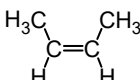
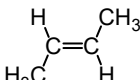


MUDrTest

**TABUĽKY
ORGANICKÝCH
ZLÚČENÍN**

názov	vzorec		jednoväzbová skupina	vzorec	
ALKÁNY			ALKYLY		
metán	CH ₄		metyl-	CH ₃ -	
etán	CH ₃ -CH ₃	C ₂ H ₆	etyl-	CH ₃ -CH ₂ -	C ₂ H ₅ -
propán	CH ₃ -CH ₂ -CH ₃	C ₃ H ₈	propyl-	CH ₃ -CH ₂ -CH ₂ -	C ₃ H ₇ -
			izopropyl-	CH ₃ -CH-CH ₃	C ₃ H ₇ -
bután	CH ₃ -(CH ₂) ₂ -CH ₃	C ₄ H ₁₀	butyl-	CH ₃ -(CH ₂) ₂ -CH ₂ -	C ₄ H ₉ -
pentán	CH ₃ -(CH ₂) ₃ -CH ₃	C ₅ H ₁₂			
hexán	CH ₃ -(CH ₂) ₄ -CH ₃	C ₆ H ₁₄			
heptán	CH ₃ -(CH ₂) ₅ -CH ₃	C ₇ H ₁₆			
oktán	CH ₃ -(CH ₂) ₆ -CH ₃	C ₈ H ₁₈			
nonán	CH ₃ -(CH ₂) ₇ -CH ₃	C ₉ H ₂₀			
dekán	CH ₃ -(CH ₂) ₈ -CH ₃	C ₁₀ H ₂₂			
CYKLOALKÁNY					
cyklopropán		C ₃ H ₆			
cyklobután		C ₄ H ₈			
cyklopentán		C ₅ H ₁₀			
cyklohexán		C ₆ H ₁₂			
ALKÉNY			ALKENYLY		
etén (etylén)	CH ₂ =CH ₂	C ₂ H ₄	vinyl-	CH ₂ =CH-	
propén (propylén)	CH ₂ =CH-CH ₃	C ₃ H ₆			
but-1-én	CH ₂ =CH-CH ₂ -CH ₃	C ₄ H ₈			
cis-but-2-én		C ₄ H ₈			
trans-but-2-én		C ₄ H ₈			
pent-1-én	CH ₂ =CH-(CH ₂) ₂ -CH ₃	C ₅ H ₁₀			
hex-1-én	CH ₂ =CH-(CH ₂) ₃ -CH ₃	C ₆ H ₁₂			
CYKLOALKÉNY					
cykohexén		C ₆ H ₁₀			

názov	vzorec	jednoväzbová skupina	vzorec
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ALKADIÉNY

buta-1,3-dién	$\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$ C_4H_6		
izoprén (2-methylbuta-1,3-dién)	$\text{CH}_2=\underset{\text{CH}_3}{\text{C}}-\text{CH}=\text{CH}_2$ C_5H_8		

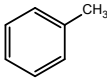
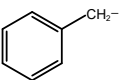
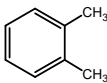
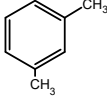
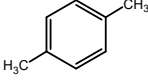
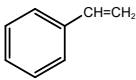
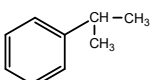
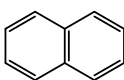
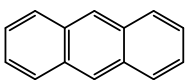
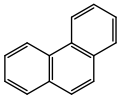
ALKÍNY

ALKINYLY

etín (acetylén)	$\text{CH}\equiv\text{CH}$ C_2H_2	etynyl-	$\text{CH}\equiv\text{C}-$
propín	$\text{CH}\equiv\text{C}-\text{CH}_3$ C_3H_4		
but-1-ín	$\text{CH}\equiv\text{C}-\text{CH}_2-\text{CH}_3$ C_4H_6		
pent-1-ín	$\text{CH}\equiv\text{C}-(\text{CH}_2)_2-\text{CH}_3$ C_5H_8		
hex-1-ín	$\text{CH}\equiv\text{C}-(\text{CH}_2)_3-\text{CH}_3$ C_6H_{10}		

AROMATICKÉ UHLŮVODÍKY (ARÉNY)

JEDNOVÄZBOVÉ SKUPINY

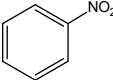
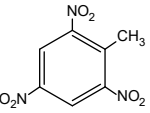
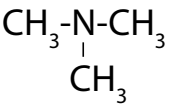
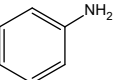
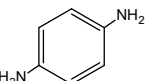
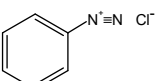
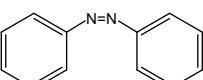
benzén	  C_6H_6	fenyl- <i>(patrí medzi aryly)</i>	  C_6H_5-
toluén (methylbenzén)		benzyl- <i>(patrí medzi alkyly)</i>	
o-xylén (1,2-dimetylbenzén)			
m-xylén (1,3-dimetylbenzén)			
p-xylén (1,4-dimetylbenzén)			
styrén (vinylbenzén)			
kumén (izopropylbenzén)			
naftalén			
antracén			
fenantrén			

názov	vzorec	vlastnosti, využitie
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HALOGÉNOVÉ DERIVÁTY

chlórmetán (metylchlorid)	CH ₃ Cl	
trichlórmetán (chloroform)	CHCl ₃	omamná látka, nepolárne rozpúšťadlo
tribrómmetán (bromoform)	CHBr ₃	
trijódmetán (jodoform)	CHI ₃	antiseptické (dezinfekčné) vlastnosti
difluórdichlórmetán	CF ₂ Cl ₂	chladiace zmesi, freón, poškodzuje ozónovú vrstvu
chloretén (vinylchlorid)	CH ₂ =CH-Cl	výroba plastov - PVC (polyvinylchlorid)
1,1,2,2-tetrafluóretén	CF ₂ =CF ₂	výroba teflónu (polytetrafluóretylén)

DUSÍKATÉ DERIVÁTY

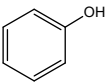
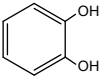
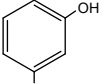
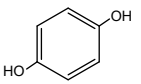
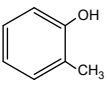
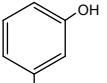
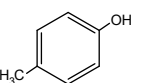
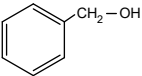
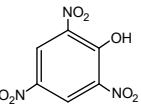
nitrobenzén		
2,4,6-trinitrotoluén		výbušnina TNT
metylamín	CH ₃ -NH ₂	primárny amín
dimetylamín	CH ₃ -NH-CH ₃	sekundárny amín
trimetylamín		terciárny amín
bután-1,4-diamín (tetrametyléndiamín, putrescín)	H ₂ N-(CH ₂) ₄ -NH ₂	hnilobný amín, mrtvolný jed
pentán-1,5-diamín (pentametyléndiamín, kadaverín)	H ₂ N-(CH ₂) ₅ -NH ₂	hnilobný amín, mrtvolný jed
hexán-1,6-diamín (hexametyléndiamín)	H ₂ N-(CH ₂) ₆ -NH ₂	výroba nylonu 66
anilín (fenylamín, aminobenzén)		primárny aromatický amín, substrát pre diazotáciu
benzén-1,4-diamín (p-fenyléndiamín)		
benzéndiazónium chlorid		produkt diazotácie, substrát pre kopuláciu
azobenzén		produkt kopulácie, azofarbivo, deriváty tejto látky patria medzi acidobazické indikátory (metyloranž)

názov	vzorec	názov	vzorec
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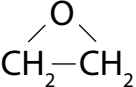
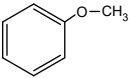
HYDROXYDERIVÁTY

ALKOHOLY

FENOLY

metanol (metylalkohol)	$\text{CH}_3\text{-OH}$	fenol (hydroxybenzén)	
etanol (etylalkohol)	$\text{CH}_3\text{-CH}_2\text{-OH}$	pyrokatechol (1,2-dihydroxybenzén, o-dihydroxybenzén)	
propán-1-ol (propylalkohol)	$\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-OH}$	rezorcinol (1,3-dihydroxybenzén, m-dihydroxybenzén)	
propán-2-ol (izopropanol, izopropylalkohol)	$\text{CH}_3\text{-CH(OH)-CH}_3$	hydrochinón (1,4-dihydroxybenzén, p-dihydroxybenzén)	
etenol (vinylalkohol)	$\text{CH}_2\text{=CH-OH}$	o-krezol (2-metylfenol)	
etylénglykol (etán-1,2-diol)	$\text{CH}_2\text{(OH)-CH}_2\text{(OH)}$	m-krezol (3-metylfenol)	
glycerol (propán-1,2,3-triol)	$\text{CH}_2\text{(OH)-CH(OH)-CH}_2\text{(OH)}$	p-krezol (4-metylfenol)	
benzylalkohol (OH skupina nie je priamo na benzénovom jadre, preto to nie je fenol)		kyselina pikrová (2,4,6-trinitrofenol)	

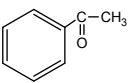
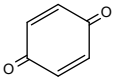
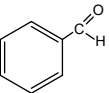
ÉTERY

dimetyléter (metoxymetán)	$\text{CH}_3\text{-O-CH}_3$	etylénoxid (oxirán)	
fenylmetyléter (metoxybenzén, anizol)		1,4-dioxán (dietyléndioxid)	

KARBONYLOVÉ ZLÚČENINY

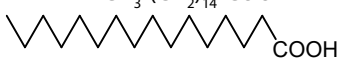
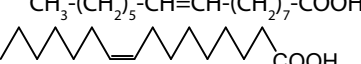
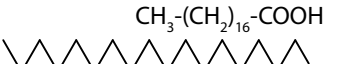
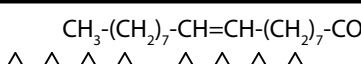
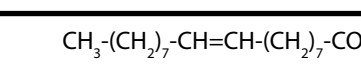
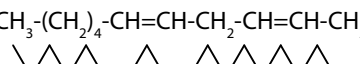
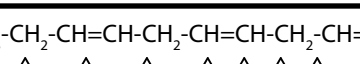
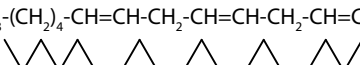
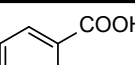
ALDEHYDY

KETÓNY

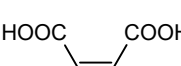
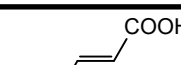
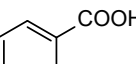
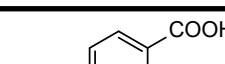
formaldehyd (metanal)	H-C(=O)-H	acetón (dimetylketón, propán-2-ón)	$\text{CH}_3\text{-C(=O)-CH}_3$
acetaldehyd (etanal)	$\text{CH}_3\text{-C(=O)-H}$	cyklohexanón	
akroleín (propenal)	$\text{CH}_2\text{=CH-C(=O)-H}$	fenylmetylketón (acetofenón)	
glyoxál (etándial)	O=C-C(=O)-H	benzochinón	
benzaldehyd (benzénkarbaldehyd)			

triviálny názov (systematický názov)	počet uhlíkov, typ kyseliny	racionálny vzorec kyseliny skrátенý racionálny vzorec	anión	$\text{R}-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-\text{O}^-$	zvyšok (acyl)	$\text{R}-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-$
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MONOKARBOXYLOVÉ KYSELINY

kyselina mravčia (kyselina metánová)	C1, nasýtená	$\text{H}-\text{COOH}$ $\text{H}-\text{COOH}$	mravčan (formiát) (metanoát)	formyl-
kyselina octová (kyselina etánová)	C2, nasýtená	CH_3-COOH CH_3-COOH	octan (acetát) (etanoát)	acetyl-
kyselina propionová (kyselina propánová)	C3, nasýtená	$\text{CH}_3-\text{CH}_2-\text{COOH}$ $\text{C}_2\text{H}_5-\text{COOH}$	propionát (propanoát)	propionyl-
kyselina akrylová (kyselina prop-2-énová)	C3, nenasýtená	$\text{CH}_2=\text{CH}-\text{COOH}$ $\text{C}_2\text{H}_3-\text{COOH}$	akrylát	akrylyl-
kyselina maslová (kyselina butánová)	C4, nasýtená	$\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{COOH}$ $\text{C}_3\text{H}_7-\text{COOH}$	butyrát (butanoát)	butyryl-
kyselina valérová (kyselina pentánová)	C5, nasýtená	$\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{COOH}$ $\text{C}_4\text{H}_9-\text{COOH}$	valerát	valeryl-
kyselina palmitová (kyselina hexadekánová)	C16, nasýtená mastná kyselina	$\text{CH}_3-(\text{CH}_2)_{14}-\text{COOH}$  $\text{C}_{15}\text{H}_{31}-\text{COOH}$	palmitát	palmitoyl-
kyselina palmitolejová (kyselina cis-hexadec-9-énová)	C16, nenasýtená mastná kyselina	$\text{CH}_3-(\text{CH}_2)_5-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{COOH}$  $\text{C}_{15}\text{H}_{29}-\text{COOH}$	palmitoleát	palmitoleoyl-
kyselina stearová (kyselina oktadekánová)	C18, nasýtená mastná kyselina	$\text{CH}_3-(\text{CH}_2)_{16}-\text{COOH}$  $\text{C}_{17}\text{H}_{35}-\text{COOH}$	stearát	stearoyl-
kyselina olejová (kyselina cis-oktadec-9-énová)	C18, nenasýtená mastná kyselina	$\text{CH}_3-(\text{CH}_2)_7-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{COOH}$  $\text{C}_{17}\text{H}_{33}-\text{COOH}$	oleát	oleoyl-
kyselina elaidová (kyselina trans-oktadec-9-énová)	C18, nenasýtená mastná kyselina	$\text{CH}_3-(\text{CH}_2)_7-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{COOH}$  $\text{C}_{17}\text{H}_{33}-\text{COOH}$	elaidát	elaidoyl-
kyselina linolová (kyselina all-cis-octadeka-9,12-diénová)	C18, nenasýtená mastná kyselina esenciálna	$\text{CH}_3-(\text{CH}_2)_4-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-(\text{CH}_2)_7-\text{COOH}$  $\text{C}_{17}\text{H}_{31}-\text{COOH}$	linoleát	linoloyl-
kyselina linolénová (kyselina all-cis-octadeka-9,12,15-triénová)	C18, nenasýtená mastná kyselina esenciálna	$\text{CH}_3-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}-(\text{CH}_2)_7-\text{COOH}$  $\text{C}_{17}\text{H}_{29}-\text{COOH}$	linolenát	linolenoyl-
kyselina arachidónová (kyselina all-cis-eikosa-5,8,11,14-tetraénová)	C20, nenasýtená mastná kyselina esenciálna	$\text{CH}_3-(\text{CH}_2)_4-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}-(\text{CH}_2)_3-\text{COOH}$  $\text{C}_{19}\text{H}_{31}-\text{COOH}$	arachidonát	arachidonoyl-
kyselina benzoová (kyselina benzénkarboxylová)	aromatická	 $\text{C}_6\text{H}_5-\text{COOH}$	benzoát	benzoyl-

DIKARBOXYLOVÉ KYSELINY

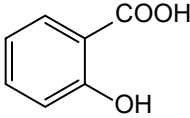
kyselina šťavelová (oxalová) (kyselina etándiová)	C2, nasýtená	$\text{HOOC}-\text{COOH}$	šťaveľan (oxalát)	oxalyl-
kyselina malonová (kyselina propándiová)	C3, nasýtená	$\text{HOOC}-\text{CH}_2-\text{COOH}$	malonát	malonyl-
kyselina jantárová (kyselina butándiová)	C4, nasýtená	$\text{HOOC}-\text{CH}_2-\text{CH}_2-\text{COOH}$	sukcinát	sukcinyl-
kyselina maleínová (kyselina cis-but-2-éndiová)	C4, nenasýtená		maleinát	maleyl-
kyselina fumarová (kyselina trans-but-2-éndiová)	C4, nenasýtená		fumarát	fumaryl-
kyselina glutárová (kyselina pentándiová)	C5, nasýtená	$\text{HOOC}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{COOH}$	glutarát	glutaryl-
kyselina adipová (kyselina hexándiová)	C6, nasýtená	$\text{HOOC}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{COOH}$	adipát	adipoyl-
kyselina ftalová (kyselina benzén-1,2-dikarboxylová)	aromatická		ftalát	---
kyselina tereftalová (kyselina benzén-1,4-dikarboxylová)	aromatická		tereftalát	---

triviálny názov (systematický názov)	racionálny vzorec kyseliny	anión $\text{R}-\overset{\text{O}}{\underset{\text{O}}{\parallel}}\text{C}-\text{O}^-$	zvyšok (acyl) $\text{R}-\overset{\text{O}}{\underset{\text{O}}{\parallel}}\text{C}-$
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HALOGÉN-DERIVÁTY KARBOXYLOVÝCH KYSELÍN (HALOGÉNKYSELINY)

kyselina trichlóroctová (kyselina trichlóroctová)	CCl_3-COOH	---	---
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HYDROXY-DERIVÁTY KARBOXYLOVÝCH KYSELÍN (HYDROXYKYSELINY)

kyselina glykolová (kyselina 2-hydroxyetánová)	$\begin{array}{c} \text{CH}_2-\text{COOH} \\ \\ \text{OH} \end{array}$	glykolát	---
kyselina mliečna (kyselina 2-hydroxypropánová)	$\begin{array}{c} \text{CH}_3-\text{CH}-\text{COOH} \\ \\ \text{OH} \end{array}$	laktát	---
kyselina jablčná (kyselina 2-hydroxybutándiová)	$\begin{array}{c} \text{HOOC}-\text{CH}_2-\text{CH}-\text{COOH} \\ \\ \text{OH} \end{array}$	malát	---
kyselina vínna (kyselina 2,3-dihydroxybutándiová)	$\begin{array}{c} \text{HOOC}-\text{CH}-\text{CH}-\text{COOH} \\ \quad \\ \text{OH} \quad \text{OH} \end{array}$	vínan (tartarát)	---
kyselina citrónová (kyselina 2-hydroxypropán-1,2,3-trikarboxylová)	$\begin{array}{c} \text{CH}_2-\text{COOH} \\ \\ \text{HO}-\text{C}-\text{COOH} \\ \\ \text{CH}_2-\text{COOH} \end{array}$	citrát	---
kyselina salicylová (kyselina 2-hydroxybenzénkarboxylová)		salicylát	---

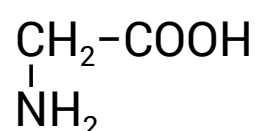
OXO-DERIVÁTY KARBOXYLOVÝCH KYSELÍN (OXOKYSELINY)

kyselina pyrohroznová (kyselina 2-oxopropánová)	$\begin{array}{c} \text{CH}_3-\text{C}-\text{COOH} \\ \\ \text{O} \end{array}$	pyruvát	---
kyselina acetoctová (kyselina 3-oxobutánová)	$\begin{array}{c} \text{CH}_3-\text{C}-\text{CH}_2-\text{COOH} \\ \\ \text{O} \end{array}$	acetoacetát	acetoacetyl-
kyselina oxalocetová (kyselina 2-oxobutándiová)	$\begin{array}{c} \text{HOOC}-\text{CH}_2-\text{C}-\text{COOH} \\ \\ \text{O} \end{array}$	oxalacetát	---
kyselina 2-oxoglutárová (kyselina 2-oxopentándiová)	$\begin{array}{c} \text{HOOC}-\text{CH}_2-\text{CH}_2-\text{C}-\text{COOH} \\ \\ \text{O} \end{array}$	2-oxoglutarát	---

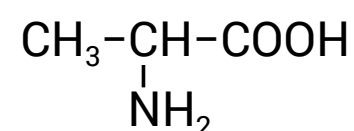
AMINO-DERIVÁTY KARBOXYLOVÝCH KYSELÍN (AMINOKYSELINY)

alanín (kyselina 2-aminopropánová)	$\begin{array}{c} \text{CH}_3-\text{CH}-\text{COOH} \\ \\ \text{NH}_2 \end{array}$	---	---
kyselina asparágová (kyselina 2-aminobutándiová)	$\begin{array}{c} \text{HOOC}-\text{CH}_2-\text{CH}-\text{COOH} \\ \\ \text{NH}_2 \end{array}$	aspartát	---
kyselina glutámová (kyselina 2-aminopentándiová)	$\begin{array}{c} \text{HOOC}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{COOH} \\ \\ \text{NH}_2 \end{array}$	glutamát	---
(ďalšie aminokyseliny)			

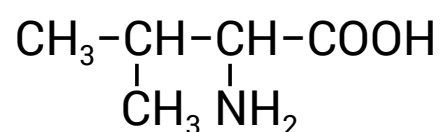
glycín



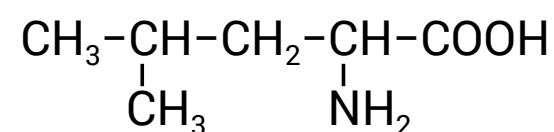
alanín



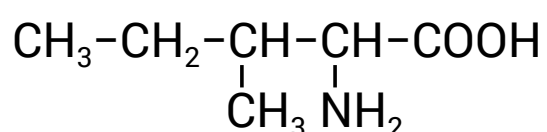
valín



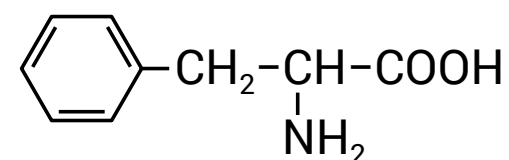
leucín



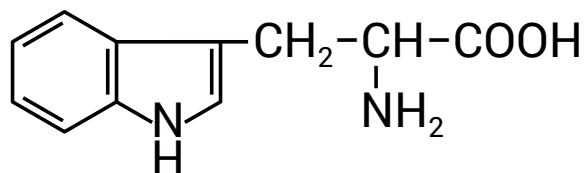
izoleucín



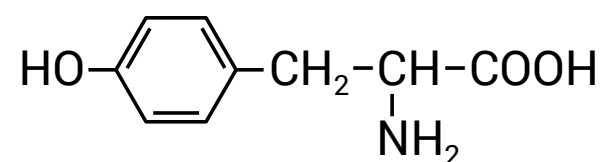
fenylalanín



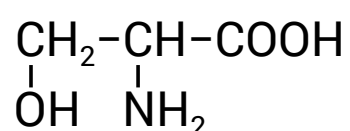
tryptofán



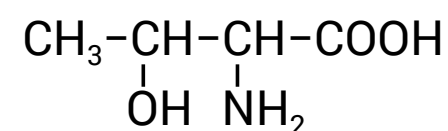
tyrozín



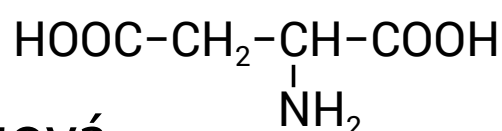
serín



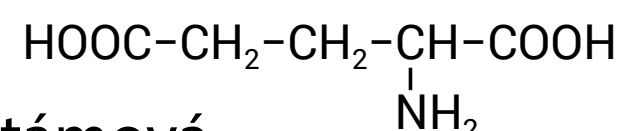
treonín



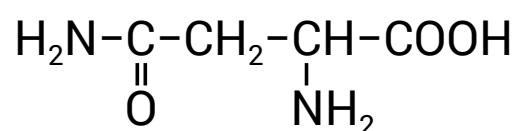
kyselina asparágová



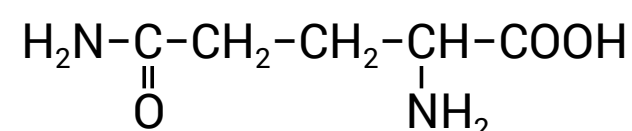
kyselina glutámová



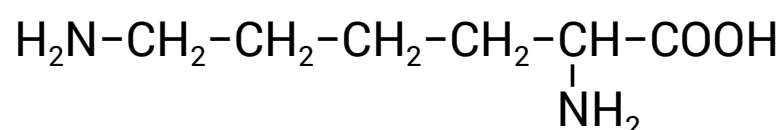
asparagín



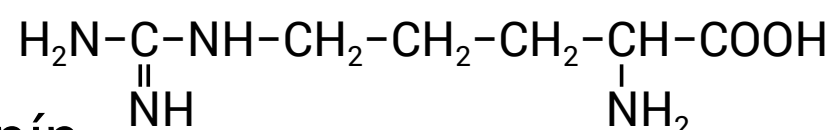
glutamín



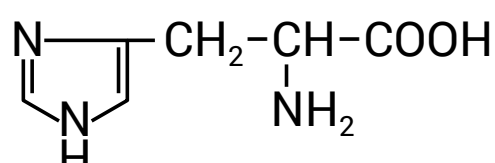
lyzín



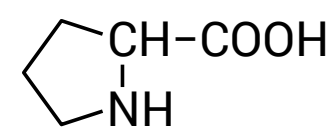
arginín



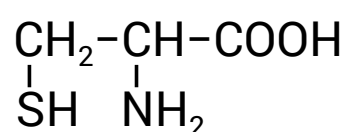
histidín



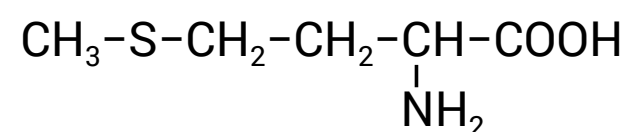
prolín



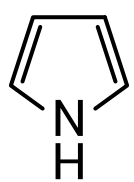
cysteín



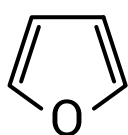
metionín



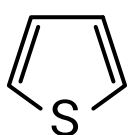
5-ČLENNÉ HETEROCYKLY



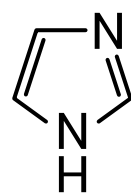
pyrol



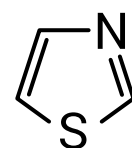
furán



tiofén

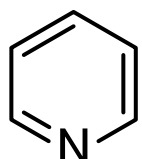


imidazol

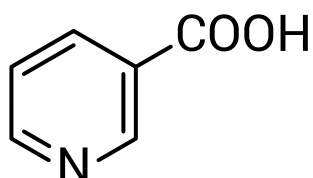


tiazol

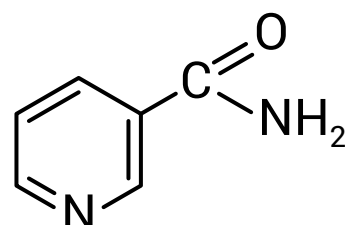
6-ČLENNÉ HETEROCYKLY



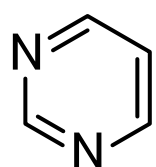
pyridín



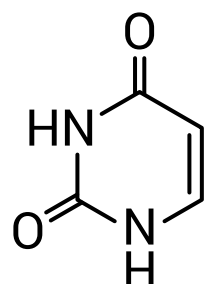
kyselina nikotínová



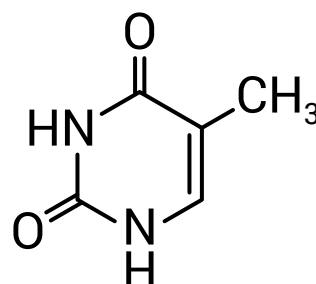
nikotínamid



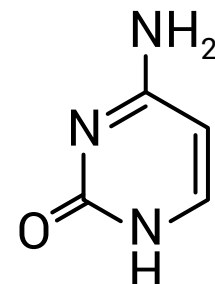
pyrimidín



uracil

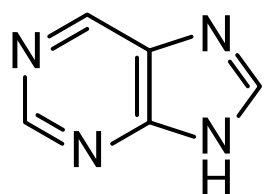


tymín

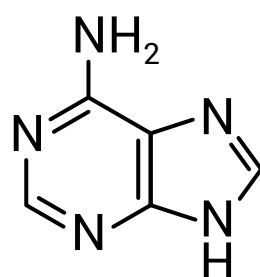


cytozín

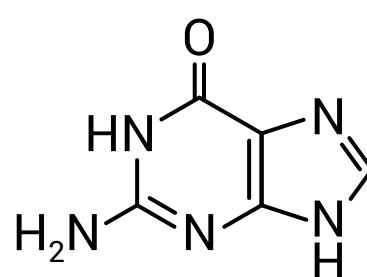
KONDENZOVANÉ HETEROCYKLY



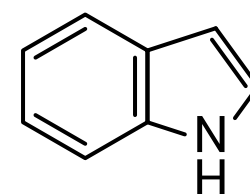
purín



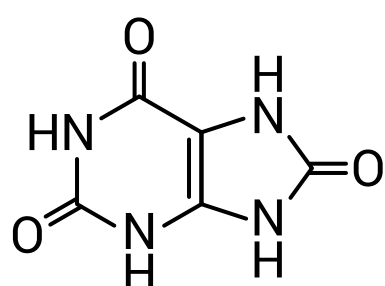
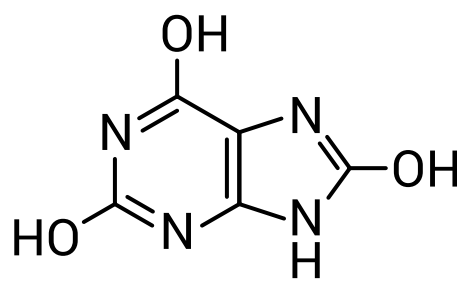
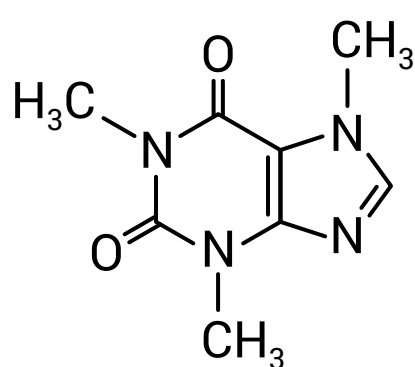
adenín



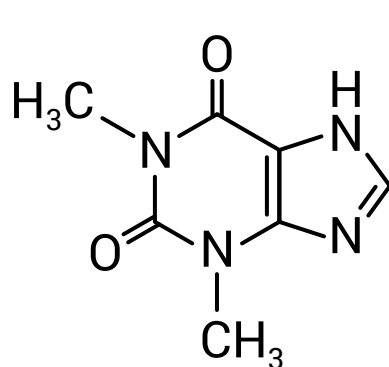
guanín



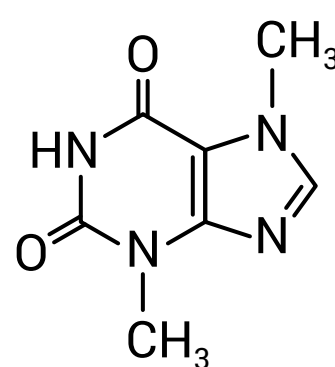
indol


kyselina močová
(keto-forma)

kyselina močová
(enol-forma)


kofeín



teofylín



teobromín