Problem 2.3 Spectrum A

Wavelength, (μm)

ABSORBANCE

FREQUENCY (cm^{-1})

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SCANNED ON PERKIN−ELMER 521

Problem 2.3 Spectrum B

Wavelength, (μm)

ABSORBANCE

FREQUENCY (cm^{-1})

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Problem 2.3 Spectrum C

2966.4	1404.1	965.0
1657.8	1306.1	933.2
1455.5	1069.7	697.1

Wavelength, (μm)

% TRANSMITTANCE

ABSORBANCE

NEAT

WAVENUMBERS (cm^{-1})

NICOLET 20SX FT-IR

Problem 2.3 Spectrum D

2927.1	1467.1	909.8
1822.5	1378.9	724.5
1641.7	993.3	634.5

Wavelength, (μm)

NEAT

WAVENUMBERS (cm⁻¹)

NICOLET 20SX FT-IR
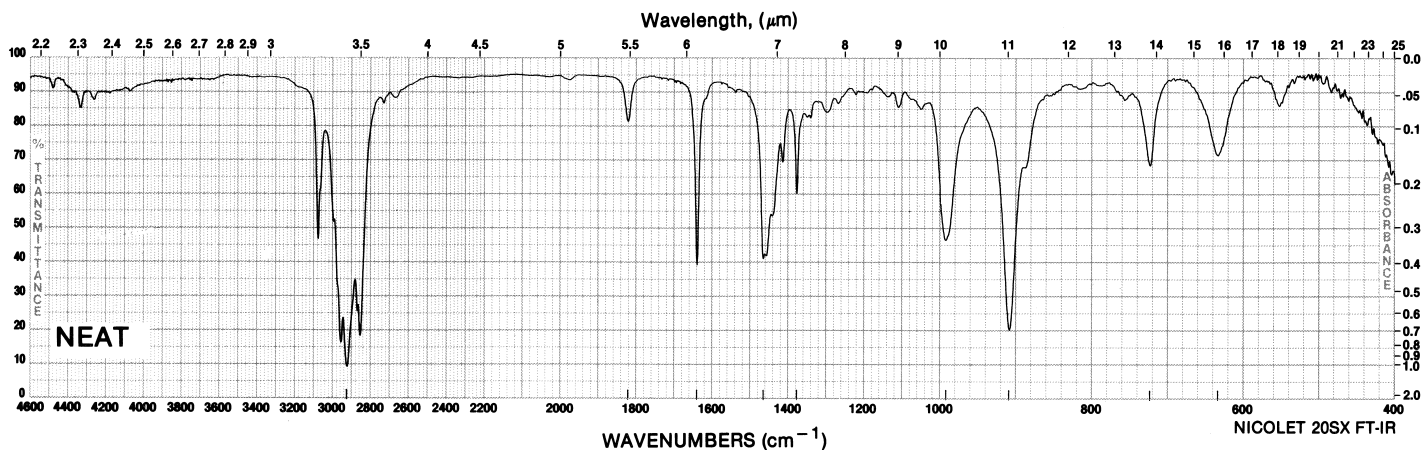
Problem 2.4 Spectrum E

2962.1	1366.3	1031.3
1743.1	1303.6	950.8
1466.5	1243.2	606.6

Wavelength, (μm)

NEAT

WAVENUMBERS (cm⁻¹)

NICOLET 20SX FT-IR
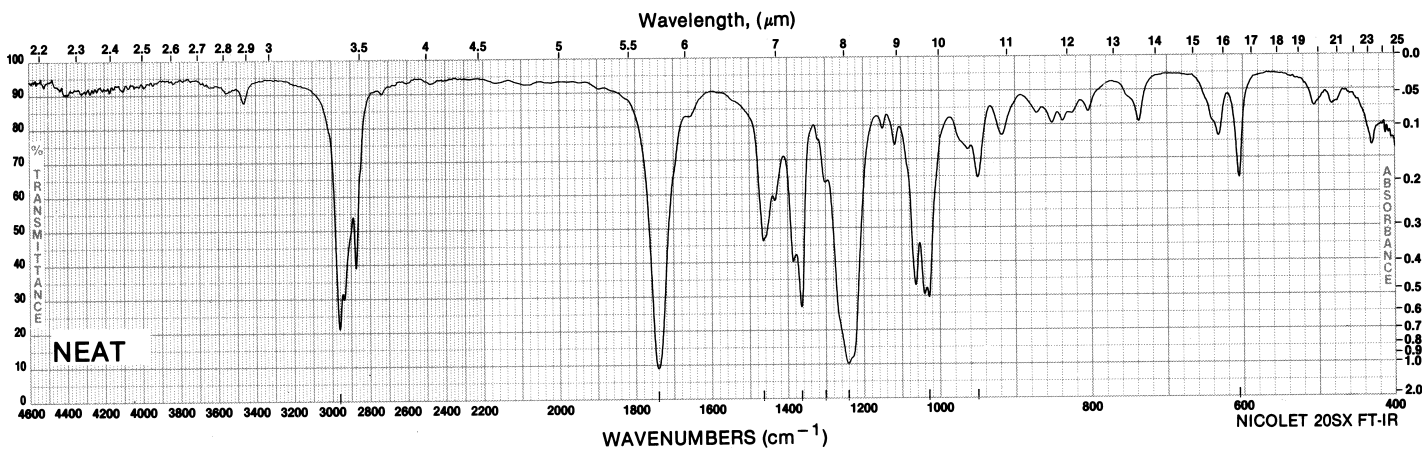
Problem 2.4 Spectrum F

3148.2	1712.1	1285.0
2925.9	1466.3	1218.9
2670.8	1412.3	935.3

Wavelength, (μm)

MELT

WAVENUMBERS (cm⁻¹)

NICOLET 20SX FT-IR

Problem 2.4 Spectrum G

Wavelength, (μm)

PERCENT TRANSMITTANCE vs FREQUENCY (cm⁻¹)

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Problem 2.4 Spectrum H

Wavelength, (μm)

ABSORBANCE vs FREQUENCY (cm⁻¹)

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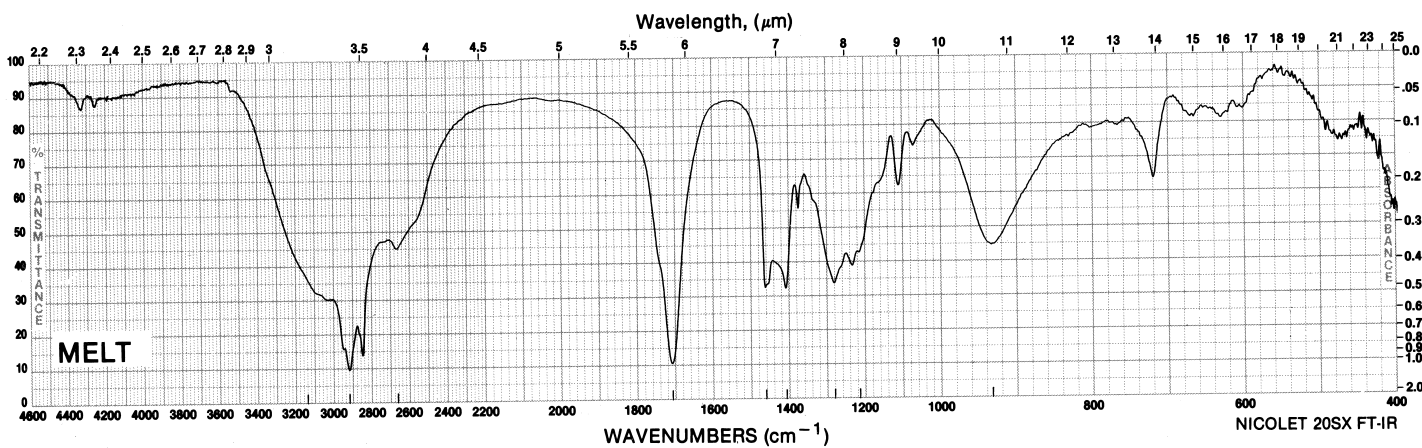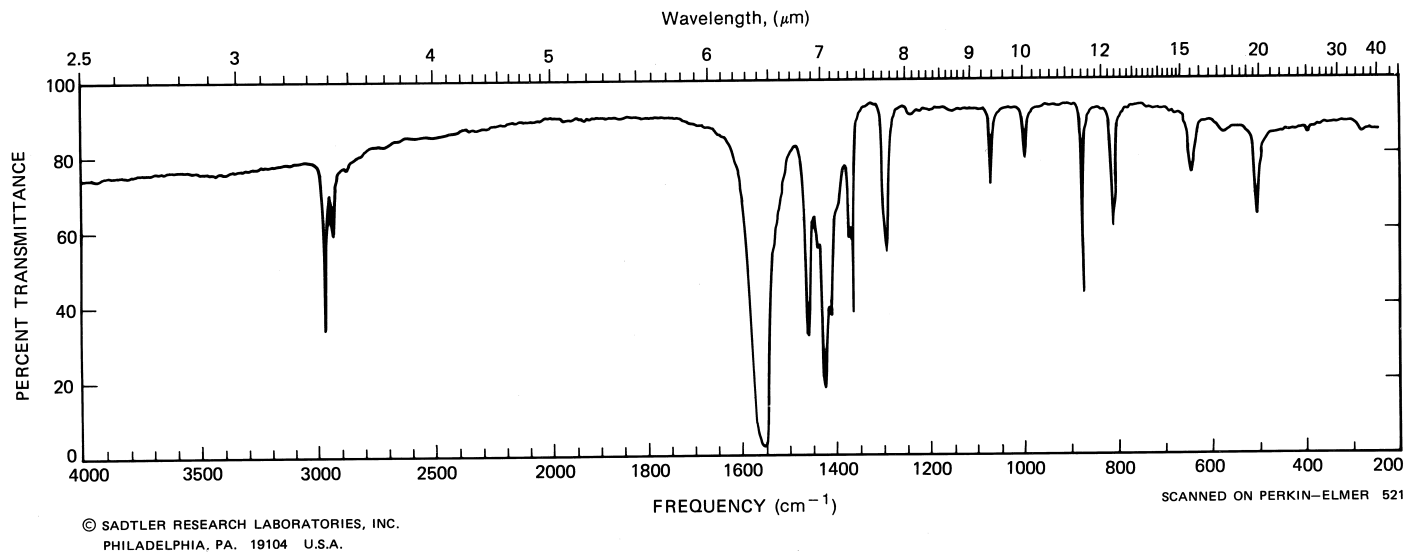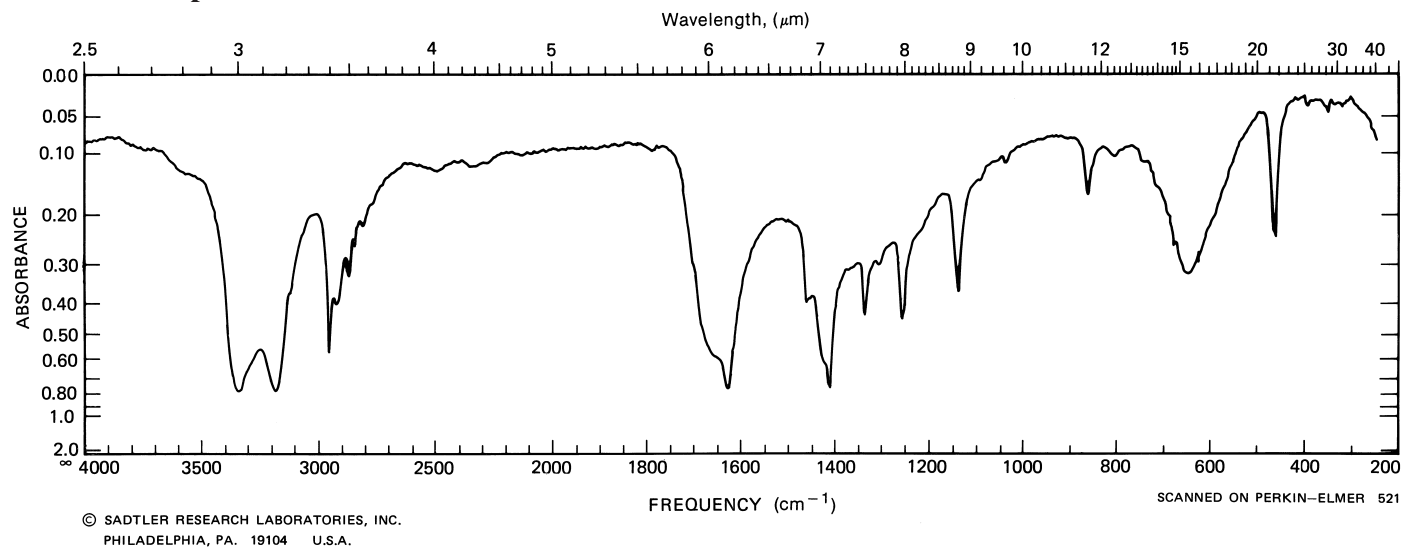
Problem 2.4 Spectrum I

3375.8	1366.4	903.6
2955.6	1065.7	839.0
1470.0	939.6	778.0

Wavelength, (μm)

% TRANSMITTANCE vs WAVENUMBERS (cm⁻¹)

ABSORBANCE

NEAT

NICOLET 20SX FT-IR

Problem 2.5 Spectrum J

Wavelength, (μm)

ABSORBANCE

FREQUENCY (cm⁻¹)

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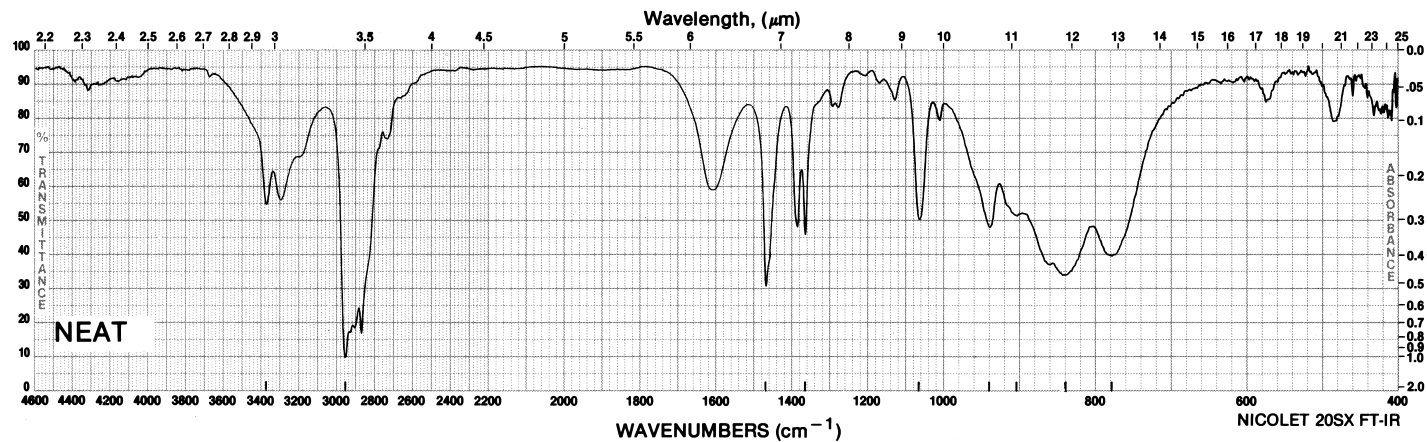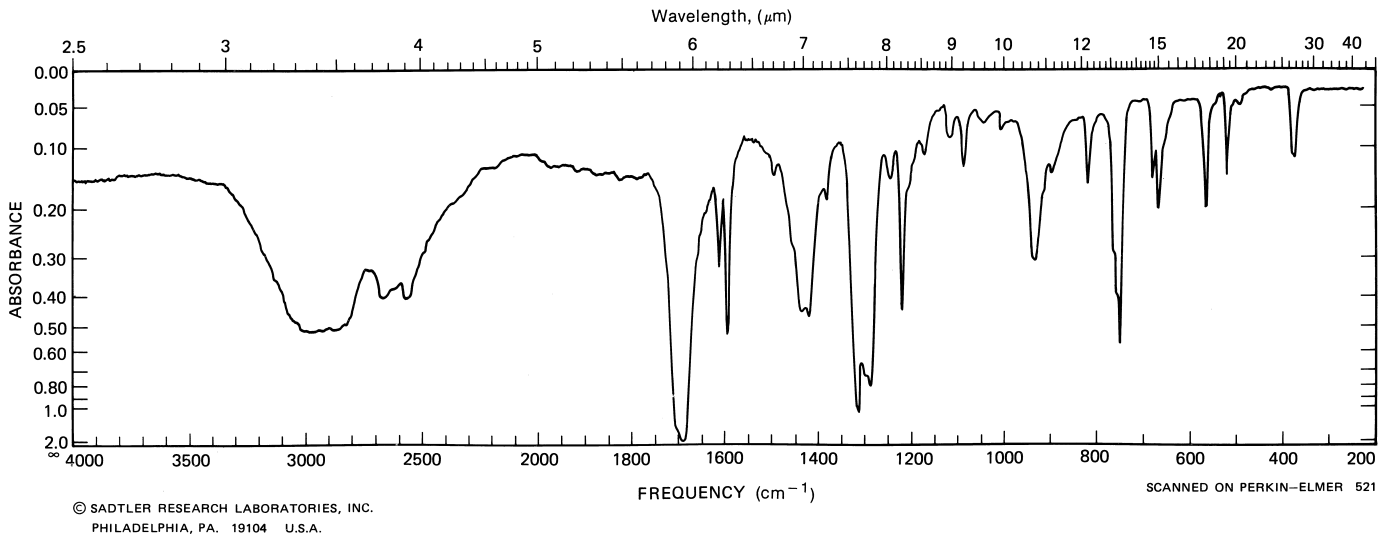
Problem 2.5 Spectrum K

3447.7	1327.7	1106.2
1592.6	1239.7	843.1
1464.2	1170.0	751.3

Wavelength, (μm)

% TRANSMITTANCE

MELT

ABSORBANCE

WAVENUMBERS (cm⁻¹)
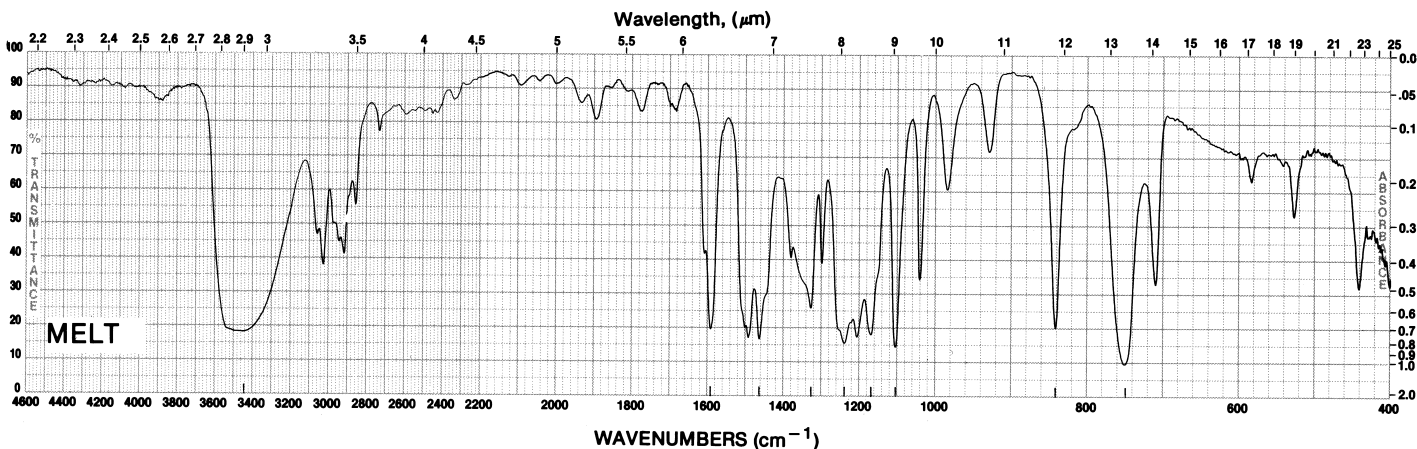
Problem 2.5 Spectrum L

1599.2	1173.0	926.6
1495.8	1033.3	753.8
1242.5	991.7	691.3

Wavelength, (μm)

% TRANSMITTANCE

NEAT

ABSORBANCE

WAVENUMBERS (cm⁻¹)

NICOLET 20SX FT-IR
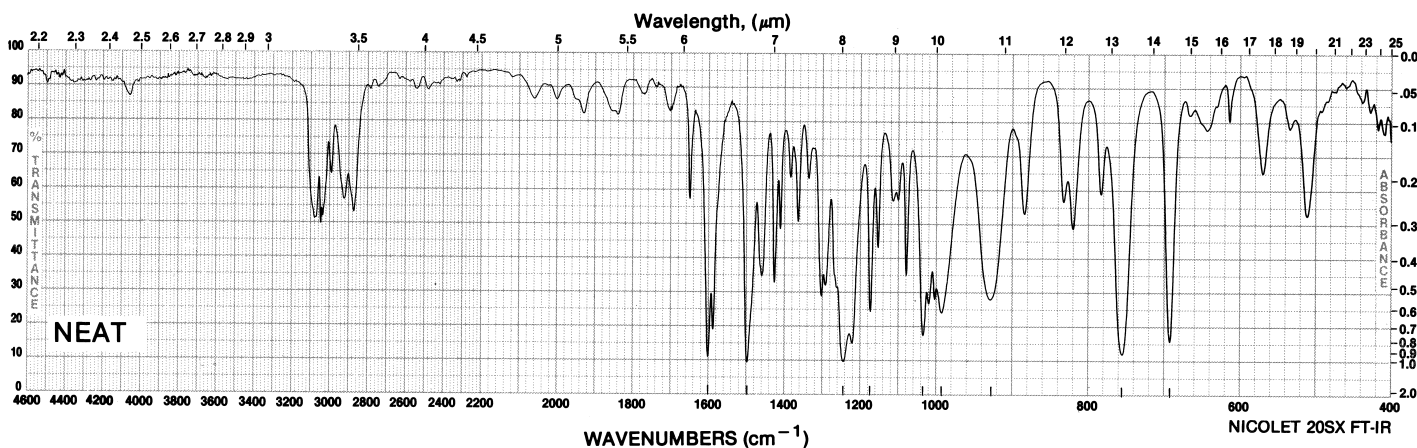
Problem 2.5 Spectrum M

1702.5	1310.7	745.4
1596.9	1203.7	688.3
1455.7	827.9	650.0

NEAT

NICOLET 20SX FT-IR
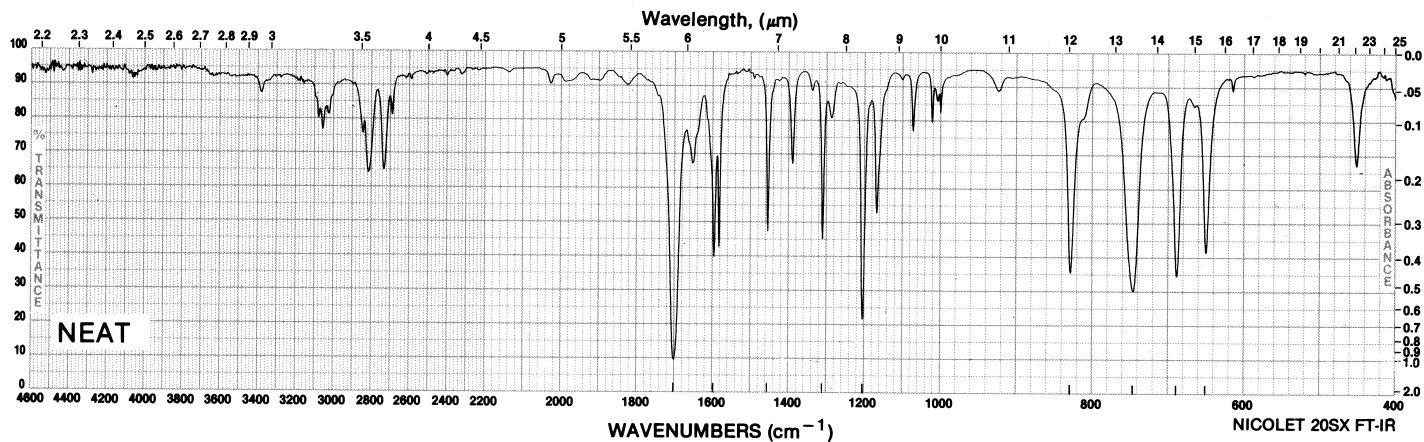
Problem 2.6 Spectrum N

Merck 10,1131

3370.1	1452.3	779.2
3025.9	895.8	735.9
1604.5	858.9	698.3

NEAT

Problem 2.6 Spectrum O

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Problem 2.6 Spectrum P

100
PERCENT TRANSMISSION
0
4000 3600 3200 2800 2400 2000 1800 1600 1400 1200 1000 800 600 400
FREQUENCY (cm⁻¹)

926
994 913 761 692

STATE: KBr
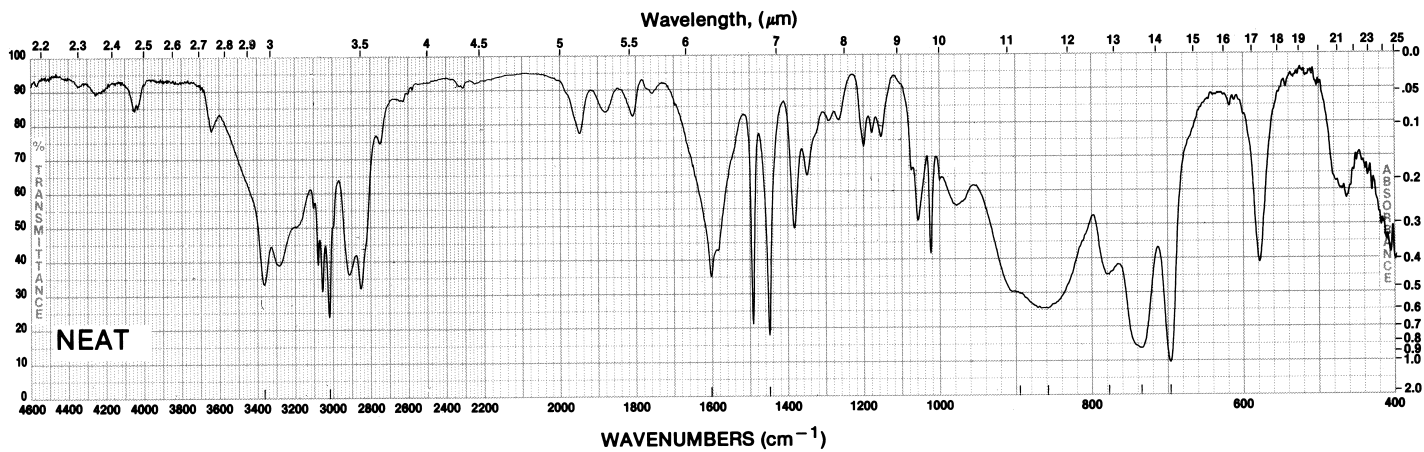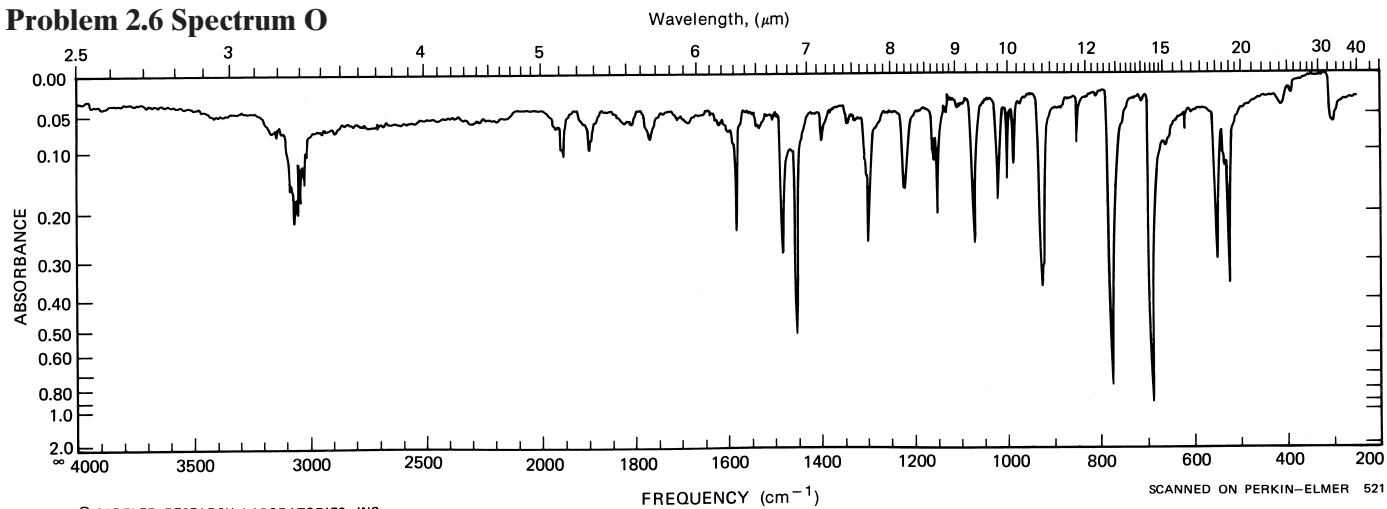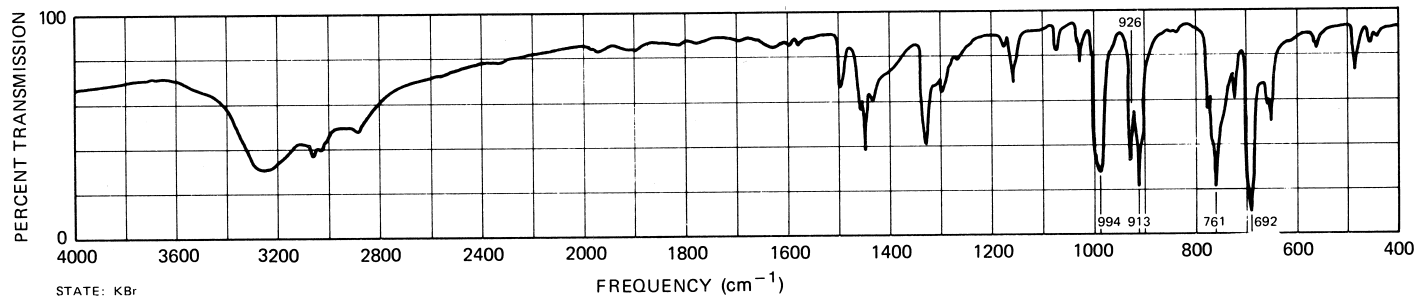
Problem 2.6 Spectrum Q

3355.3	1498.7	752.6
3037.2	1276.8	692.6
1601.2	1174.8	503.8

Wavelength, (μm)

NEAT

WAVENUMBERS (cm⁻¹)

NICOLET 20SX FT-IR

Problem 2.6 Spectrum R

Wavelength, (μm)

ABSORBANCE

FREQUENCY (cm⁻¹)

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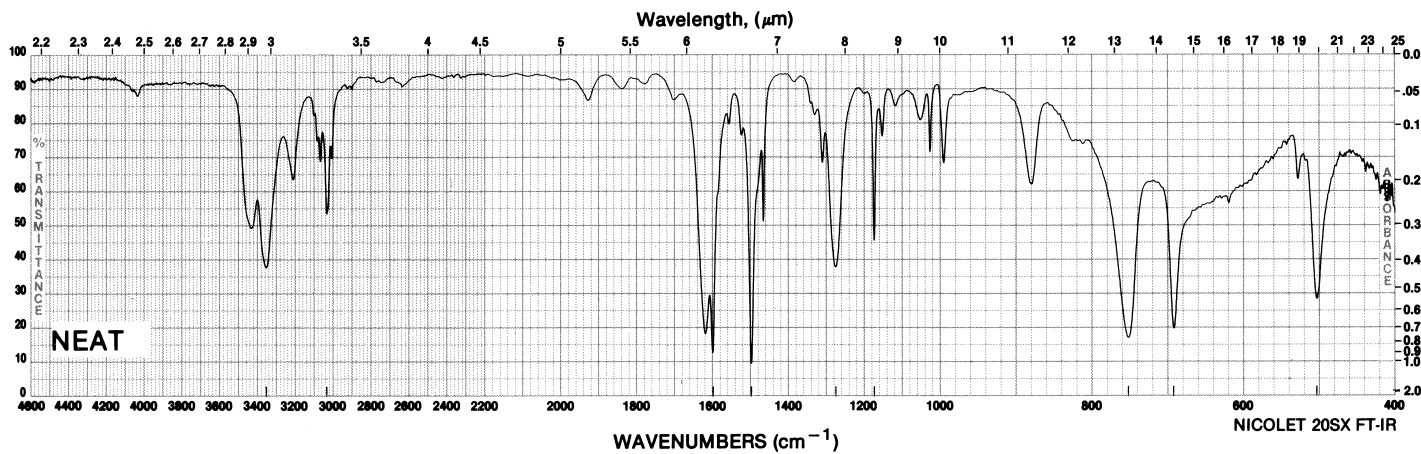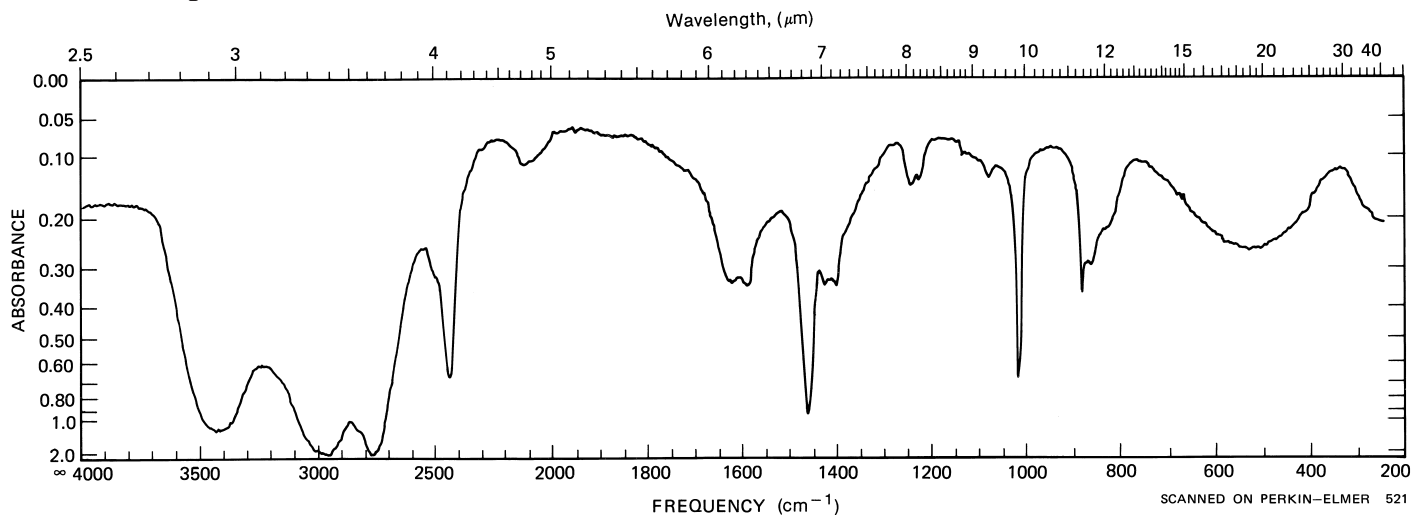
Problem 2.7 Spectrum S

Wavelength, (μm)

MELT

Compound S

WAVENUMBERS (cm⁻¹)
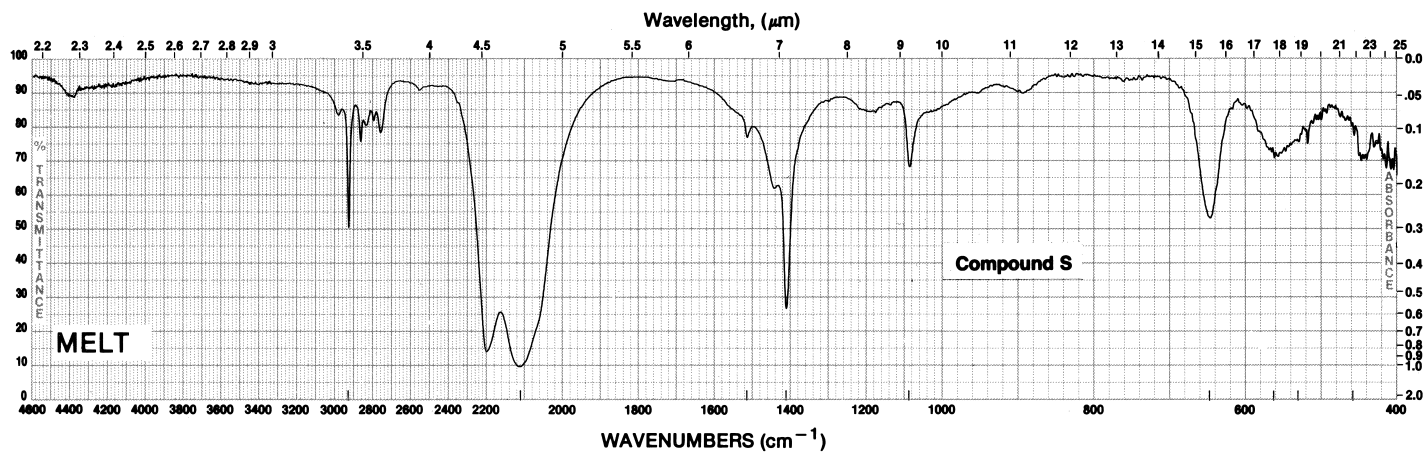
Problem 2.8 Spectrum T

P775-4   CAS [123-54-6]
2,4-Pentanedione, 99 + %

$$CH_3CCH_2CCH_3$$
(with O=C groups shown above)
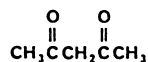
FW 100.12	d 0.975	IR III, 252C
mp -23°C	Fp 94°F	NMR II, 1,388B
bp 140.4°C	nᴅ 1.4510	Merck 10,76

1710.0	1418.8	1249.4
1622.3	1360.9	914.7
1516.8	1304.5	780.7

Wavelength, (μm)

Compound T

NEAT

WAVENUMBERS (cm⁻¹)