

(a)

nuclei	spin	Natural abundance(%)	NMR frequency
^1H	$1/2$	99.98	100
^{13}C	$1/2$	1.11	25.144
^{15}N	$1/2$	0.37	10.133
^{19}F	$1/2$	100	94.077
^{31}P	$1/2$	100	40.481

(b)

