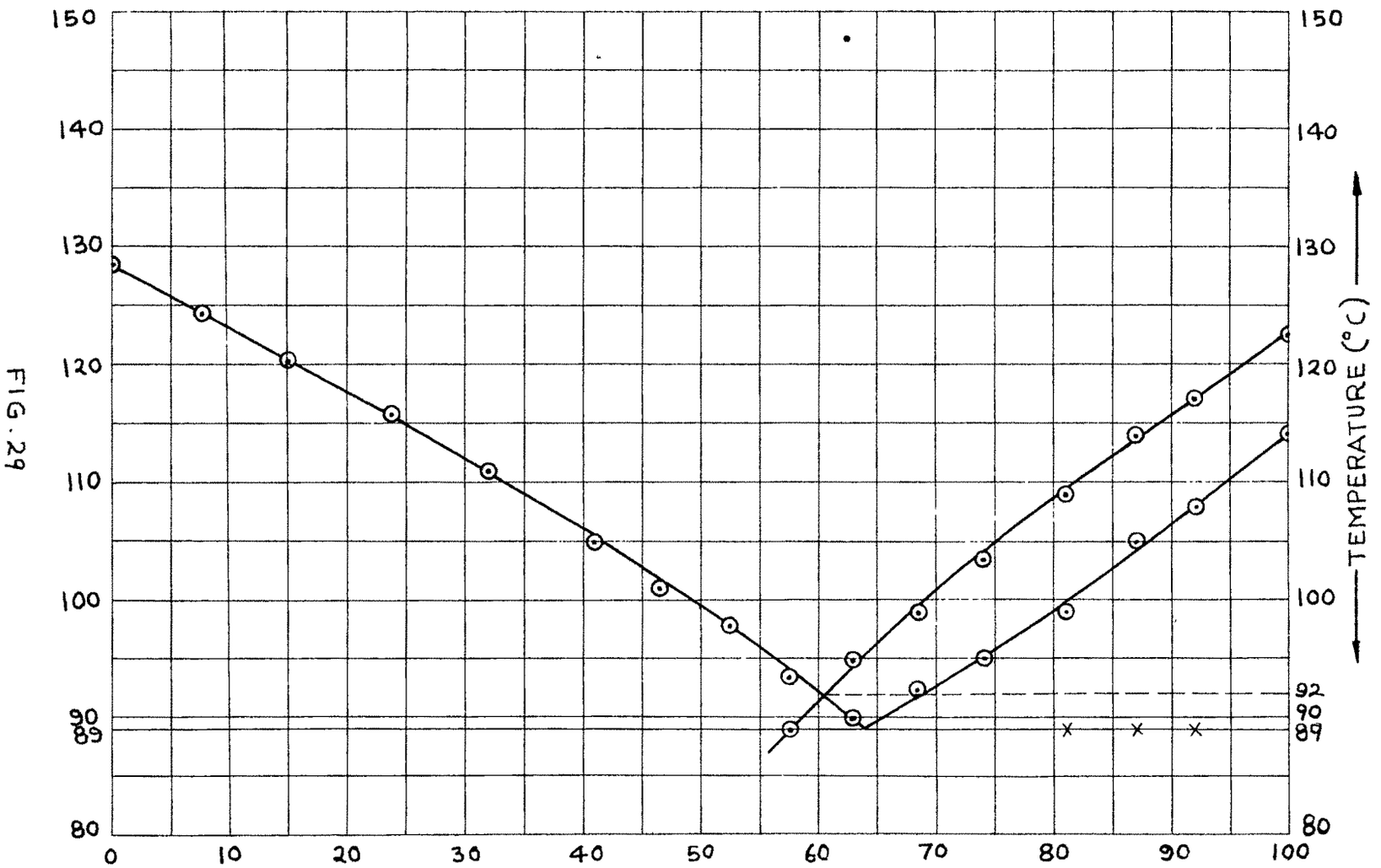
150
140
130
120
110
100
90
89
80
92
90
89
80
0
10
20
30
40
50
60
70
80
90
100
TEMPERATURE (°C)
MOLE PER CENT ETHYL p-AZOXYBENZOATE
ETHYL p-AZOXYBENZOATE : p-ANISYLIDENE - p-PHENETIDINE

FIG. 29

TABLE - 36

Ethyl p-azoxybenzoate : p-Anisylidene-p-phenetidine

% of ethyl p-azoxybenzoate	Mole % of ethyl p-azoxybenzoate	Temperature (^{o}C) of transition to	
		Smectic	Isotropic
100.00	100.00	114.0	122.5
96.40	92.26	108.0	117.0
90.60	87.30	105.0	114.0
85.33	81.12	99.0	109.0
79.50	74.40	95.0	103.5
74.30	68.92	92.5	99.0
70.30	63.42	90.0	95.0
64.65	57.57	(89.0)	93.5
59.70	52.53	-	98.0
54.50	46.96	-	101.0
50.55	41.22	-	105.0
40.05	31.97	-	111.0
31.11	23.91	-	116.0
20.65	15.31	-	120.5
10.50	7.60	-	124.5
00.00	0.00	-	128.5

Sintering point : 89.0^{o}C.