

質子化學位移

Proton Chemical Shifts

(若需修正或補充，請 mail 給我們建檔，謝謝！)

Type of Proton		Chemical Shift δ , ppm
Cyclopropane		0.2
Primary	RCH_3	0.9
Secondary	R_2CH_2	1.3
Tertiary	R_3CH	1.5
Vinylc	$\text{C}=\text{C}-\text{H}$	4.6-5.9
Acetylenic	$\text{C}\equiv\text{C}-\text{H}$	2-3
Aromatic	$\text{Ar}-\text{H}$	6-8.5
Benzylic	$\text{Ar}-\text{C}-\text{H}$	2.2-3
Allylic	$\text{C}=\text{C}-\text{CH}_3$	1.7
Fluorides	$\text{HC}-\text{F}$	4-4.5
Chlorides	$\text{HC}-\text{Cl}$	3-4
Bromides	$\text{HC}-\text{Br}$	2.5-4
Iodides	$\text{HC}-\text{I}$	2-4
Alcohols	$\text{HC}-\text{OH}$	3.4-4
Ethers	$\text{HC}-\text{OR}$	3.3-4
Esters	$\text{RCOO}-\text{CH}$	3.7-4.1
Esters	$\text{HC}-\text{COOR}$	2-2.2
Acids	$\text{HC}-\text{COOH}$	2-2.6
Carbonyl compounds	$\text{HC}-\text{C}=\text{O}$	2-2.7
Aldehydic	RCHO	9-10
Hydroxylic	ROH	1-5.5
Phenolic	ArOH	4-12
Enolic	$\text{C}=\text{C}-\text{OH}$	15-17
Carboxylic	RCOOH	10.5-12
Amino	RNH_2	1-5