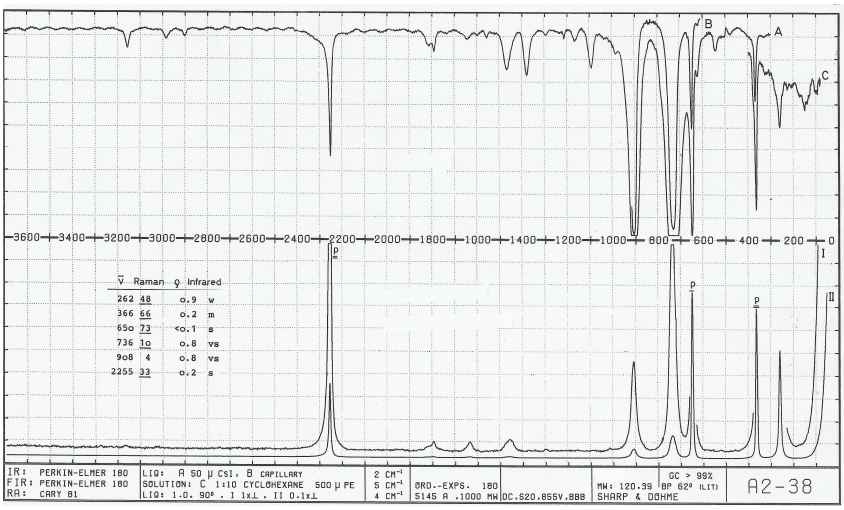
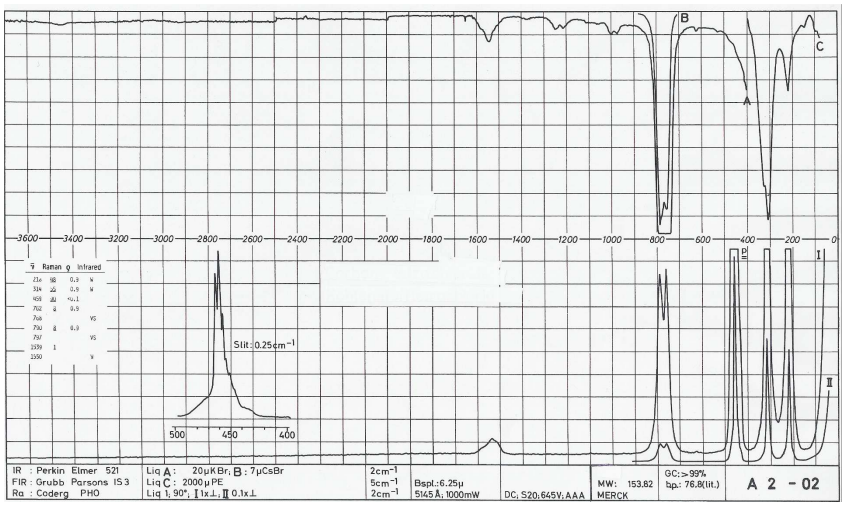
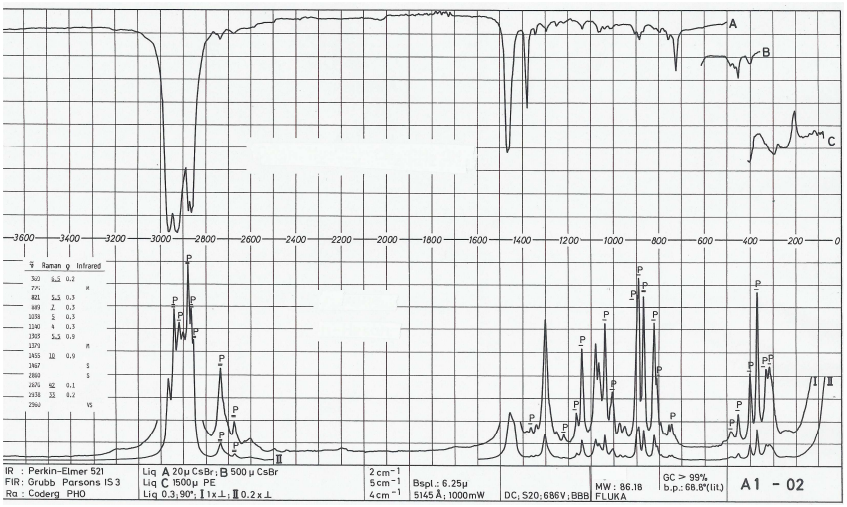
IV- Analyse de spectres

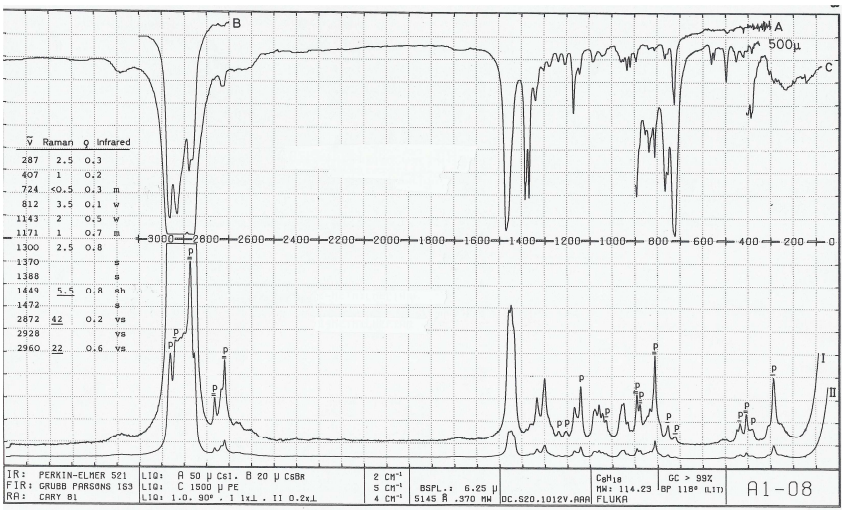
$CH_nX_{n'}$ (X = halogène, n+n'=4)

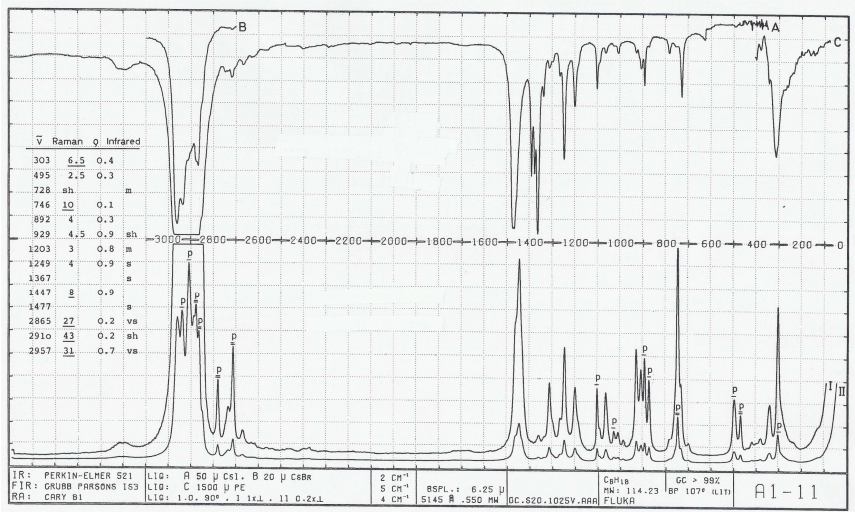
$CY_nX_{n'}$ (X = halogène, n+n'=4)

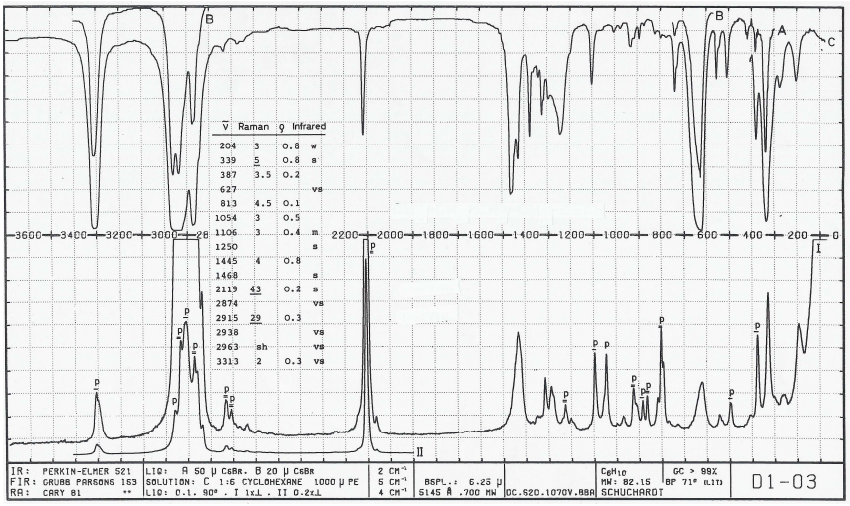


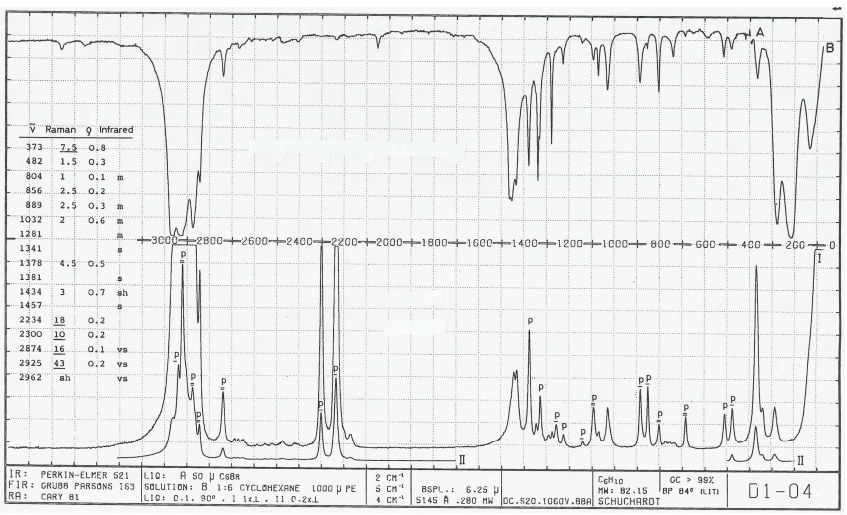

3600 3400 3200 3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
Slit: 0.25 cm⁻¹
500 450 400
IR : Perkin Elmer 521
FIR : Grubb Parsons IS 3
Ra : Coderg PHO
Liq A : 20µ KBr, B : 7µ CsBr
Liq C : 2000µ PE
Liq I, 90°, I 1x⊥, II 0.1x⊥
2cm⁻¹
5cm⁻¹
2cm⁻¹
Bspl.: 6.25µ
5145 Å; 1000mW
DC; S20; 645V; AAA
MW: 153.82
MERCK
GC: > 99%
bp.: 76.8(lit.)
A 2 - 02

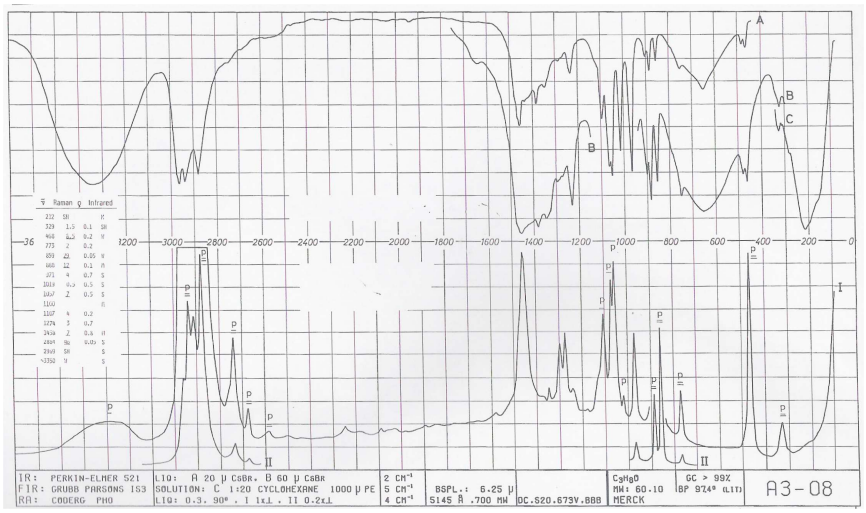

3600 3400 3200 3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
IR : Perkin-Elmer 521
FIR: Grubb Parsons IS 3
Ra : Coderg PHO
Liq A 20µ CsBr; B 500µ CsBr
Liq C 1500µ PE
Liq 0.3; 90°; I 1x⊥; II 0.2x⊥
2 cm⁻¹
5 cm⁻¹
4 cm⁻¹
Bspl.: 6.25µ
5145 Å; 1000mW
DC; S20; 686V; BBB
MW: 86.18
FLUKA
GC > 99%
b.p.: 68.8°(lit.)
A1 - 02

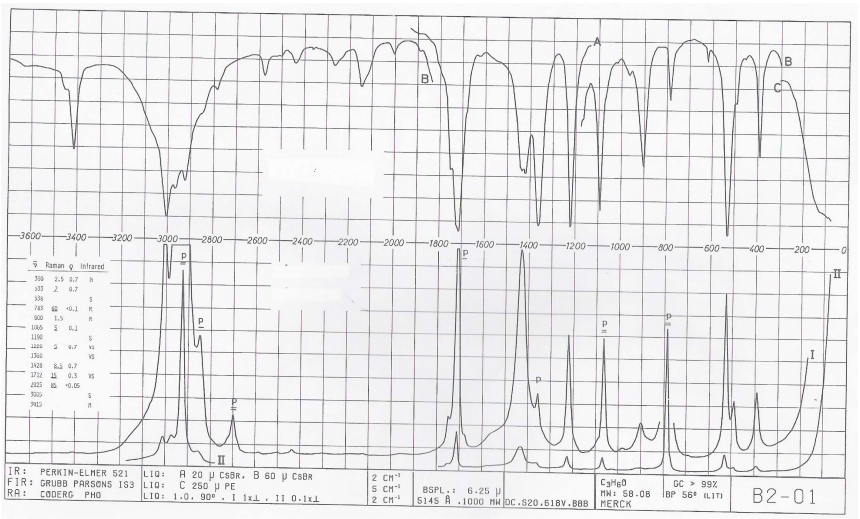

B
A
500µ
C
ν̃ Raman ρ Infrared
287 2.5 0.3
407 1 0.2
724 <0.5 0.3 m
812 3.5 0.1 w
1143 2 0.5 w
1171 1 0.7 m
1300 2.5 0.8
1370 s
1388 s
1449 5.5 0.8 sh
1472 s
2872 42 0.2 vs
2928 vs
2960 22 0.6 vs
3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
I
II
IR: PERKIN-ELMER 521
FIR: GRUBB PARSONS 153
RA: CARY 81
LIQ: A 50 µ CsI. B 20 µ CsBr
LIQ: C 1500 µ PE
LIQ: 1.0. 90° . I 1x⊥ . II 0.2x⊥
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
BSPL.: 6.25 µ
5145 Å .370 MW
DC.520.1012V.AAA
C8H18
MW: 114.23
FLUKA
GC > 99%
BP 118° (LIT)
A1-08

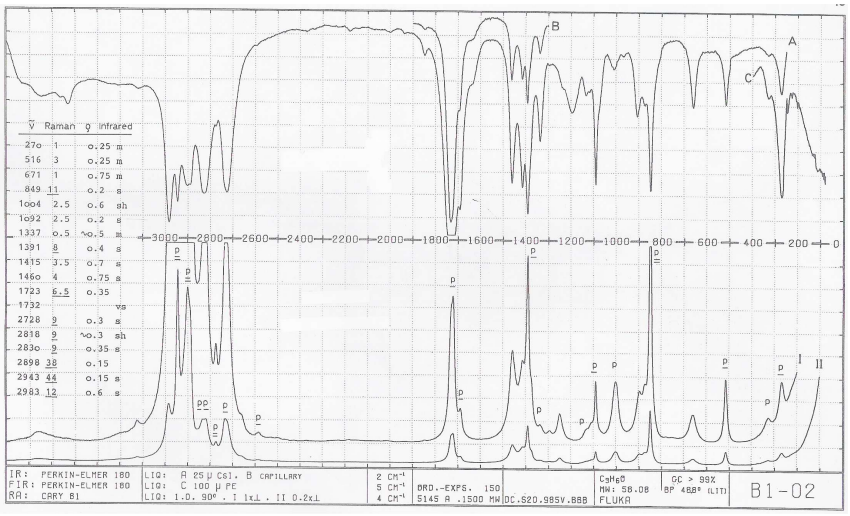

B
A
C
ν̃ Raman ρ Infrared
303 6.5 0.4
495 2.5 0.3
728 sh m
746 10 0.1
892 4 0.3
929 4.5 0.9 sh
1203 3 0.8 m
1249 4 0.9 s
1367 s
1447 8 0.9
1477 s
2865 27 0.2 vs
2910 43 0.2 sh
2957 31 0.7 vs
3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
I
II
IR: PERKIN-ELMER 521
FIR: GRUBB PARSONS 153
RA: CARY 81
LIQ: A 50 µ CsI. B 20 µ CsBr
LIQ: C 1500 µ PE
LIQ: 1.0. 90° . I 1x⊥ . II 0.2x⊥
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
BSPL.: 6.25 µ
5145 Å .550 MW
DC.520.1025V.AAA
C8H18
MW: 114.23
FLUKA
GC > 99%
BP 107° (LIT)
A1-11

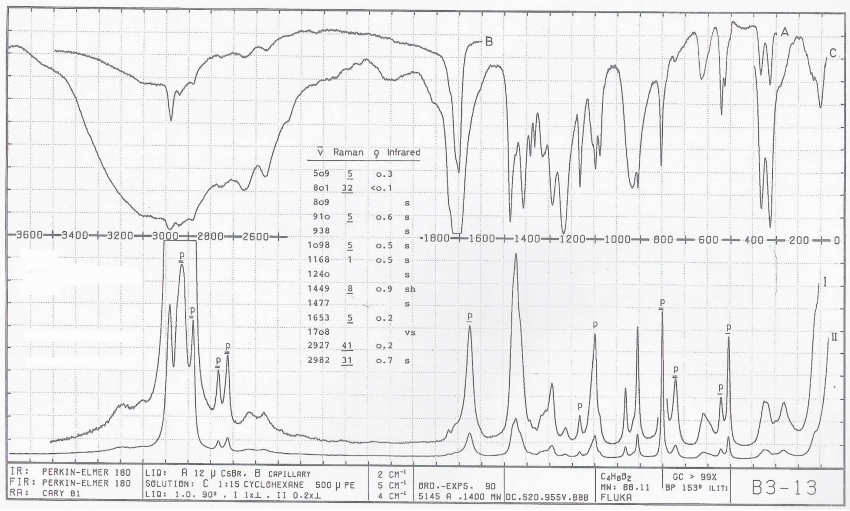

ν̄ Raman ρ Infrared
204 3 0.8 w
339 5 0.8 s
387 3.5 0.2
627 vs
813 4.5 0.1
1054 3 0.5
1106 3 0.4 m
1250 s
1445 4 0.8
1468 s
2119 43 0.2 s
2874 vs
2915 29 0.3
2938 vs
2963 sh vs
3313 2 0.3 vs
3600 3400 3200 3000 2800 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
IR: PERKIN-ELMER 521
FIR: GRUBB PARSONS 163
RA: CARY 81
LIQ: A 50 μ CsBr. B 20 μ CsBr
SOLUTION: C 1:6 CYCLOHEXANE 1000 μ PE
LIQ: 0.1. 90°. I ∥. II 0.2∥
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
BSPL.: 6.25 μ
5145 Å .700 MW
DC.520.1070V.88A
C6H10
MW: 82.15
SCHUCHARDT
GC > 99%
BP 71° (LIT)
D1-03

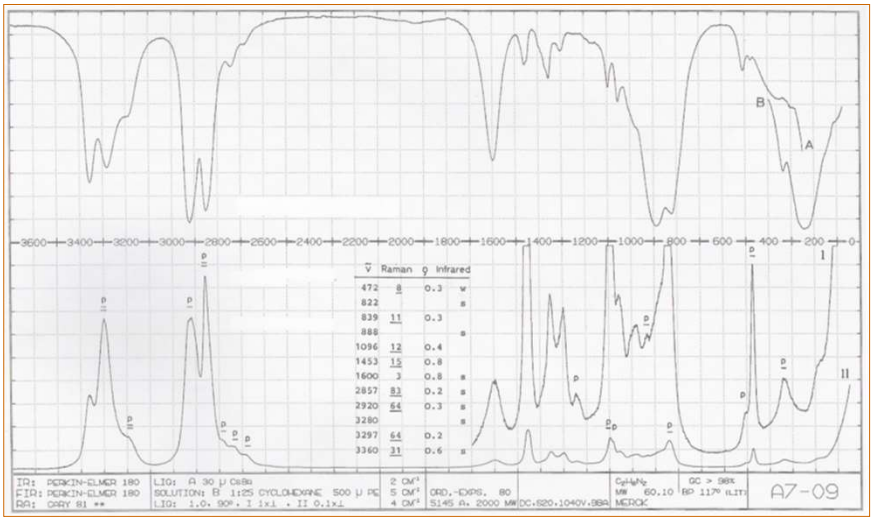

ν̄ Raman ρ Infrared
373 7.5 0.8
482 1.5 0.3
804 1 0.1 m
856 2.5 0.2
889 2.5 0.3 m
1032 2 0.6 m
1281 m
1341 s
1378 4.5 0.5
1381 s
1434 3 0.7 sh
1457 s
2234 18 0.2
2300 10 0.2
2874 16 0.1 vs
2925 43 0.2 vs
2962 sh vs
3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
IR: PERKIN-ELMER 521
FIR: GRUBB PARSONS 163
RA: CARY 81
LIQ: A 50 μ CsBr
SOLUTION: B 1:6 CYCLOHEXANE 1000 μ PE
LIQ: 0.1. 90°. I ∥. II 0.2∥
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
BSPL.: 6.25 μ
5145 Å .280 MW
DC.520.1060V.88A
C6H10
MW: 82.15
SCHUCHARDT
GC > 99%
BP 84° (LIT)
D1-04

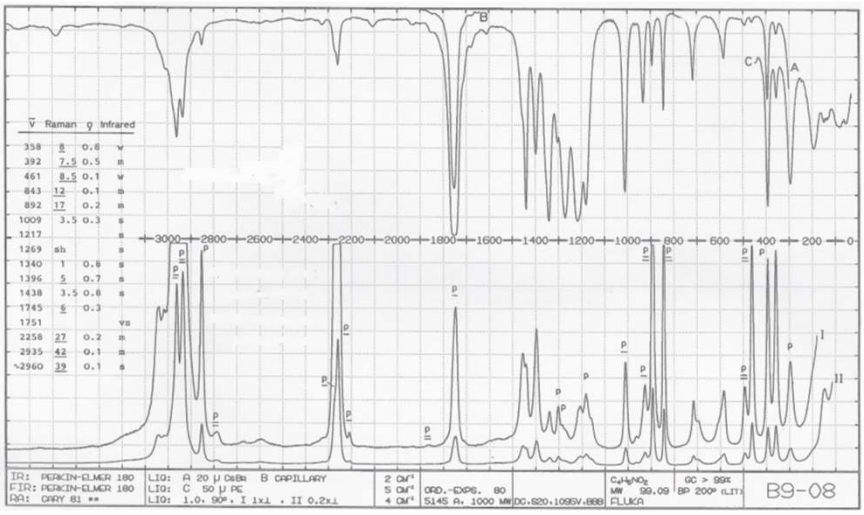

IR: PERKIN-ELMER 521
FIR: GRUBB PARSONS IS3
RA: CODERG PHO
LIQ: A 20 μ CsBr, B 60 μ CsBr
SOLUTION: C 1:20 CYCLOHEXANE 1000 μ PE
LIQ: 0.3, 90°, I 1x⊥, II 0.2x⊥
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
BSPL.: 6.25 μ
514S Å .700 MW
DC.S20.673V.BBB
C3H6O
MW: 60.10
MERCK
GC > 99%
BP 97.4° (LIT)
A3-08


IR: PERKIN-ELMER 521
FIR: GRUBB PARSONS IS3
RA: CODERG PHO
LIQ: A 20 μ CsBr, B 60 μ CsBr
LIQ: C 250 μ PE
LIQ: 1.0, 90°, I 1x⊥, II 0.1x⊥
2 CM⁻¹
5 CM⁻¹
2 CM⁻¹
BSPL.: 6.25 μ
514S Å .1000 MW
DC.S20.618V.BBB
C3H6O
MW: 58.08
MERCK
GC > 99%
BP 56° (LIT)
B2-01


ν̃ Raman ϱ infrared
270 1 0.25 m
516 3 0.25 m
671 1 0.75 m
849 11 0.2 s
1004 2.5 0.6 sh
1092 2.5 0.2 s
1337 0.5 ~0.5 m
1391 8 0.4 s
1415 3.5 0.7 s
1460 4 0.75 s
1723 6.5 0.35
1732 vs
2728 9 0.3 s
2818 9 ~0.3 sh
2830 9 0.35 s
2898 38 0.15
2943 44 0.15 s
2983 12 0.6 s
3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
IR: PERKIN-ELMER 180
FIR: PERKIN-ELMER 180
RA: CARY 81
LIQ: A 25 μ CsI. B CAPILLARY
LIQ: C 100 μ PE
LIQ: 1.D. 90° . I ∥x⊥ . II 0.2x⊥
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
ORD.-EXPS. 150
5145 A .1500 MW DC.520.985V.888
C3H6O
MW: 58.08
FLUKA
GC > 99%
BP 48.8° (LIT)
B1-02


ν̃ Raman ϱ infrared
509 5 0.3
801 32 <0.1
809 s
910 5 0.6 s
938 s
1098 5 0.5 s
1168 1 0.5 s
1240 s
1449 8 0.9 sh
1477 s
1653 5 0.2
1708 vs
2927 41 0.2
2982 31 0.7 s
3600 3400 3200 3000 2800 2600
1800 1600 1400 1200 1000 800 600 400 200 0
IR: PERKIN-ELMER 180
FIR: PERKIN-ELMER 180
RA: CARY 81
LIQ: A 12 μ CsBr. B CAPILLARY
SOLUTION: C 1:15 CYCLOHEXANE 500 μ PE
LIQ: 1.D. 90° . I ∥x⊥ . II 0.2x⊥
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
ORD.-EXPS. 90
5145 A .1400 MW DC.520.955V.888
C4H8O2
MW: 88.11
FLUKA
GC > 99%
BP 153° (LIT)
B3-13


3600 3400 3200 3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
ν̃ Raman ρ Infrared
472 8 0.3 w
822 s
839 11 0.3
888 s
1096 12 0.4
1453 15 0.8
1600 3 0.8 s
2857 83 0.2 s
2920 64 0.3 s
3280 s
3297 64 0.2
3360 31 0.6 s
IR: PERKIN-ELMER 180
FIR: PERKIN-ELMER 180
RR: DARY 81 **
LIQ: A 30 μ CaBr
SOLUTION: B 1:25 CYCLOHEXANE 500 μ PE
LIQ: 1.0. 90°, I 1x↓ , II 0.1x↓
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
ORD.-EXPS. 80
5145 A. 2000 MW
DC.820.1040V.BBA
C4H8N2
MW 60.10
METROC
GC > 98%
BP 117° (LIT)
A7-09


3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
ν̃ Raman ρ Infrared
358 8 0.6 w
392 7.5 0.5 m
461 8.5 0.1 w
843 12 0.1 m
892 17 0.2 m
1009 3.5 0.3 s
1217 s
1269 sh s
1340 1 0.8 s
1396 5 0.7 s
1438 3.5 0.8 s
1745 6 0.3
1751 vs
2258 27 0.2 m
2935 42 0.1 m
~2960 39 0.1 s
IR: PERKIN-ELMER 180
FIR: PERKIN-ELMER 180
RR: DARY 81 **
LIQ: A 20 μ CaBr B CAPILLARY
LIQ: C 50 μ PE
LIQ: 1.0. 90°, I 1x↓ , II 0.2x↓
2 CM⁻¹
5 CM⁻¹
4 CM⁻¹
ORD.-EXPS. 80
5145 A. 1000 MW
DC.820.1095V.BBB
C4H8NO2
MW 99.09
FLUKA
GC > 99%
BP 200° (LIT)
B9-08