

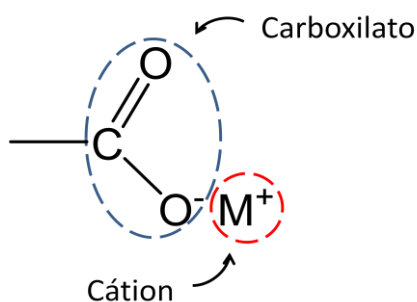


Lista de Exercícios

Nomenclatura Orgânica: Sais Orgânicos

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1. Introdução



GRUPO SAL DE ÁCIDO CARBOXÍLICO

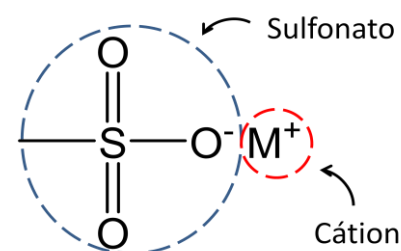
fotográficas, em fixadores de corantes de tecidos, no tingimento de couros e, principalmente, em sabões e sabonetes.

Sal de Ácido Sulfônico é uma função orgânica que se caracteriza pela presença, em sua estrutura, do grupamento sulfonato. Em fórmulas química, os grupos sulfônicos são representados como SO_3^- .

Os Sais de Ácidos Sulfônicos são mais conhecidos pela sua aplicação na obtenção de espumantes, que estão presentes em xampus, detergentes e cremes dentais. Esses sais agem como agentes surfactantes, ou seja, agem diminuindo a tensão superficial.

Sal de Ácido Carboxílico é uma função orgânica que se caracteriza pela presença, em sua estrutura, do grupamento carboxilato, formado pela ionização do grupamento carboxila de um ácido carboxílico. Em fórmulas químicas, os carboxilatos são representados como COO^- ou CO_2^- .

Os Sais de Ácidos Carboxílicos são produtos da reação de neutralização entre um ácido carboxílico e uma base inorgânica, ou também, da hidrólise alcalina de um éster. São sólidos a temperatura ambiente devido a ligação iônica do grupo carboxilato com um cátion. Esses sais possuem ampla aplicação comercial, como em medicamentos, em aditivos alimentares, em soluções



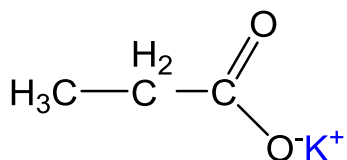
GRUPO SAL DE ÁCIDO SULFÔNICO

2. Regras de nomenclatura

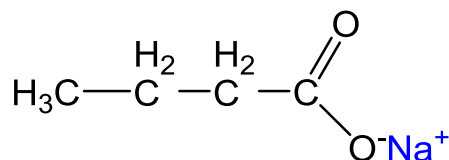
Para Sais de Ácido Carboxílico usamos a seguinte regra:

PREFIXO + INFIXO + OATO DE "NOME DO CÁTION"

Exemplos:



Propanoato de Potássio

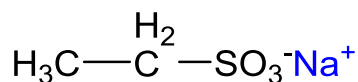


Butanoato de Sódio

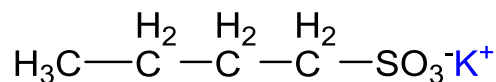
Para Sais de Ácido Sulfônico usamos a seguinte regra:

PREFIXO + INFIXO + OSSULFONATO DE "NOME DO CÁTION"

Exemplos:

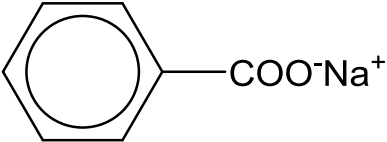
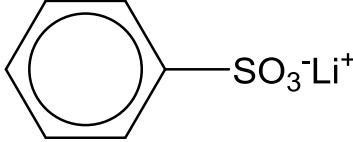


Etanossulfonato de Sódio

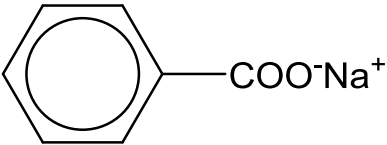
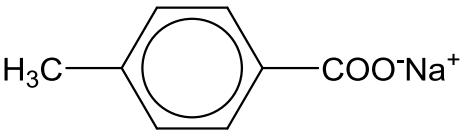
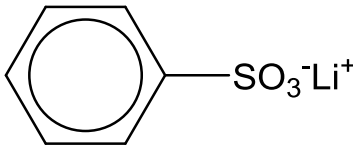


Butanossulfonato de Potássio

Dê os nomes dos seguintes compostos orgânicos:

$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}-\text{C} \\ \\ \text{O}^-\text{Na}^+ \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C} \\ \\ \text{O}^-\text{Na}^+ \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \quad \\ \text{H}_2 \quad \text{H}_2 \\ \quad \\ \text{O}^-\text{Na}^+ \end{array}$
$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{C} \\ \quad \quad \\ \text{H}_2 \quad \text{H}_2 \quad \text{H}_2 \\ \quad \quad \\ \text{O}^-\text{K}^+ \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{C}-\text{C} \\ \quad \quad \quad \\ \text{H}_2 \quad \text{H}_2 \quad \text{H}_2 \quad \text{H}_2 \\ \quad \quad \quad \\ \text{O}^-\text{K}^+ \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \quad \\ \text{H} \quad \text{CH}_3 \\ \quad \\ \text{O}^-\text{K}^+ \end{array}$
$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_2\text{C}=\text{C}-\text{C} \\ \quad \\ \text{H} \quad \text{O}^-\text{Na}^+ \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}=\text{C}-\text{C} \\ \quad \quad \\ \text{H} \quad \text{H} \quad \text{O}^-\text{Na}^+ \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \quad \\ \text{H} \quad \text{CH}_3 \\ \quad \\ \text{O}^-\text{K}^+ \end{array}$
$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \quad \\ \text{H}_2 \quad \text{CH}_3 \\ \quad \\ \text{H} \quad \text{O}^-\text{Ag}^+ \end{array}$	$\begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ \text{C}-\text{C}-\text{C}-\text{C} \\ \quad \quad \\ \text{H}_2 \quad \text{H}_2 \quad \text{H}_2 \\ \quad \quad \\ \text{O}^-\text{Na}^+ \quad \text{O}^-\text{Na}^+ \end{array}$	$\begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ \text{C}-\text{C}-\text{C} \\ \quad \\ \text{H}_2 \quad \text{H}_2 \\ \quad \\ \text{O}^-\text{K}^+ \quad \text{O}^-\text{K}^+ \end{array}$
$\begin{array}{c} \text{H}_3\text{C}-\text{C}=\text{C}-\text{C}-\text{COO}^-\text{Na}^+ \\ \quad \quad \\ \text{H} \quad \text{H} \quad \text{H}_2 \end{array}$	$\begin{array}{c} \text{H}_2\text{C}=\text{C}-\text{C}=\text{C}-\text{COO}^-\text{Li}^+ \\ \quad \quad \\ \text{H} \quad \text{H} \quad \text{H} \end{array}$	$\text{HC}\equiv\text{C}-\text{C}-\text{C}-\text{COO}^-\text{Ag}^+ \\ \quad \\ \text{H}_2 \quad \text{H}_2 \end{array}$
$\begin{array}{c} \text{H}_3\text{C}-\text{C}-\text{C}-\text{COO}^-\text{K}^+ \\ \quad \\ \text{H}_2 \quad \text{CH}_3 \\ \quad \\ \text{H} \quad \text{H}_2 \end{array}$		$\text{H}_3\text{C}-\text{C}_6\text{H}_4-\text{COO}^-\text{Na}^+$
$\text{H}_3\text{C}-\text{SO}_3^-\text{Na}^+$	$\text{H}_3\text{C}-\text{C}-\text{SO}_3^-\text{K}^+ \\ \\ \text{H}_2$	$\text{H}_3\text{C}-\text{C}-\text{C}-\text{SO}_3^-\text{K}^+ \\ \quad \\ \text{H}_2 \quad \text{H}_2$
$\text{H}_3\text{C}-\text{C}-\text{C}-\text{C}-\text{SO}_3^-\text{Na}^+ \\ \quad \quad \\ \text{H}_2 \quad \text{H}_2 \quad \text{H}_2$	$\begin{array}{c} \text{CH}_3 \\ \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{SO}_3^-\text{K}^+ \\ \quad \\ \text{H} \quad \text{H}_2 \end{array}$	$\begin{array}{c} \text{SO}_3^-\text{Na}^+ \\ \\ \text{H}_3\text{C}-\text{C}-\text{CH}_3 \\ \\ \text{H} \end{array}$
$\begin{array}{c} \text{SO}_3^-\text{K}^+ \\ \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{CH}_3 \\ \quad \\ \text{H}_2 \quad \text{H} \end{array}$	$\begin{array}{c} \text{SO}_3^-\text{Ag}^+ \\ \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{CH}_3 \\ \quad \\ \text{H}_2 \quad \text{H}_2 \end{array}$	

GABARITO

$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}-\text{C} \\ \diagdown \\ \text{O}^- \text{Na}^+ \end{array}$ <p>Metanoato de Sódio</p>	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C} \\ \diagdown \\ \text{O}^- \text{Na}^+ \end{array}$ <p>Etanoato de Sódio</p>	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \diagdown \quad \diagup \\ \text{O}^- \text{Na}^+ \end{array}$ <p>Propanoato de Sódio</p>
$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{C} \\ \diagdown \quad \diagup \quad \diagup \\ \text{O}^- \text{K}^+ \end{array}$ <p>Butanoato de Potássio</p>	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{C}-\text{C} \\ \diagdown \quad \diagup \quad \diagup \quad \diagup \\ \text{O}^- \text{K}^+ \end{array}$ <p>Pentanoato de Potássio</p>	$\begin{array}{c} \text{CH}_3 \\ \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \quad \diagdown \quad \diagup \\ \text{H} \quad \text{O}^- \text{K}^+ \end{array}$ <p>Metilpropanoato de Potássio</p>
$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_2\text{C}=\text{C}-\text{C} \\ \quad \diagdown \\ \text{H} \quad \text{O}^- \text{Na}^+ \end{array}$ <p>Propenoato de Sódio</p>	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}=\text{C}-\text{C} \\ \quad \quad \diagdown \\ \text{H} \quad \text{H} \quad \text{O}^- \text{Na}^+ \end{array}$ <p>But-2-enoato de Sódio</p>	$\begin{array}{c} \text{CH}_3 \\ \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \quad \diagdown \quad \diagup \\ \text{H} \quad \text{H}_2 \quad \text{O}^- \text{K}^+ \end{array}$ <p>3-Metilbutanoato de Potássio</p>
$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{C} \\ \quad \quad \diagdown \\ \text{H}_2 \quad \text{CH}_3 \quad \text{O}^- \text{Ag}^+ \end{array}$ <p>2-Metilbutanoato de Prata</p>	$\begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ \text{Na}^+ \text{O}^- \text{C}-\text{C}-\text{C}-\text{C} \\ \diagdown \quad \diagup \quad \diagdown \quad \diagup \\ \text{H}_2 \quad \text{H}_2 \quad \text{O}^- \text{Na}^+ \end{array}$ <p>Butanodioato de Sódio</p>	$\begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ \text{K}^+ \text{O}^- \text{C}-\text{C}-\text{C} \\ \diagdown \quad \diagup \quad \diagdown \quad \diagup \\ \text{H}_2 \quad \text{O}^- \text{K}^+ \end{array}$ <p>Propanodioato de Potássio</p>
$\begin{array}{c} \text{H}_2 \\ \\ \text{H}_3\text{C}-\text{C}=\text{C}-\text{C}-\text{COO}^- \text{Na}^+ \\ \quad \\ \text{H} \quad \text{H} \end{array}$ <p>Pent-3-enoato de Sódio</p>	$\begin{array}{c} \text{H}_2 \\ \\ \text{H}_2\text{C}=\text{C}-\text{C}=\text{C}-\text{COO}^- \text{Li}^+ \\ \quad \quad \\ \text{H} \quad \text{H} \quad \text{H} \end{array}$ <p>Pent-2,4-dienoato de Lítio</p>	$\begin{array}{c} \text{H}_2 \quad \text{H}_2 \\ \quad \\ \text{HC}\equiv\text{C}-\text{C}-\text{C}-\text{COO}^- \text{Ag}^+ \\ \diagdown \quad \diagup \\ \text{H} \quad \text{H} \end{array}$ <p>Pent-4-inoato de Prata</p>
$\begin{array}{c} \text{CH}_3 \\ \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{C} \\ \quad \quad \diagdown \\ \text{H}_2 \quad \text{H}_2 \quad \text{COO}^- \text{K}^+ \end{array}$ <p>3-Metilpentanoato de Potássio</p>	 <p>Benzoato de Sódio</p>	 <p>4-metilbenzoato de sódio</p>
$\text{H}_3\text{C}-\text{SO}_3^- \text{Na}^+$ <p>Metanossulfonato de Sódio</p>	$\text{H}_3\text{C}-\text{C}-\text{SO}_3^- \text{K}^+$ <p>Etanossulfonato de Sódio</p>	$\text{H}_3\text{C}-\text{C}-\text{C}-\text{SO}_3^- \text{K}^+$ <p>Propano-1-sulfonato de Potássio</p>
$\text{H}_3\text{C}-\text{C}-\text{C}-\text{C}-\text{SO}_3^- \text{Na}^+$ <p>Butano-1-sulfonato de Sódio</p>	$\begin{array}{c} \text{CH}_3 \\ \\ \text{H}_3\text{C}-\text{C}-\text{C} \\ \quad \diagdown \\ \text{H} \quad \text{SO}_3^- \text{K}^+ \end{array}$ <p>Metilpropano-1-sulfonato de Potássio</p>	$\begin{array}{c} \text{SO}_3^- \text{Na}^+ \\ \\ \text{H}_3\text{C}-\text{C}-\text{CH}_3 \\ \\ \text{H} \end{array}$ <p>Propano-2-sulfonato de Sódio</p>
$\begin{array}{c} \text{SO}_3^- \text{K}^+ \\ \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{CH}_3 \\ \\ \text{H}_2 \end{array}$ <p>Butano-2-sulfonato de Potássio</p>	$\begin{array}{c} \text{SO}_3^- \text{Ag}^+ \\ \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{C}-\text{CH}_3 \\ \quad \\ \text{H}_2 \quad \text{H}_2 \end{array}$ <p>Pentano-3-sulfonato de Prata</p>	 <p>Benzenossulfonato de Lítio</p>