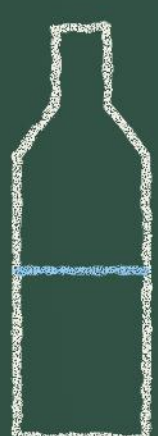
PrayogX · Chemistry

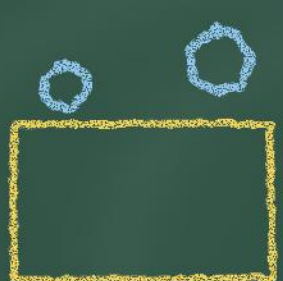
PRAYOGX

Uses of Carboxylic Acids

carboxylic acids: everywhere



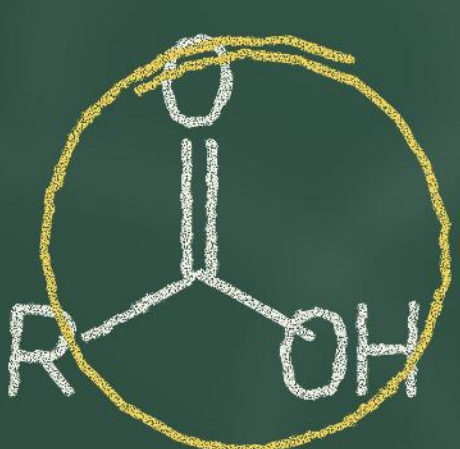
vinegar



soap



aspirin

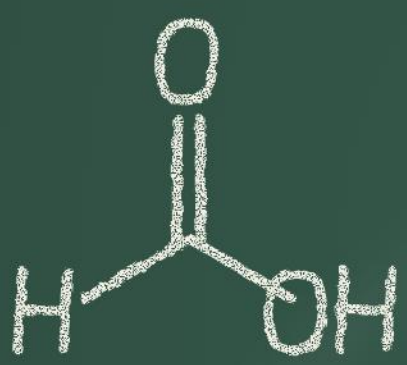


-COOH

PrayogX · Chemistry

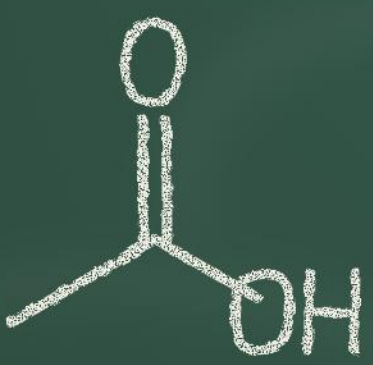
PRAYOGX

Uses of Carboxylic Acids



methanoic acid
(formic acid)

- rubber
- textile
- dyeing
- leather
- electroplating



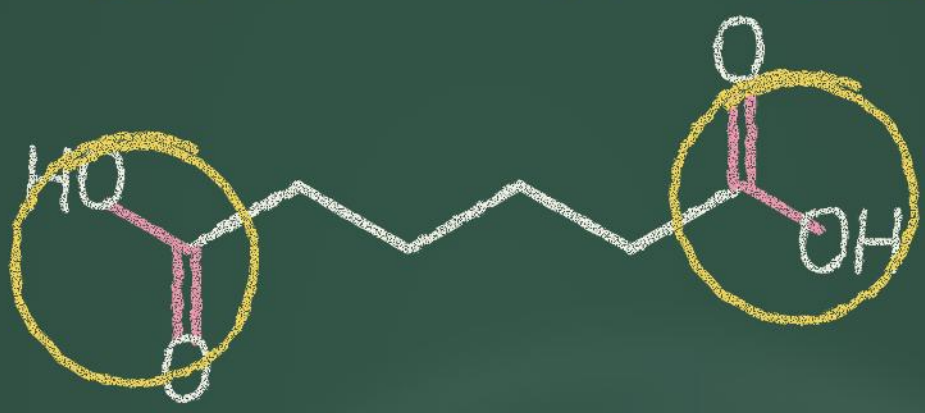
ethanoic acid
(acetic acid)

- solvent
- vinegar (food)

PrayogX · Chemistry

PRAYOGX

Uses of Carboxylic Acids

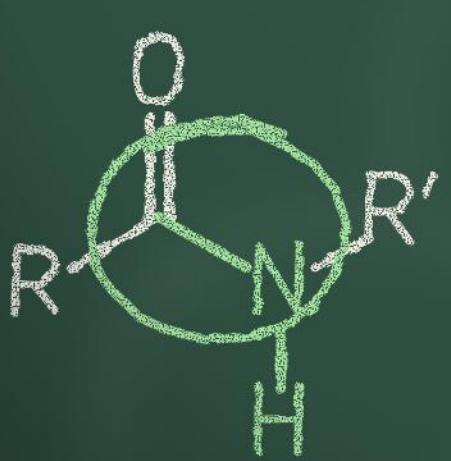


hexanedioic (adipic) acid

diamine $H_2N-(CH_2)_6-NH_2$



$-H_2O$



amide link

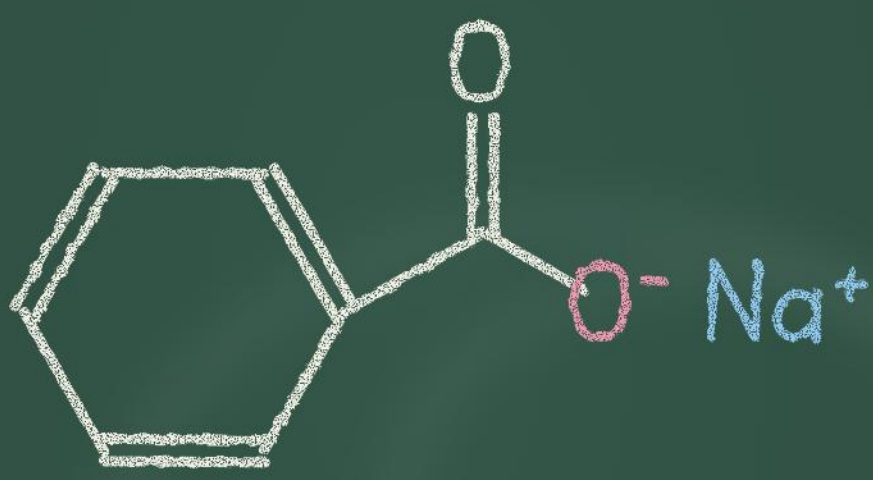
nylon-6,6

ropes, fabric

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Uses of Carboxylic Acids



sodium benzoate

jam · sauce · cold drinks

food preservative

microbes cannot grow

benzoic esters → perfumes

PrayogX · Chemistry

PRAYOGX

Uses of Carboxylic Acids

higher fatty acids

stearic acid $C_{17}H_{35}COOH$



sodium stearate = soap

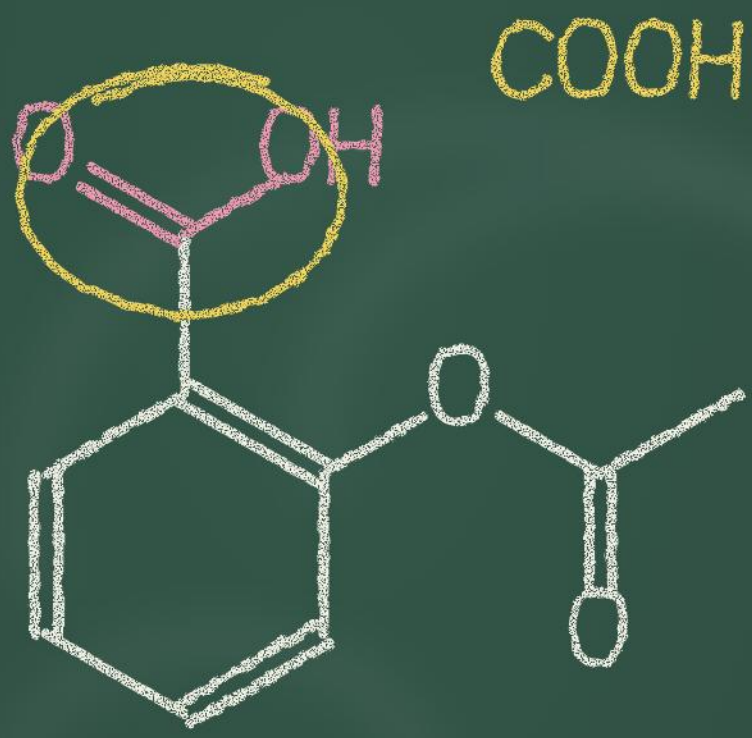
long oily tail: holds grease

COO^- head: loves water

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Uses of Carboxylic Acids



aspirin = acetylsalicylic acid

relieves pain and fever

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Uses of Carboxylic Acids

one COOH, many uses

formic acid → industry

acetic acid → vinegar

adipic acid → nylon

Na benzoate → preservative

fatty acids → soap

aspirin → medicine

kitchen → pharmacy

next: the chapter recap