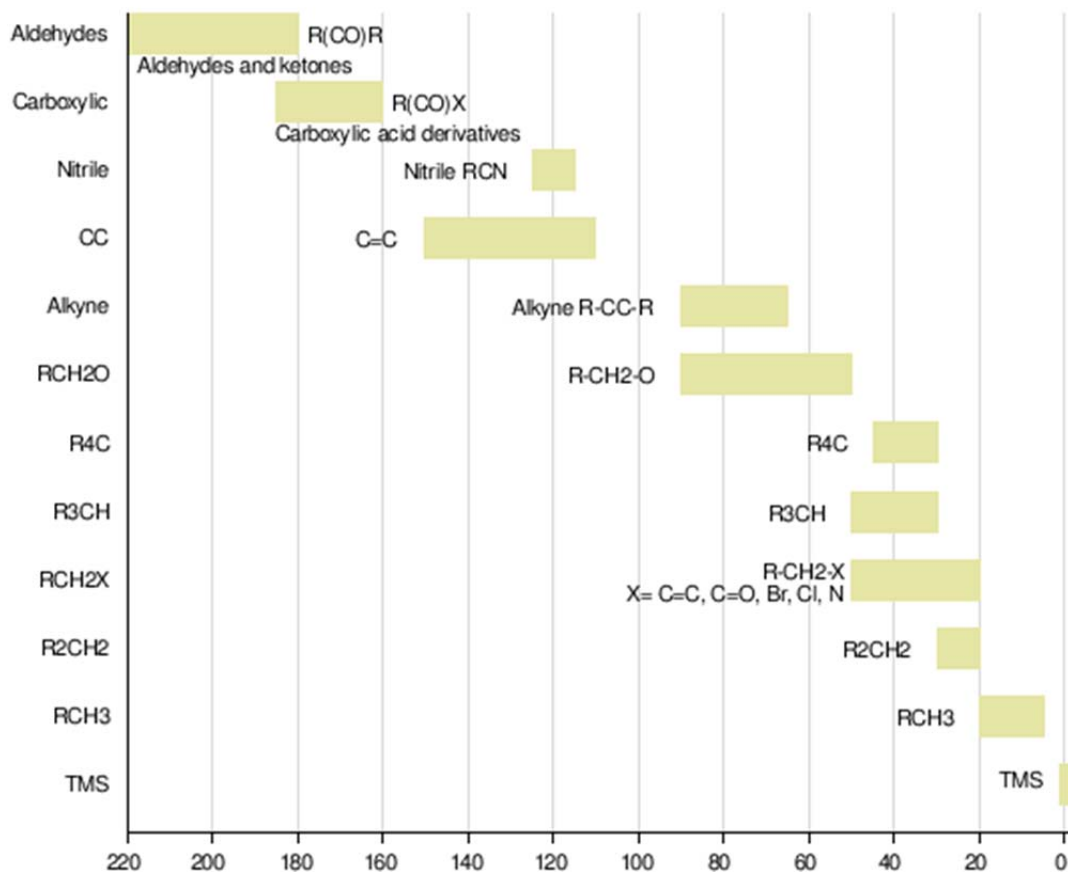
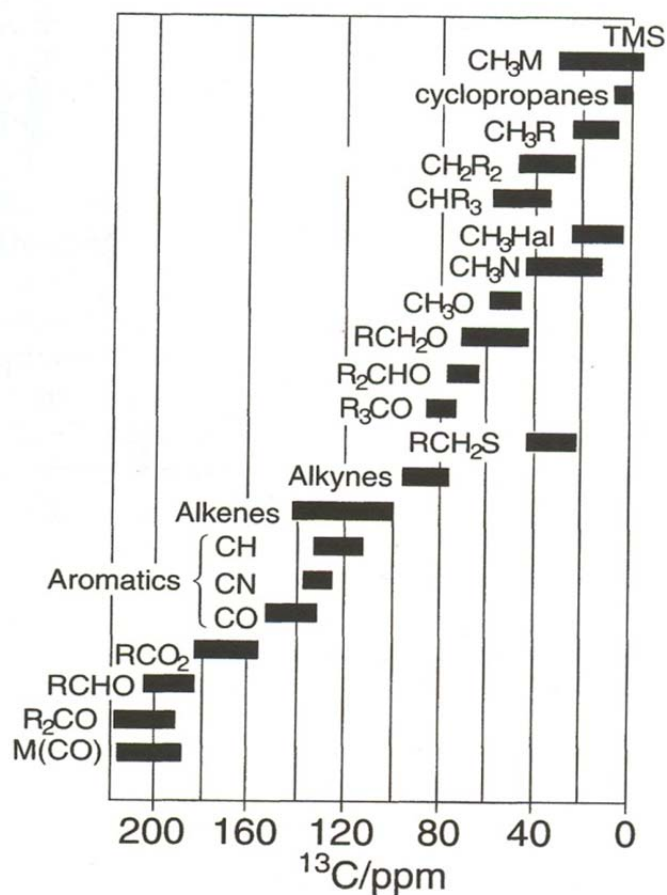
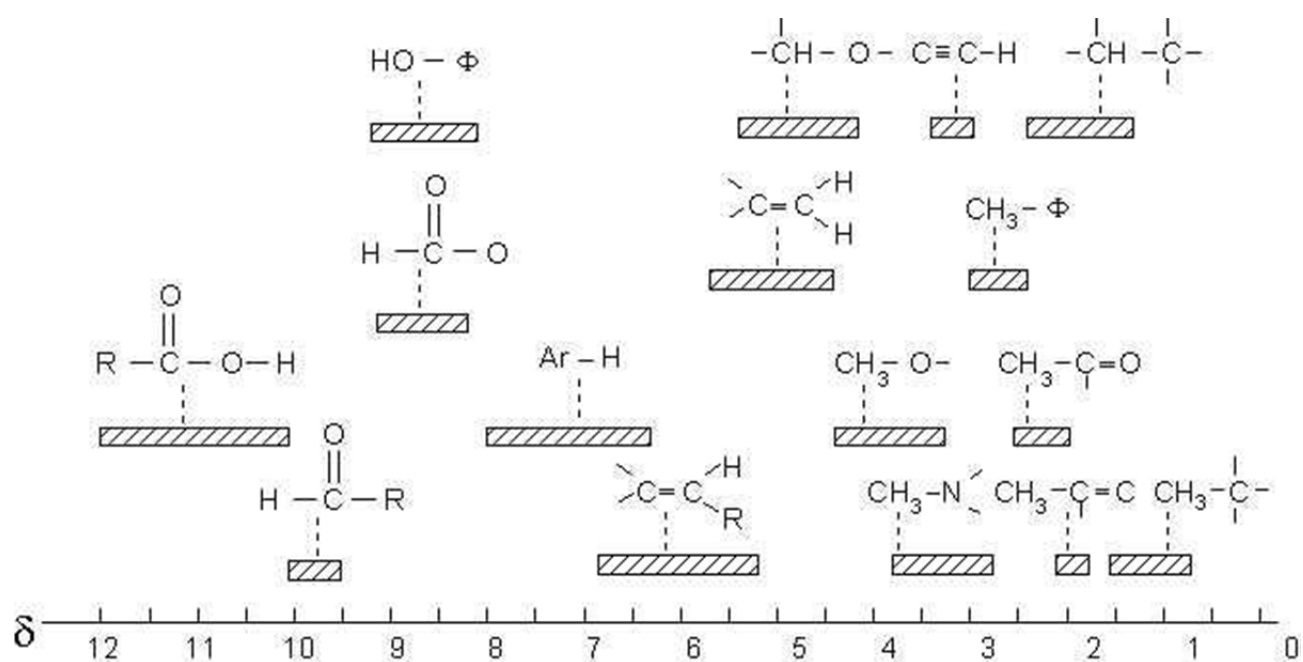
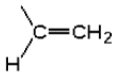
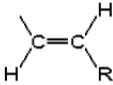
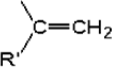
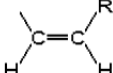
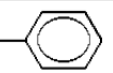
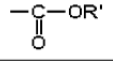
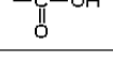
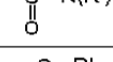
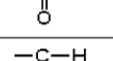
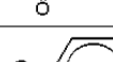
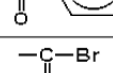
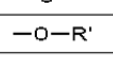
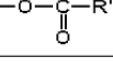
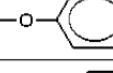
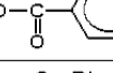
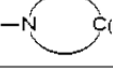
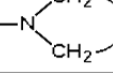
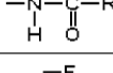


DÉPLACEMENTS CHIMIQUES EN δ DES CARBONES-13



DÉPLACEMENTS CHIMIQUES EN δ DES PROTONS



$-R$	CH_3-R	$R'-\text{CH}_2-R$	$R'R''-\text{CH}-R$
$-\text{CH}_3$	0,90	1,25	1,50
	1,70	1,90	--
	1,90	--	--
	2,00	--	--
	2,10	--	--
	2,35	2,60	2,85
	2,00	2,10	--
	2,05	2,35	2,55
	2,00	2,05	--
	2,10	2,40	2,50
	2,15	2,20	2,40
	3,55	--	--
	3,85	--	--
$-\text{O}-R'$	3,30	3,35	3,80
$-\text{O}-\text{H}$	3,40	3,55	3,85
	3,65	4,15	5,00
	3,70	3,90	--
	3,90	4,25	5,10
$-\text{S}-R'$	2,10	2,40	--
$-\text{NR}'_2$	2,15	2,50	2,85
	2,20	2,30	--
	--	2,70	--
	2,85	3,20	--
$-\text{F}$	4,25	4,35	--
$-\text{Cl}$	3,05	3,40	4,00
$-\text{Br}$	2,70	3,30	4,10
$-\text{I}$	2,15	3,15	4,20
$-\text{NO}_2$	4,30	4,40	--
$-\text{CN}$	2,00	--	--

DÉPLACEMENTS CHIMIQUES EN δ DE PROTONS ATTACHÉS À DES GROUPEMENTS INSATURÉS

	2,35		4,65
	5,40		5,60
	5,60		6,40
	5,80		5,02 H _a 5,02 H _b 6,40 H _c 5,70 H _d
	5,74 H _a 5,23 H _b 6,69 H _c		5,84 H _a 5,97 H _b 6,44 H _c
	6,24 H _a 6,11 H _b 5,69 H _c		4,17 H _a 3,96 H _b 6,46 H _c
	4,88 H _a 4,56 H _b 7,28 H _c		6,21 H _a 5,91 H _b 6,30 H _c
	4 H _a 4 H _b 7 H _c		6,40 H _a 5,83 H _b 6,14 H _c
	9,65		9,90
	7,25		8,50 H _a 7,00 H _b 7,35 H _c

DÉPLACEMENTS CHIMIQUES EN δ DES PROTONS DE BENZÈNES MONOSUBSTITUÉS

Substituant	ortho	méta	para
-NO ₂	0,92	0,25	0,38
-COOH	0,85	0,18	0,35
-COOCH ₂ CH ₃	0,78	0,14	0,25
-COCH ₃	0,60	0,27	0,37
-CHO	0,58	0,21	0,27
-CN	0,34	0,17	0,28
-I	0,37	-0,24	-0,02
-Br	0,17	-0,10	-0,06
-Cl	0,01	-0,04	-0,09
-CH ₃	-0,21	-0,13	-0,23
-OCOCH ₃	-0,21	-0,02	-0,13
-OCH ₃	-0,39	-0,01	-0,35
-OH	-0,43	-0,03	-0,34
-NH ₂	-0,63	-0,15	-0,54