

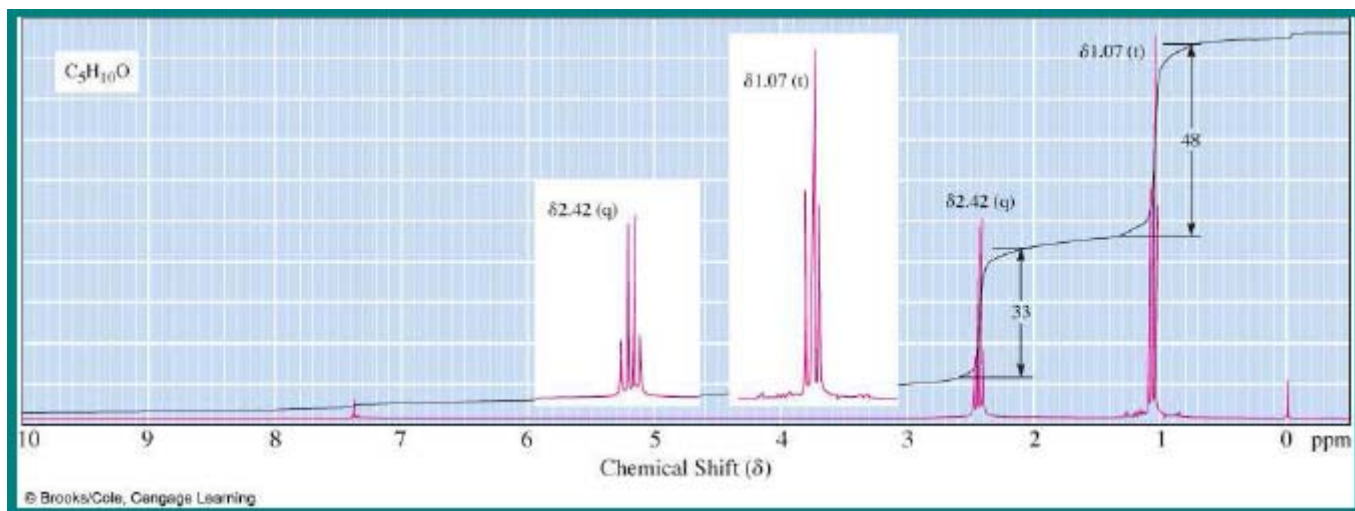
Tables and problems discussed in the videos:

Videos (1) – (2)

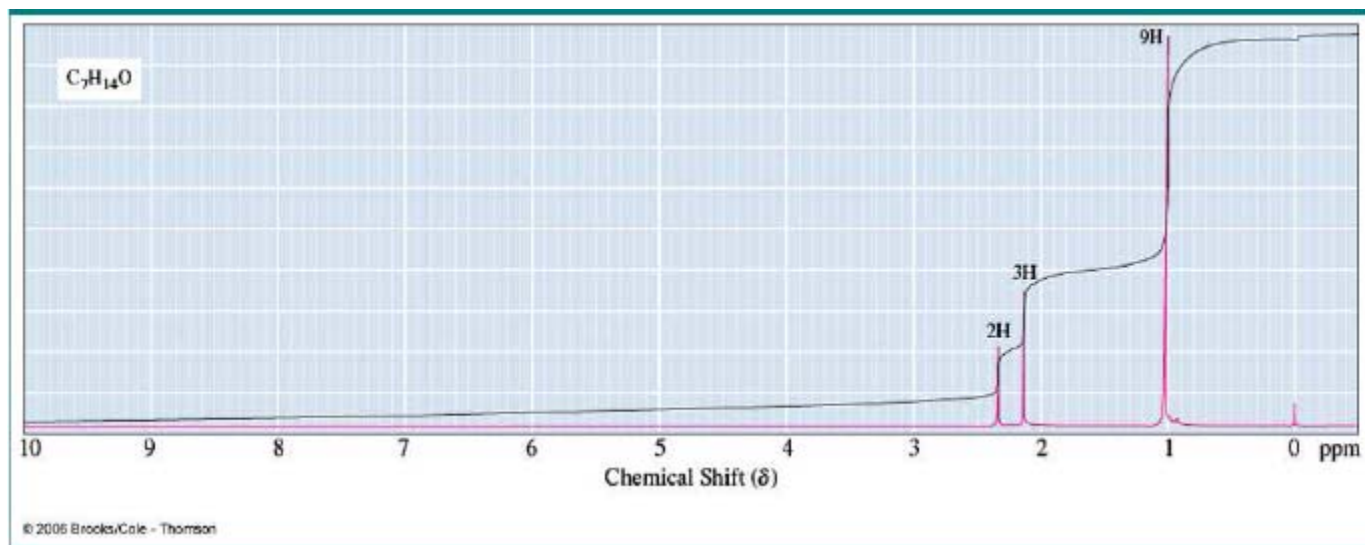
Type of Hydrogen (R = alkyl, Ar = aryl)	Chemical Shift (δ)*	Type of Hydrogen (R = alkyl, Ar = aryl)	Chemical Shift (δ)*
$(\text{CH}_3)_4\text{Si}$	0 (by definition)	$\begin{array}{c} \text{O} \\ \\ \text{RCOCH}_3 \end{array}$	3.7-3.9
RCH_3	0.8-1.0	$\begin{array}{c} \text{O} \\ \\ \text{RCOCH}_2\text{R} \end{array}$	4.1-4.7
RCH_2R	1.2-1.4	RCH_2I	3.1-3.3
R_3CH	1.4-1.7	RCH_2Br	3.4-3.6
$\text{R}_2\text{C}=\text{CRCHR}_2$	1.6-2.6	RCH_2Cl	3.6-3.8
$\text{RC}\equiv\text{CH}$	2.0-3.0	RCH_2F	4.4-4.5
ArCH_3	2.2-2.5	ArOH	4.5-4.7
ArCH_2R	2.3-2.8	$\text{R}_2\text{C}=\text{CH}_2$	4.6-5.0
ROH	0.5-6.0	$\text{R}_2\text{C}=\text{CHR}$	5.0-5.7
RCH_2OH	3.4-4.0	ArH	6.5-8.5
RCH_2OR	3.3-4.0	$\begin{array}{c} \text{O} \\ \\ \text{RCH} \end{array}$	9.5-10.1
R_2NH	0.5-5.0	$\begin{array}{c} \text{O} \\ \\ \text{RCOH} \end{array}$	10-13
$\begin{array}{c} \text{O} \\ \\ \text{RCCH}_3 \end{array}$	2.1-2.3		
$\begin{array}{c} \text{O} \\ \\ \text{RCCH}_2\text{R} \end{array}$	2.2-2.6		

* Values are approximate. Other atoms within the molecule may cause the signal to appear outside the ranges.

Videos (3) – (5)



Videos (6) – (8)



Videos (9) – (10)

$\text{C}_{10}\text{H}_{13}\text{Cl}$: 7.23 δ , s (broad), 5H;
3.53 δ , s, 2H;
1.39 δ , s, 6H

Video (11) – (12)

$C_8H_{10}O$

7.19 δ , s, 5H

3.71 δ , t, 2H

2.77 δ , t, 2H

2.44 δ , s (broad), 1H

Video (13) – (14)

$C_3H_6Br_2$

3.5 δ , t, 4H

2.36 δ , quin, 2H

Video (15)

$C_{10}H_{13}Cl$

7.23 δ , s (slightly broadened), 5H

3.53 δ , s, 2H

1.39 δ , s, 6H

Video (16) – (20)

