

# Organické látky

## Struktury a reakce

Velkou část polutantů tvoří syntetické organické molekuly. Kumulují se v potravním řetězci, degradují velmi pomalu. Chování určují fyzikální a chemické vlastnosti. Podstatnou součástí je tzv. organický uhlík.

### **Důležité fyzikální vlastnosti**

Rozpustnost ve vodě  
Rozpustnost v tucích  
Těkavost

### **Chemické vlastnosti**

Reaktivita (degradabilita)

# Organické látky

## Fyzikální vlastnosti

Molekuly, které obsahují pouze uhlík, vodík a halogenidy nejsou rozpustné ve vodě.

Molekuly, které obsahují pouze uhlík, vodík a halogenidy jsou rozpustné v tucích.

Molekuly, které obsahují pouze uhlík, vodík a halogenidy jsou těkavé.

Molekuly, které obsahují kyslík, jsou rozpustnější než jejich bezkyslíkaté analogy.

Molekuly, které obsahují kyslík, jsou méně těkavé než jejich bezkyslíkaté analogy.

## Chemické vlastnosti

Nasycené molekuly, které obsahují pouze uhlík, vodík a halogenidy nejsou reaktivní.

Rozvětvené molekuly, jsou méně reaktivní než přímé řetězce.

Molekuly, které obsahují dvojitě nebo trojitě vazby jsou reaktivnější než jejich nasycené analogy.

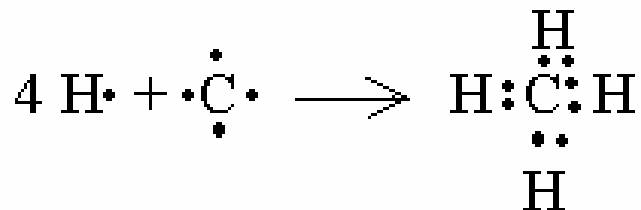
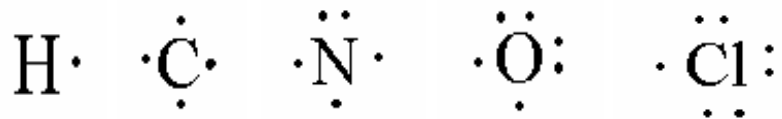
Molekuly, které obsahují kyslík jsou reaktivnější než jejich bezkyslíkaté analogy.

# Obecná pravidla

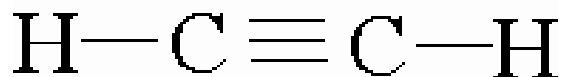
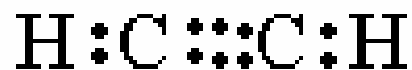
Vazby

Tvar molekul

Struktura, velikost a prostorový tvar jsou velmi důležité – určují možnost interakcí

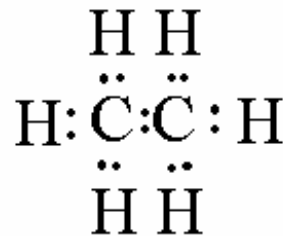
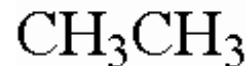


Ethin (acetylen)

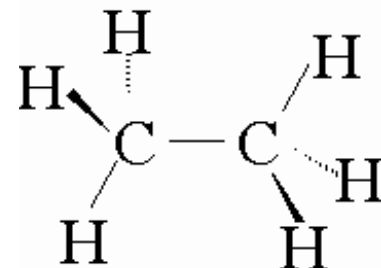


Prezentace

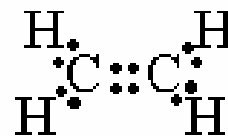
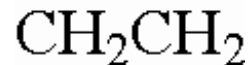
Ethan



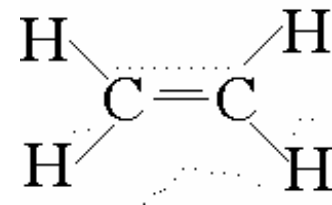
Nasyčené uhlovodíky



Ethen (ethylen)

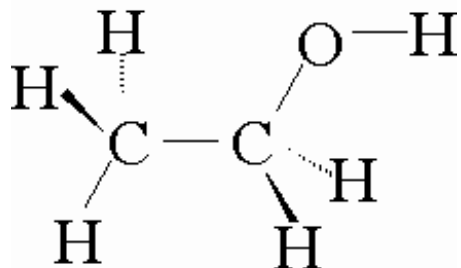


Nenasycené uhlovodíky

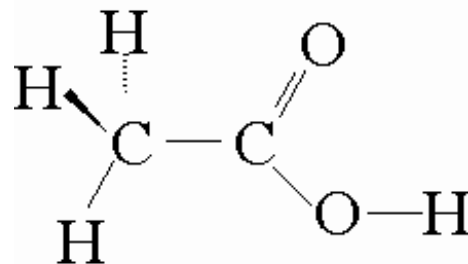


# Skupiny

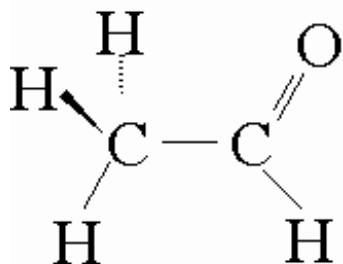
## Alkoholy



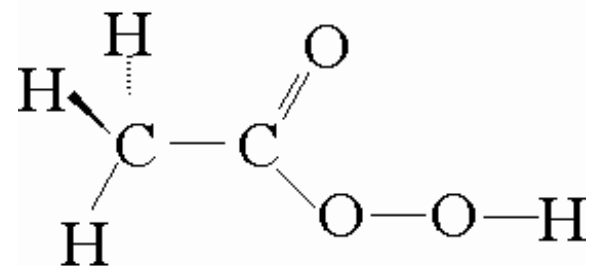
## Organické kyseliny



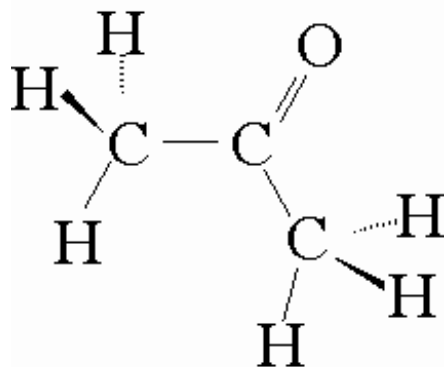
## Aldehydy



## Organické peroxykyseliny – fotochemický smog

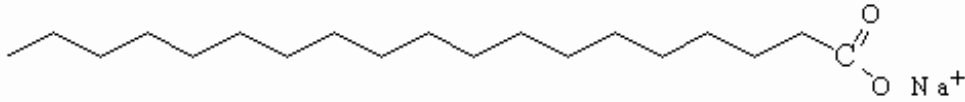


## Ketony

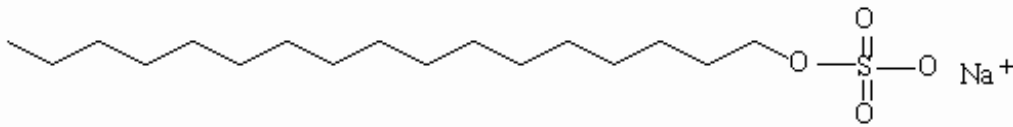


# Pesticidy, herbicidy, PCB, odpady

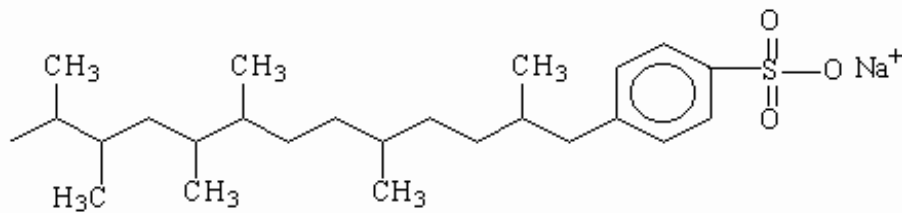
## Mýdlo



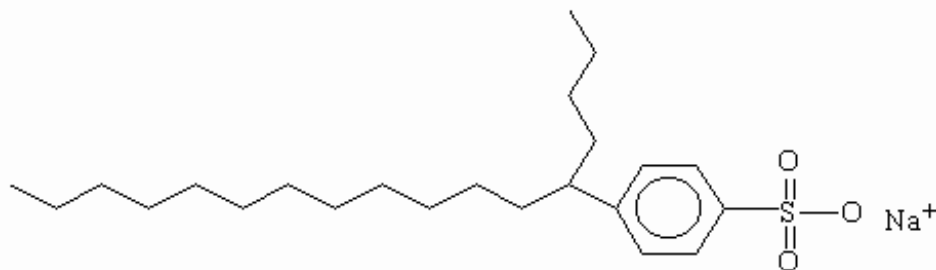
## Alkyl sulfátové povrchově aktivní látky



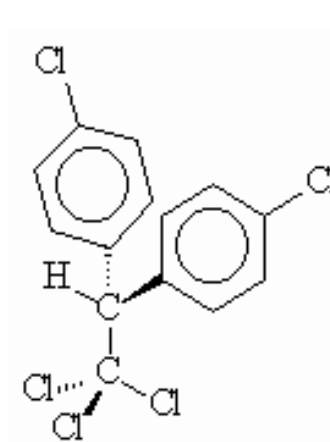
## Alkylbenzen sulfonát (ABS)



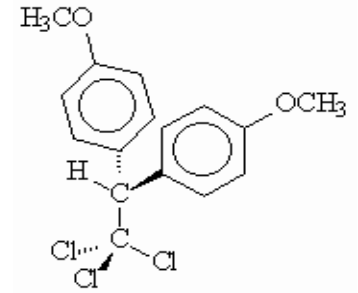
## Lineární alkyl sulfonát (LAS)



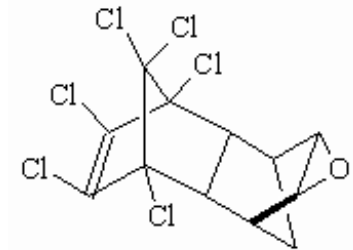
## Organochlorované insekticidy



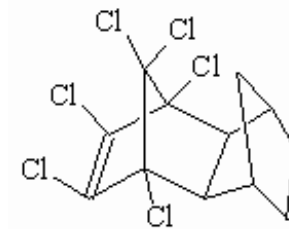
DDT



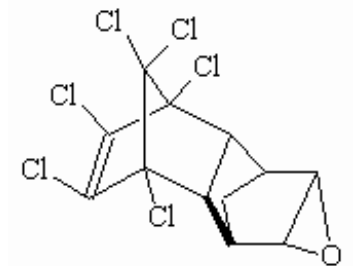
Methoxychlor



Dieldrin

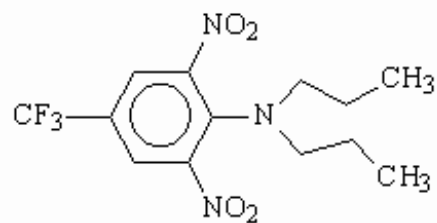


Aldrin



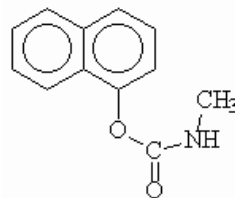
Endrin

## Nitroanilinové herbicidy

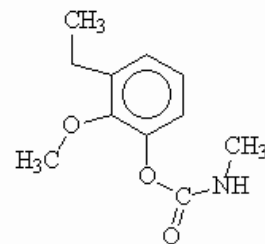


Trifluralin

## Běžné insekticidy

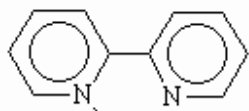


Carbaryl

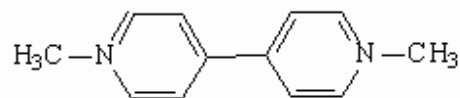


Carbofuran

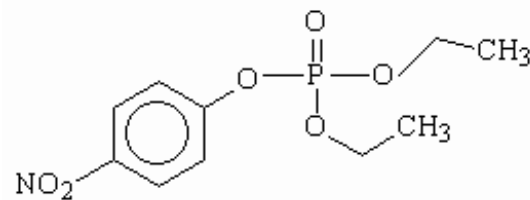
## Dipyridilium herbicidy



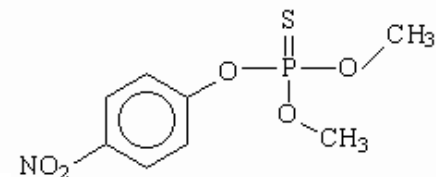
Diquat



Paraquat

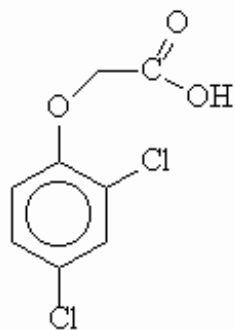


Ethyl Parathion

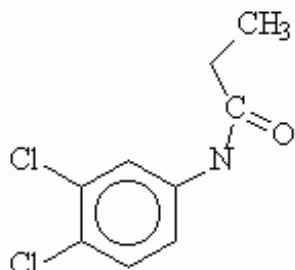


Methyl Parathion

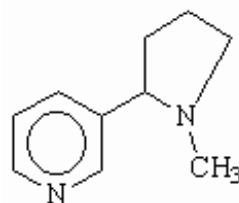
## Běžné herbicidy



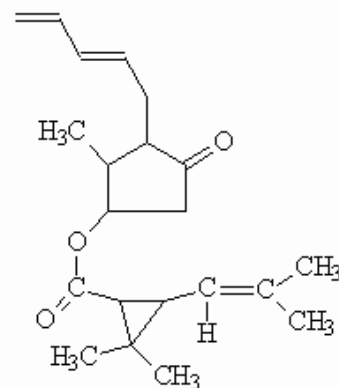
2,4-Dichlorophenoxyacetic acid



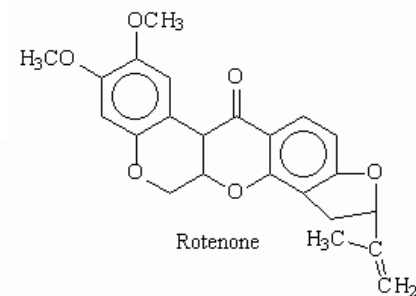
Propanil



Nicotine

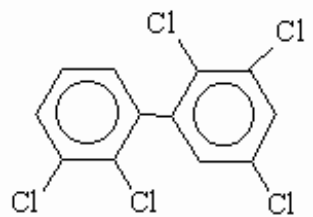
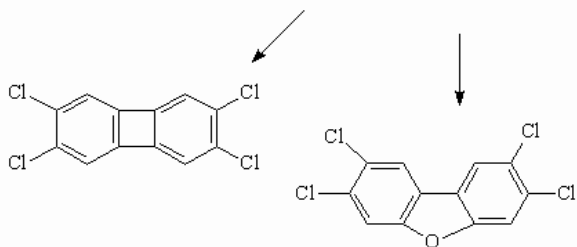


Allethrin



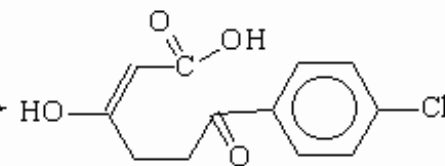
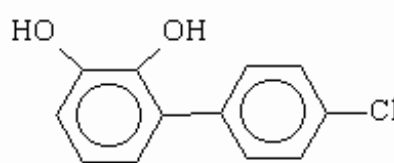
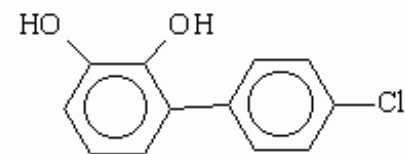
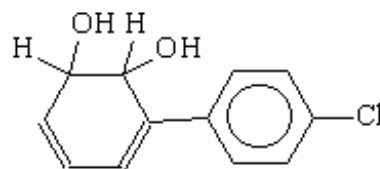
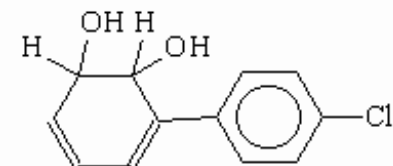
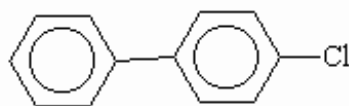
Rotenone

# Polychlorované bifenyly

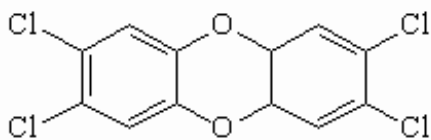


Polychlorinated Biphenyl

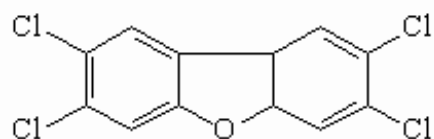
## Polychlorované bifenyly – přírodní degradace



# Dioxiny a furany



2,3,7,8-Tetrachlorodibenzo-p-dioxin



2,3,7,8-Tetrachlorodibenzo-p-furan