

Announcements (3/13/14)

(1) Midterms are being discussed in discussion sections this week. (GO TO SECTION!)

(2) Tuesday's Lecture will be given by Prof Joe Fox.

TODAY : IR Spectroscopy

NMR Spectroscopy (Intro + ^{13}C NMR)

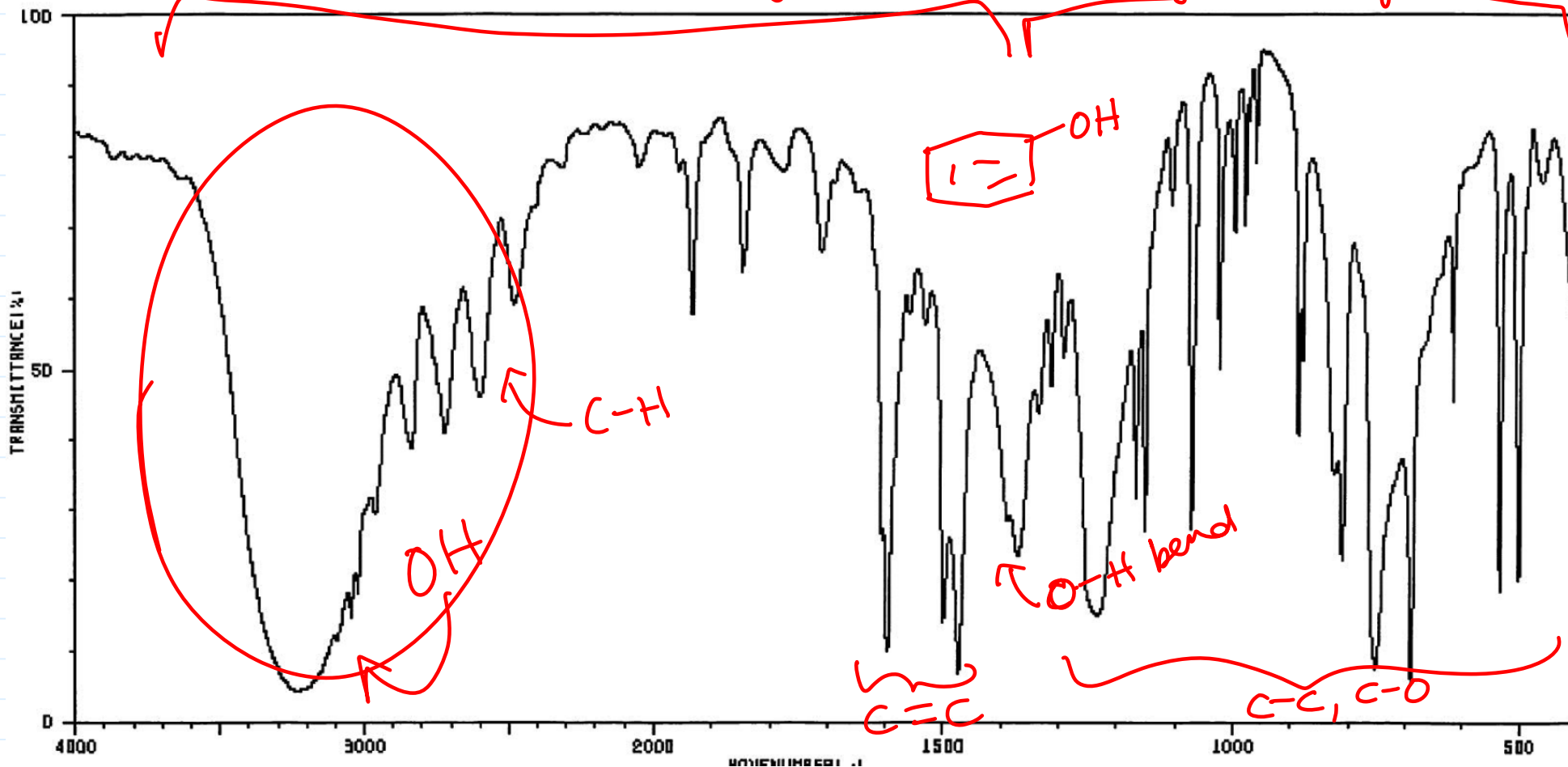
<u>Bond</u>	<u>IR Wavelengths</u> (cm^{-1})	<u>Intensity</u>
<u>Common Functional Groups</u>		
O-H (alcohol) $\begin{matrix} \nearrow \text{R-OH} \\ \searrow \text{R-C(=O)OH} \end{matrix}$	3650 - 3200	Strong, broad
O-H (carboxylic acid)	3300 - 2500	Strong, very broad
N-H	3500 - 3300	medium, broad
C-H	3300 - 2700	medium
C \equiv N	2260 - 2220	medium
C \equiv C	2260 - 2100	medium to weak
C=O	1780 - 1650	Strong
C-O	1250 - 1050	Strong

Table
15.3

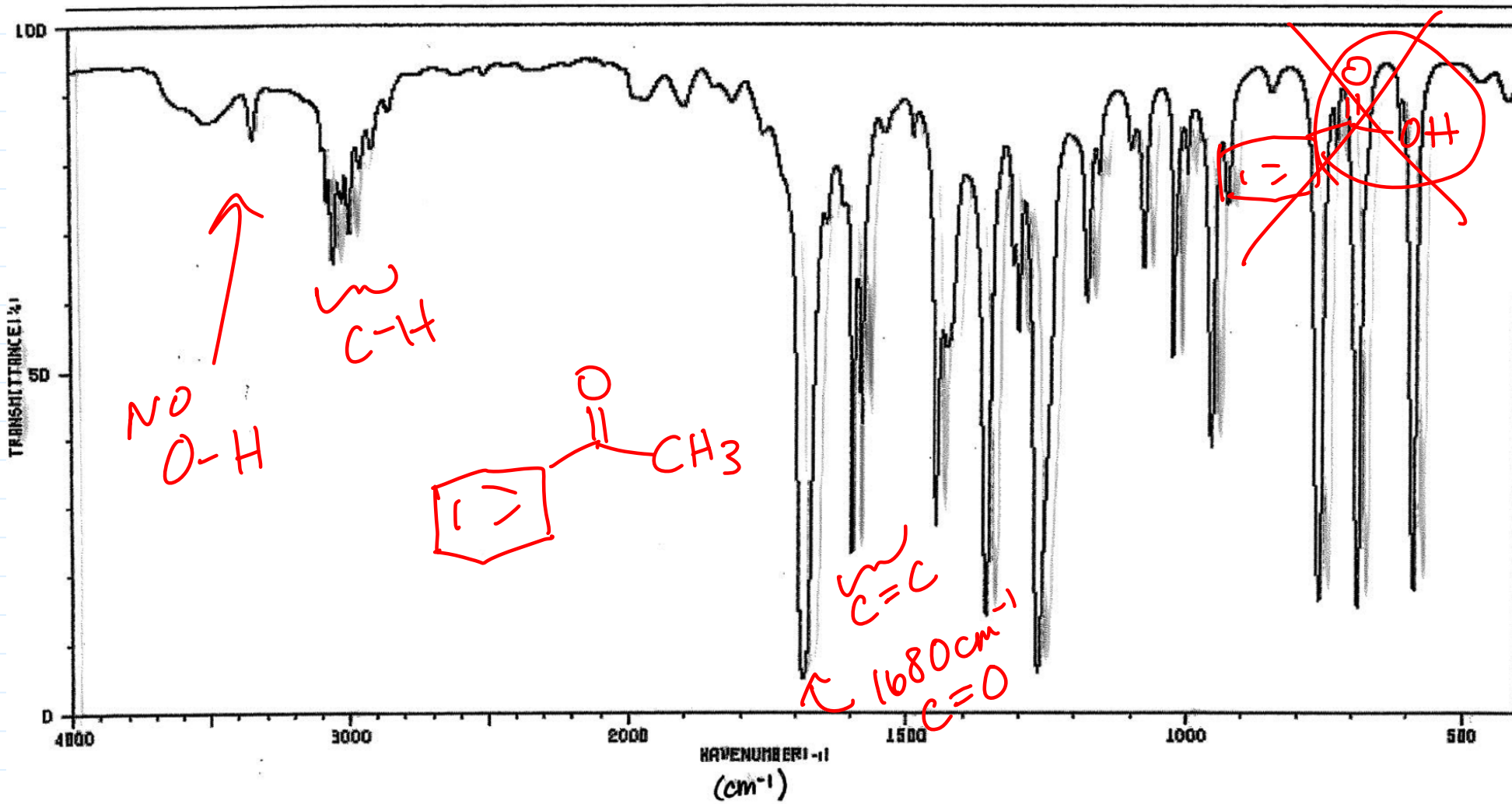
Unknown #1

Functional Group Region

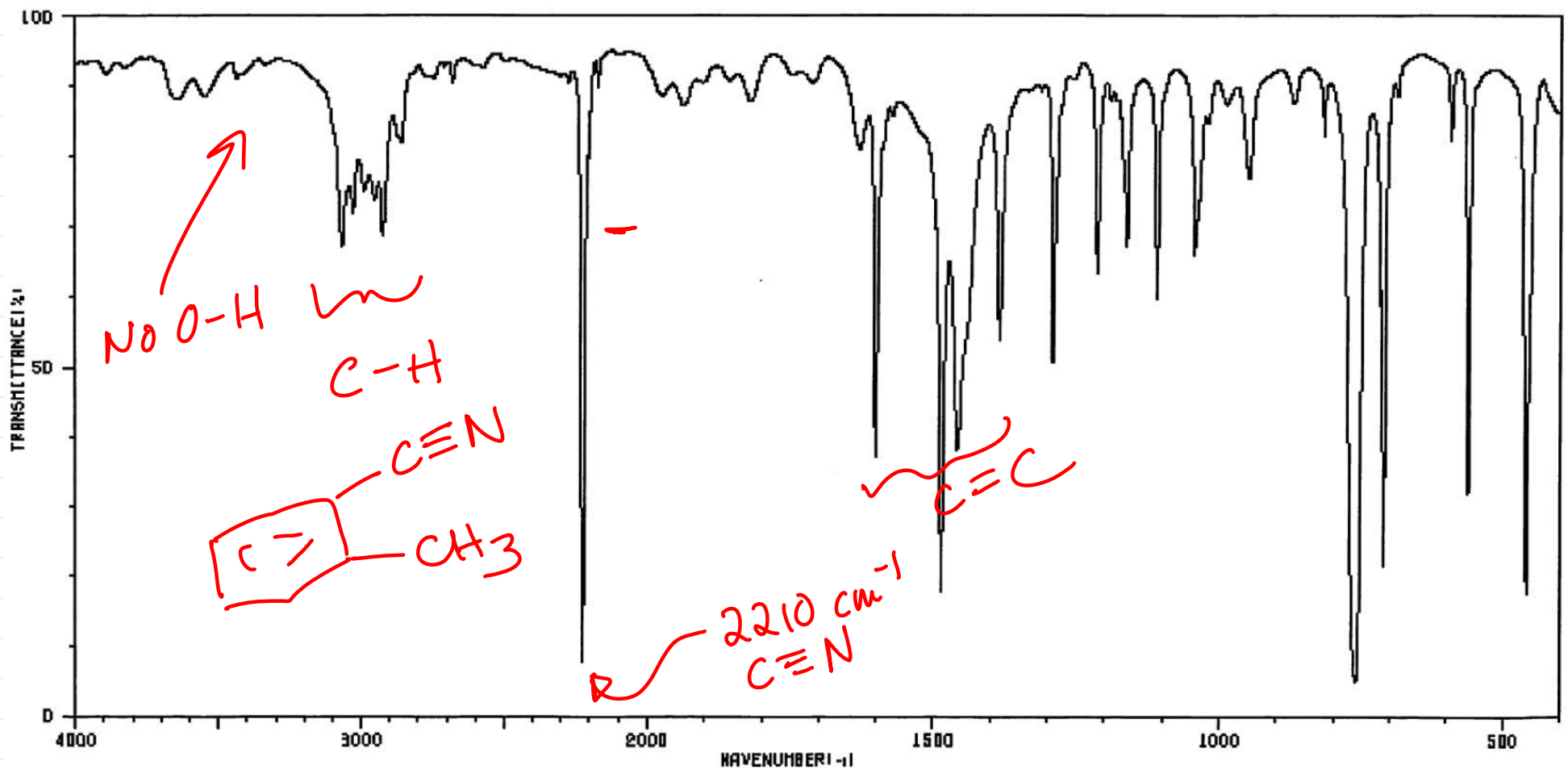
Finger Print Region



Unknown #2



Unknown #3



No O-H

C-H

C≡N

C=C

C=C

2210 cm^{-1}
C≡N