

Recognition of Molecules - E3 – 1

Functional Group/Name	Generic Structure	Line Drawing	Misc
Carboxylic Acid			
Ester			
Carboxylic Acid Salt (Na)			
Carboxylic Acid Salt (NH_4^+)			
Acid Anhydride			
Acid Halide Acyl Halide			
1° Amine			
2° Amine			
3° Amine			
Quaternary Ammonium Salt			
1° Amide			
2° Amide			
3° Amide			
Triacylglycerol (Fats and Oils)			
Soap			

Recognition of Molecules – E3 – 2

Functional Group/Name	Generic Structure	Line Drawing	Misc
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{RC}-\text{OH} \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{R}-\text{C}-\text{OR}' \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{RC}-\text{O}^- \text{Na}^+ \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{RC}-\text{O}^- \text{NH}_4^+ \end{array}$		
	$\begin{array}{c} \text{O} \quad \quad \text{O} \\ \parallel \quad \quad \parallel \\ \text{R}-\text{C}-\text{O}-\text{C}-\text{R}' \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{R}-\text{C}-\text{Cl} \end{array}$		
	$\begin{array}{c} \text{R} \\ \\ \text{N}-\text{H} \\ \\ \text{H} \end{array}$		
	$\begin{array}{c} \text{H} \\ \\ \text{R}-\text{N} \\ \\ \text{R}' \end{array}$		
	$\begin{array}{c} \text{R}'' \\ \\ \text{R}-\text{N} \\ \\ \text{R}' \end{array}$		
	$\begin{array}{c} \text{R}_4 \\ \\ \text{R}_1-\text{N}^+-\text{R}_3 \\ \\ \text{R}_2 \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{R}-\text{NH}_2 \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{R}-\text{C}-\text{N}-\text{H} \\ \\ \text{R}' \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{R}-\text{C}-\text{N}-\text{R}'' \\ \\ \text{R}' \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_2-\text{O}-\text{C}-\text{R} \\ \\ \text{CH}-\text{O}-\text{C}-\text{R}' \\ \\ \text{CH}_2-\text{O}-\text{C}-\text{R}'' \end{array}$		
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{RC}-\text{O}^- \text{Na}^+ \end{array}$		