

CHM 2210 Exam 4 Review Sheet

Mass Spectroscopy

MW from molecular ion (pp 426-7)

Fragmentation:

losing alkyl groups (pp 429-9),

alpha cleavages of alcohols and amines (pg 431),

dehydration of alcohols (pp 431),

McLafferty rearrangements of carbonyls (pp 431-2)

IR Spectroscopy

molecular bond vibrations (pp 437-441)

characteristic absorptions of functional groups (pp 442-5)

table 12.1, figure 12.15, and wave-numbers in section 12.8

^{13}C , and ^1H NMR Spectroscopy

nuclear spin changes alignment depending on electronic environment (pp 458-460)

chemical shifts in δ or ppm (pp 461-2)

characteristic chemical shifts for ^{13}C (pp 464-6)

DEPT for ^{13}C (pp 467-9)

characteristic chemical shifts for ^1H (pp 474-5)

proton counting (pg 476)

proton splitting pattern depends on neighboring protons (pp 476-81)

complex splitting (pp 482-4)