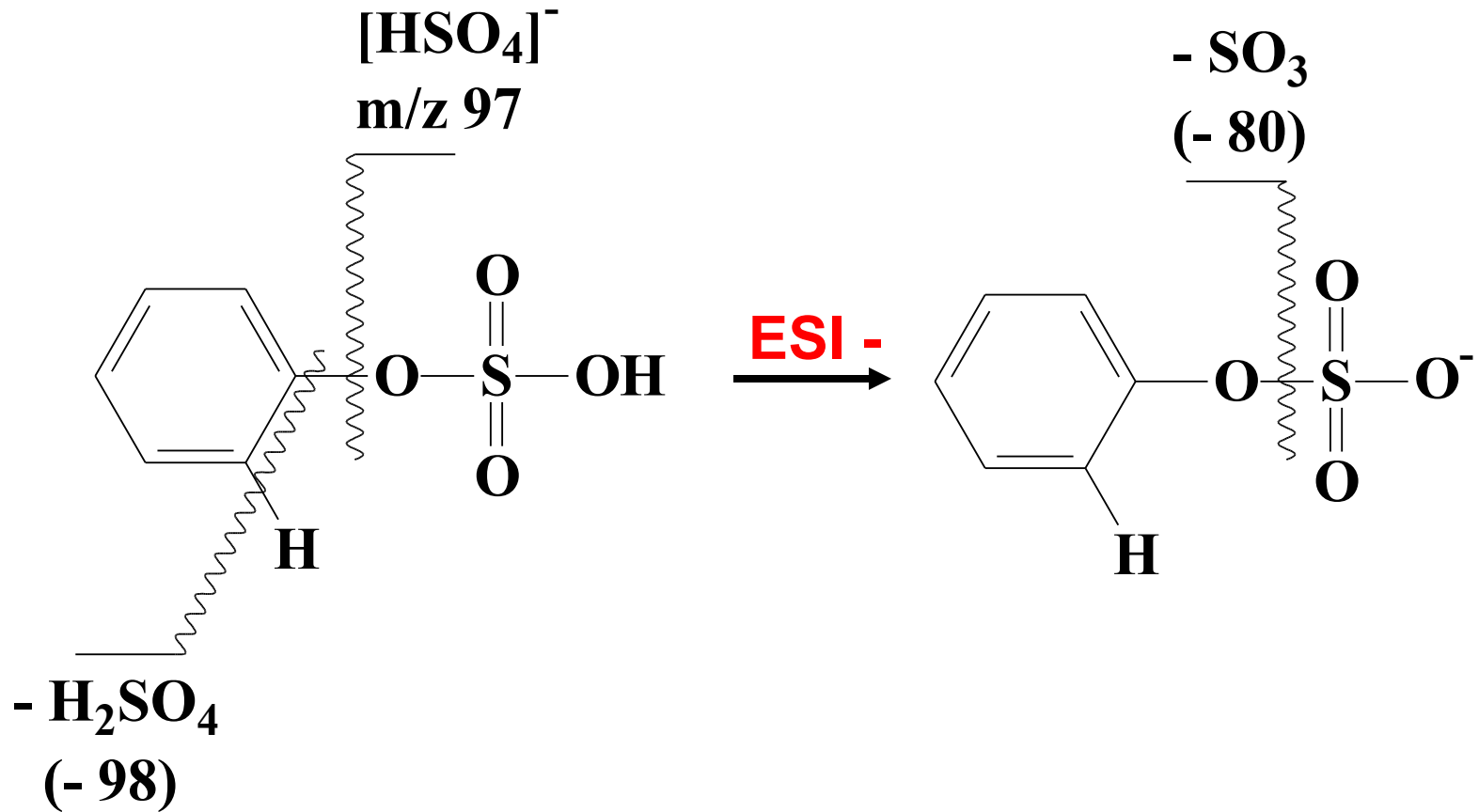
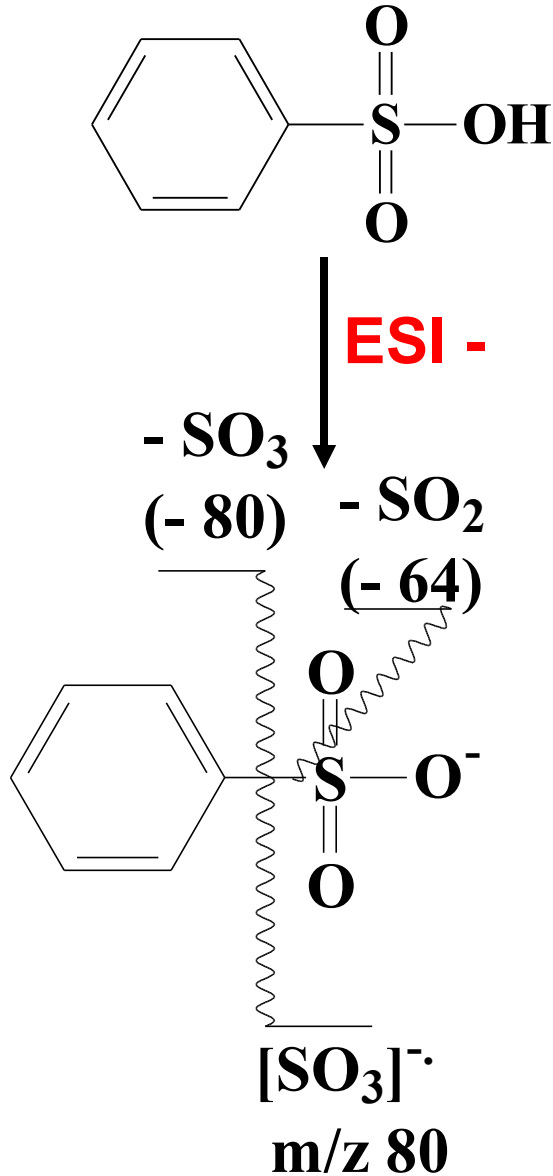


# Sulfate group - ROSO<sub>3</sub>H



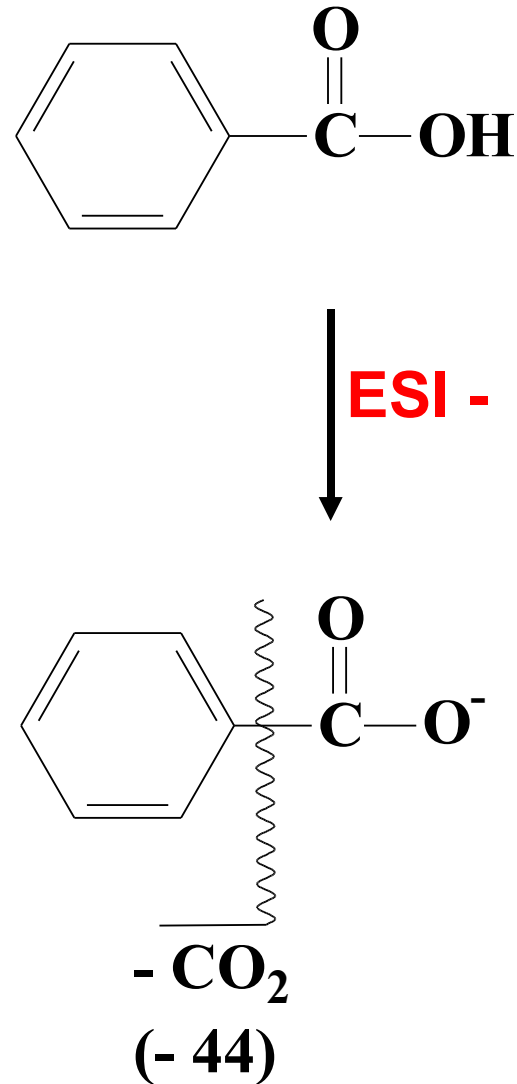
# Sulfonic acid

-  $\text{RSO}_3\text{H}$



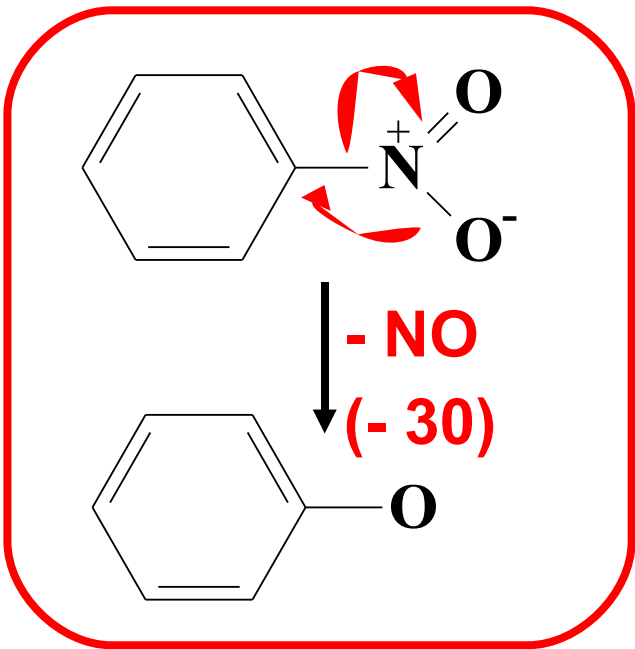
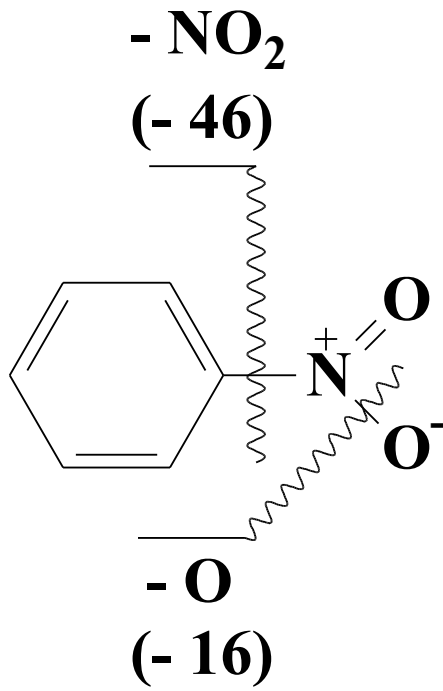
# Carboxylic acid

-  $\text{RCOOH}$



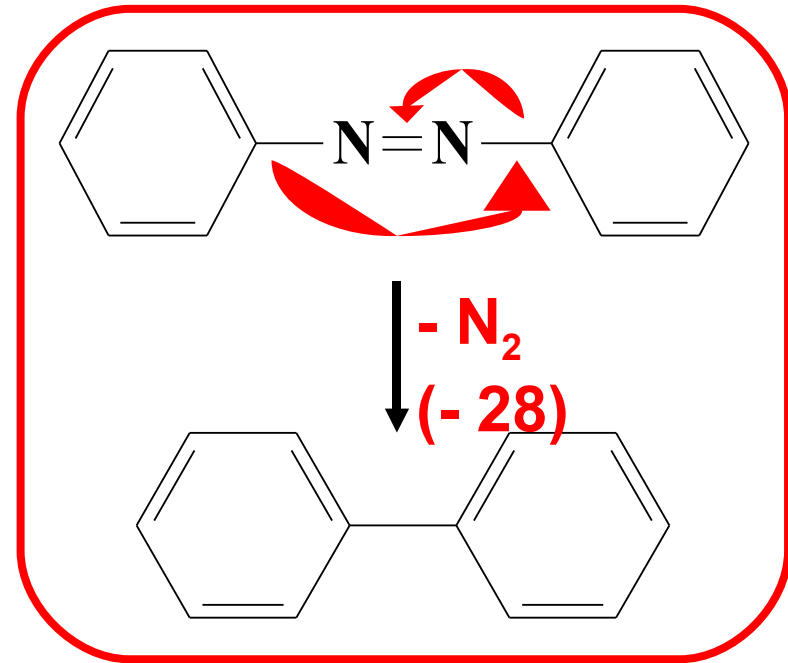
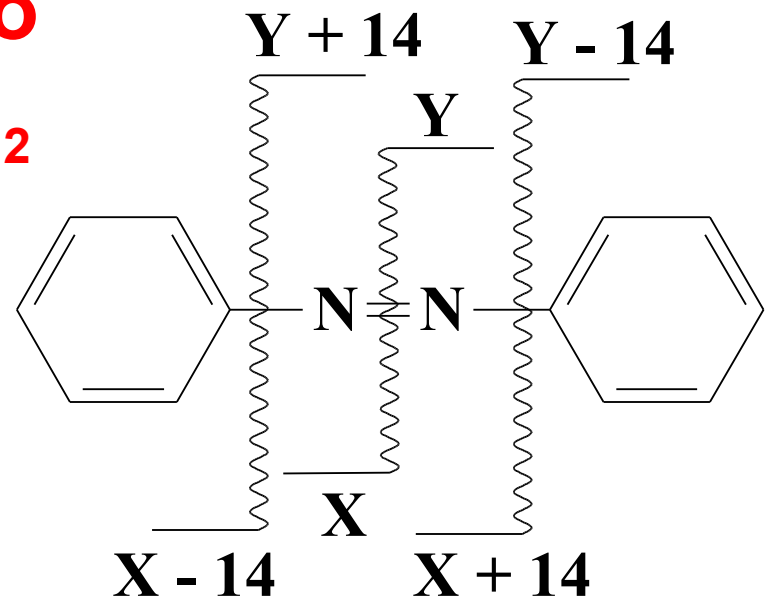
# Nitro

- NO<sub>2</sub>

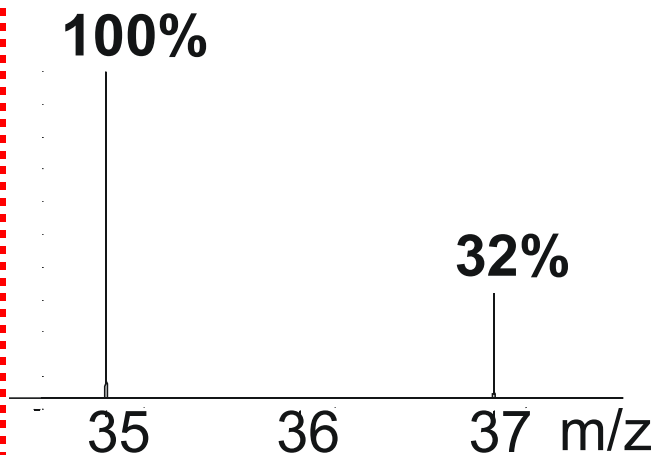
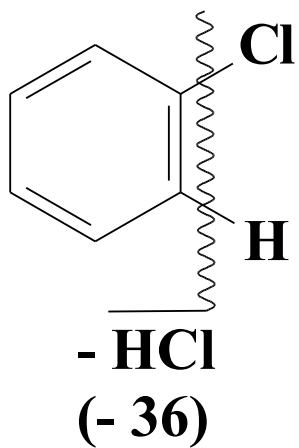


# Azo

- N<sub>2</sub>



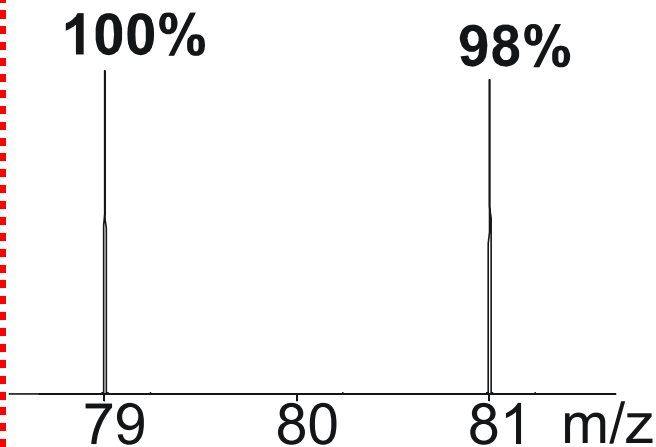
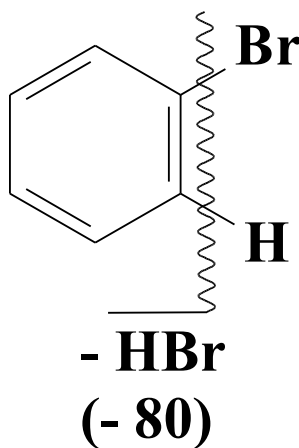
# Halogens - chlorine and bromine



Isotopic ratio

$$^{35}\text{Cl} : ^{37}\text{Cl} = 3 : 1$$

$$n * \text{Cl} = (3a + b)^n$$



Isotopic ratio

$$^{79}\text{Br} : ^{81}\text{Br} = 1 : 1$$

$$n * \text{Br} = (a + b)^n$$

# Chinones and phenols

