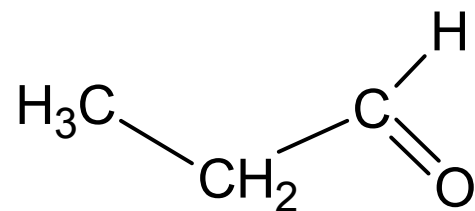
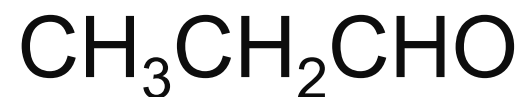
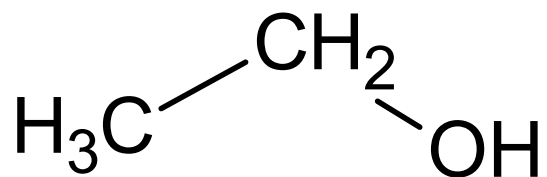
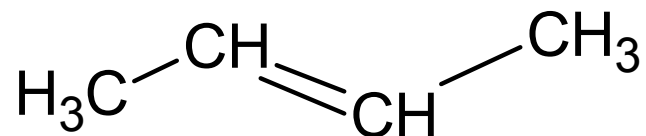
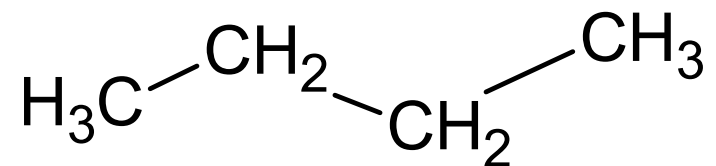
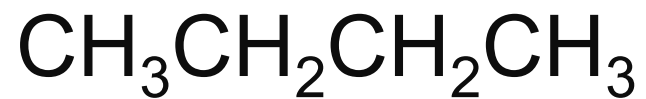
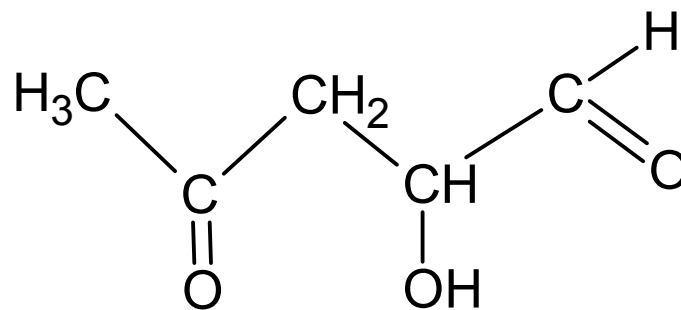
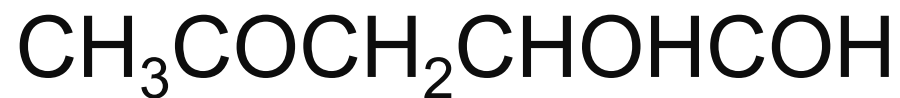
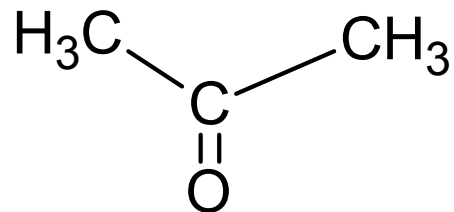
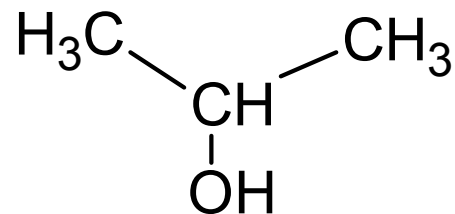
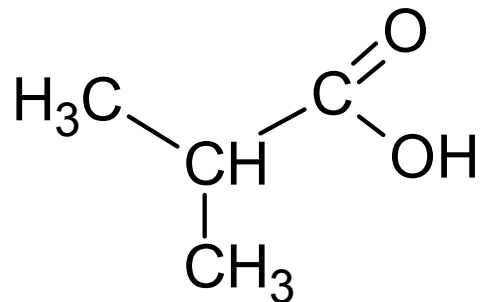
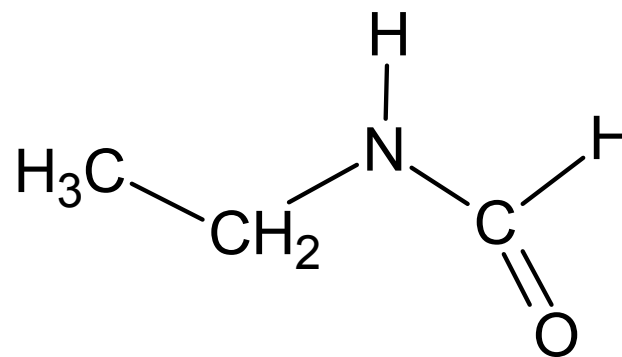
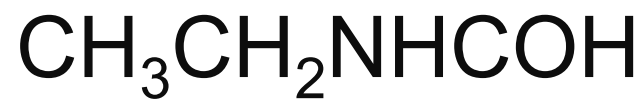
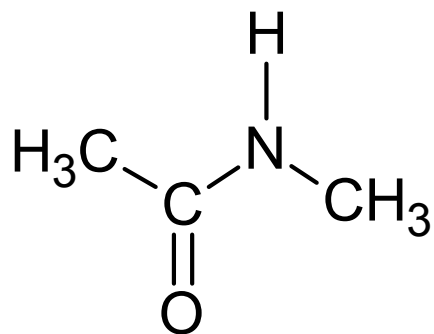
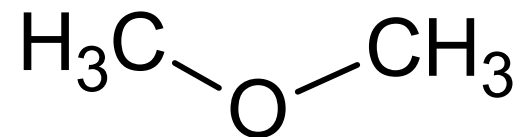
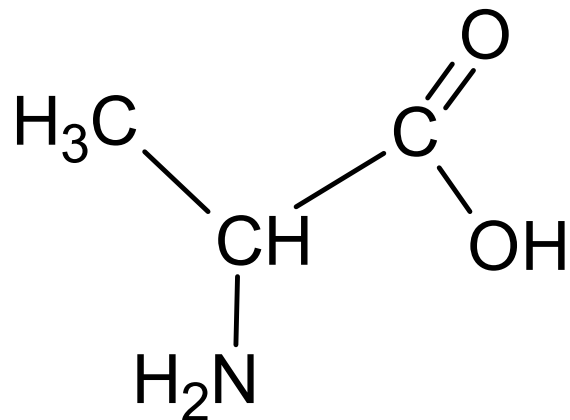


Lezen van formules.

Formules van koolstofverbindingen worden vaak op nog kortere wijze geschreven. Om dit te beheersen doen we wat voorbeelden.







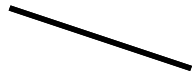
Maar nu iets anders.

In de volgende skelet-structuren staan alleen de bindingen getekend tussen C-atomen.

Noteer van elke structuur die volgt de molecuulformule. De H-atomen moet je zelf aanvullen, rekening houdend met covalenties.

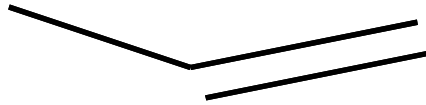
Als er een * bij staat moet je ook de naam kunnen vinden.

Eerst wat voorbeelden.



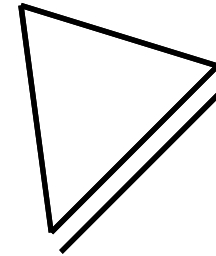
Ethaan

*



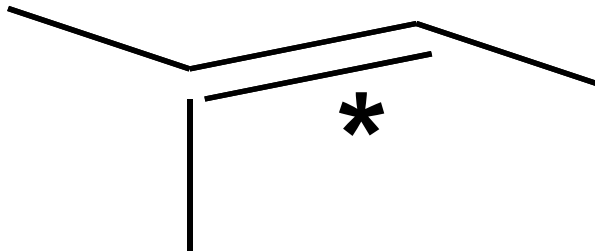
Propeen

*



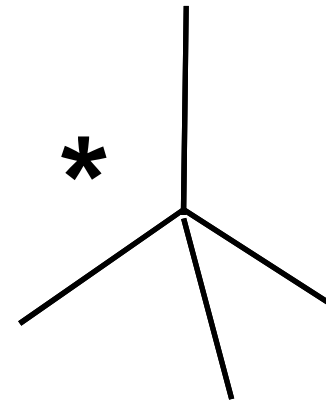
*

Cyclopropeen



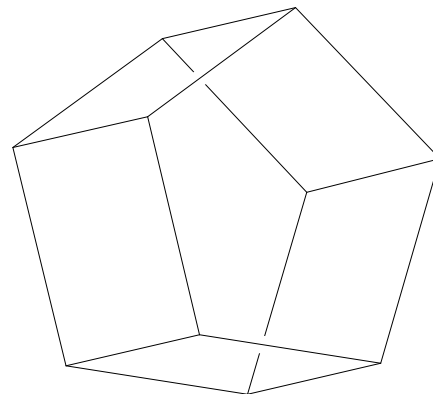
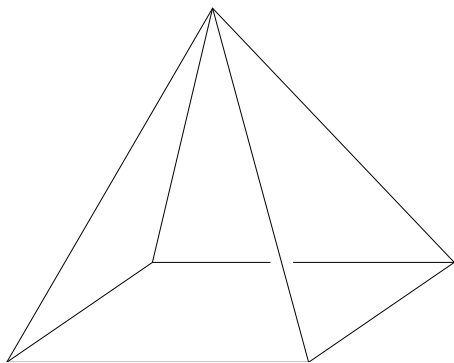
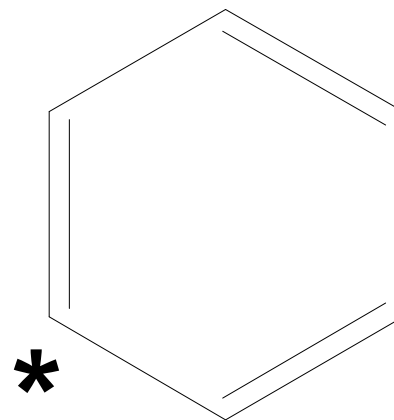
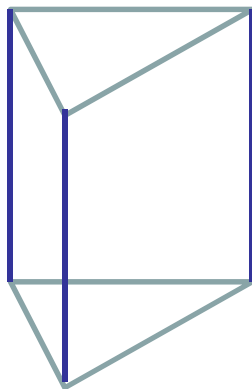
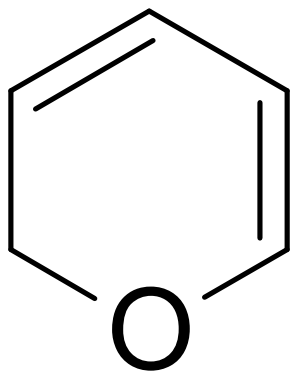
methyl-2-buteen

*

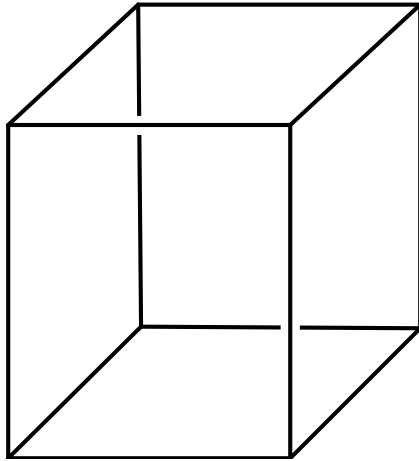


dimethylpropaan

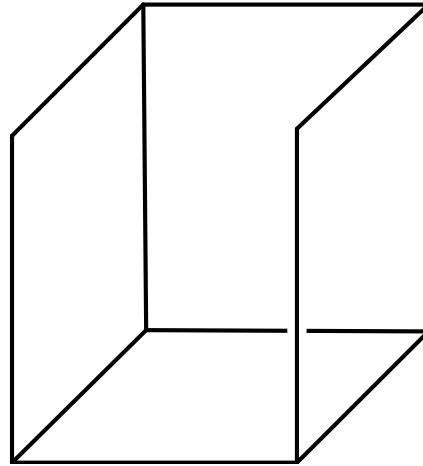
*



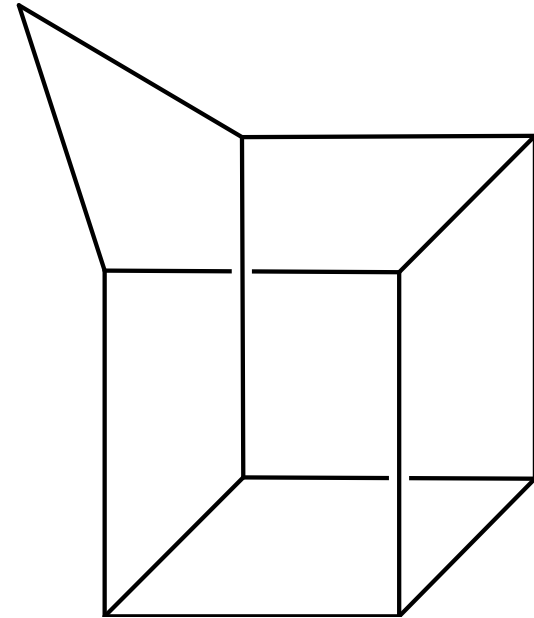
Een molecuul van de stof



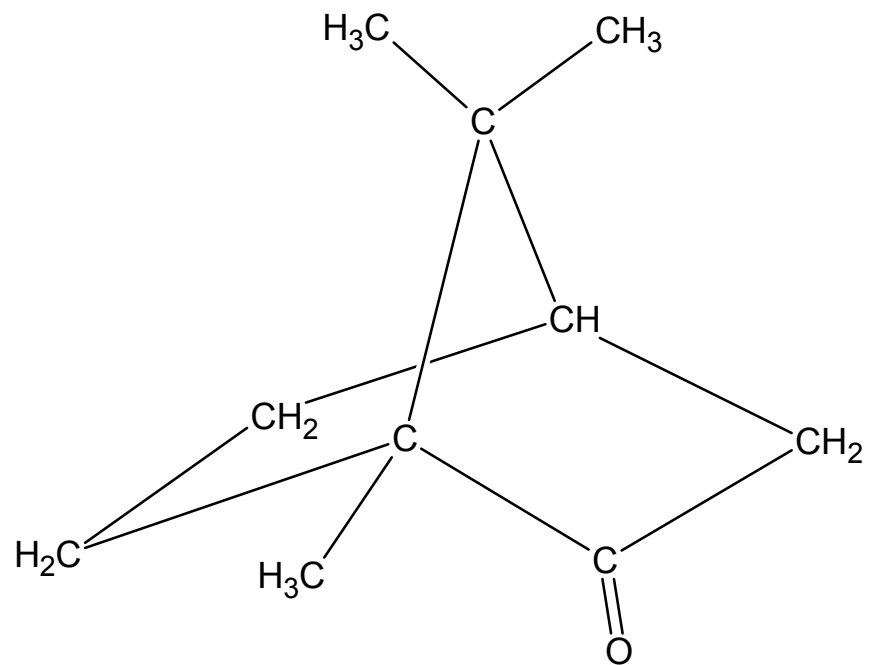
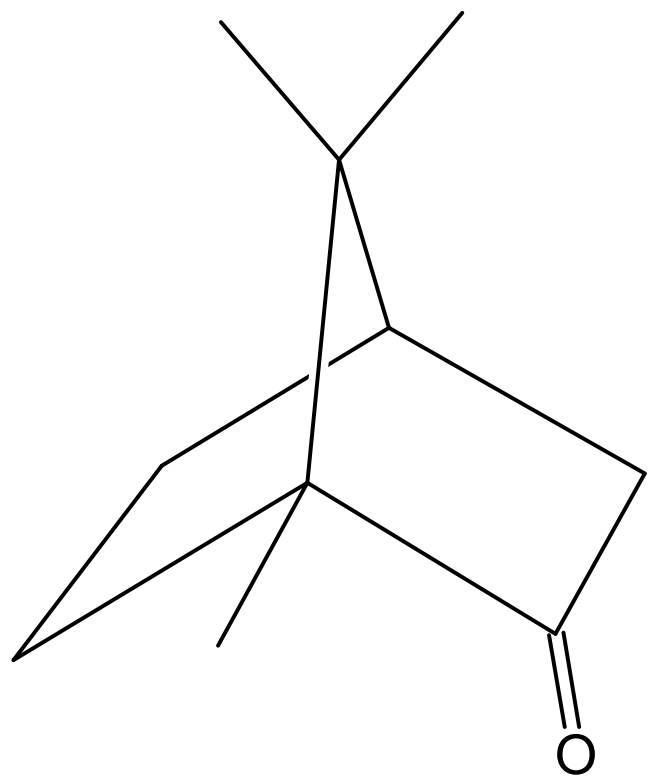
cubaan



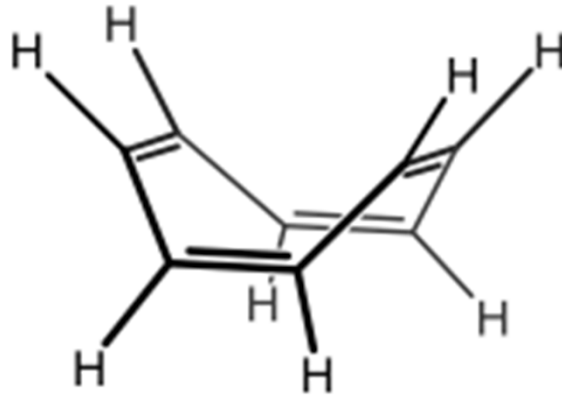
sedo-cubaan



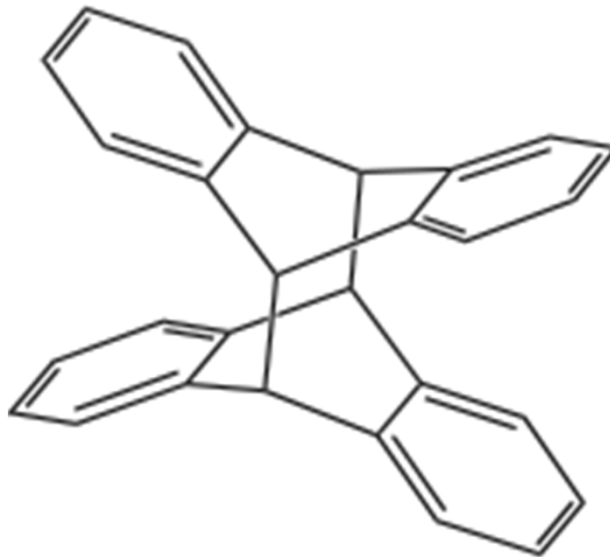
homo-cubaan

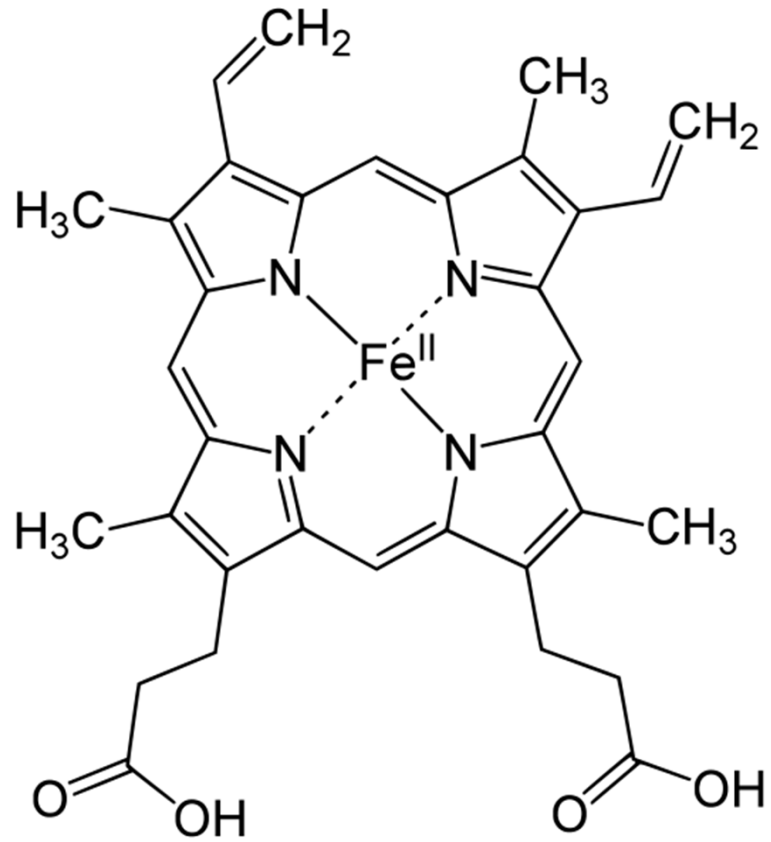


kamfer ofwel 1,7,7-trimethylbicyclo-[2,2,1]heptaan-2-on

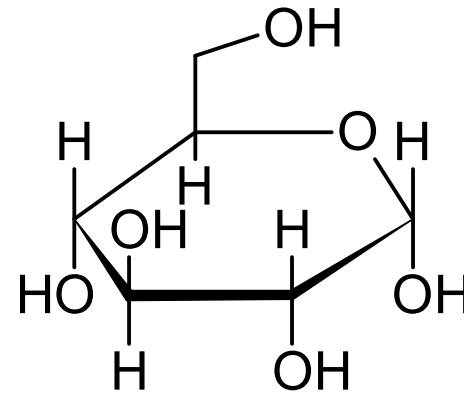


... , ... , ... , ...-cyclooctatetraën



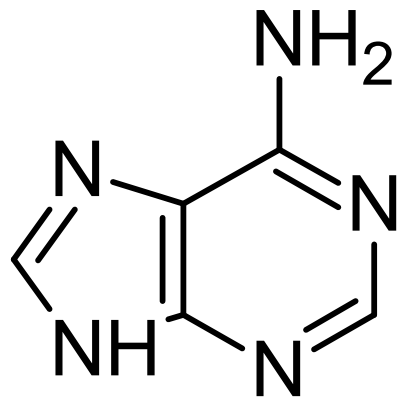


Hemoglobine



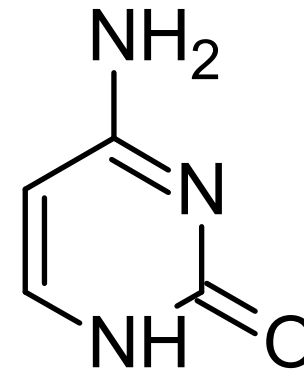
glucose

Enkele stoffen uit de biochemie



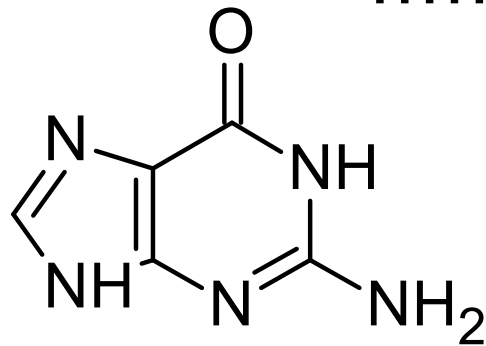
adenine

.....



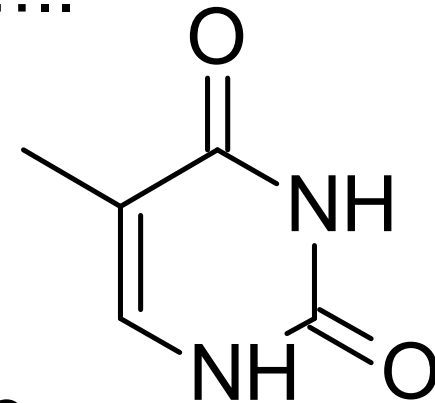
cytosine

.....



guanaine

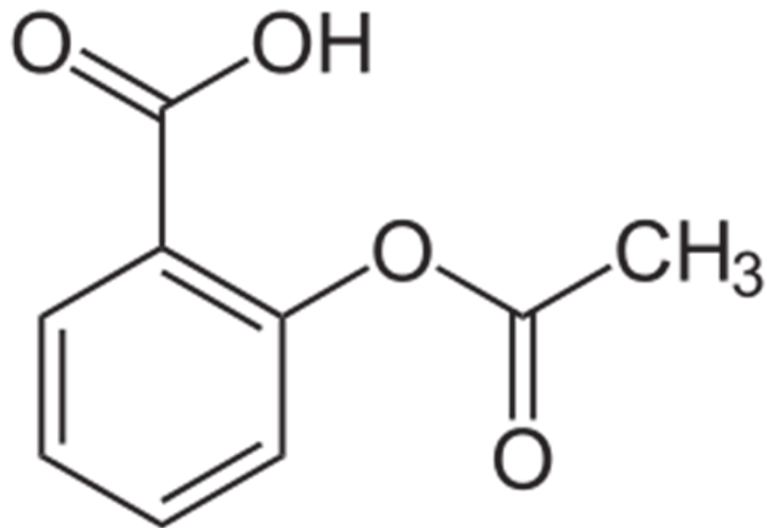
.....



thymine

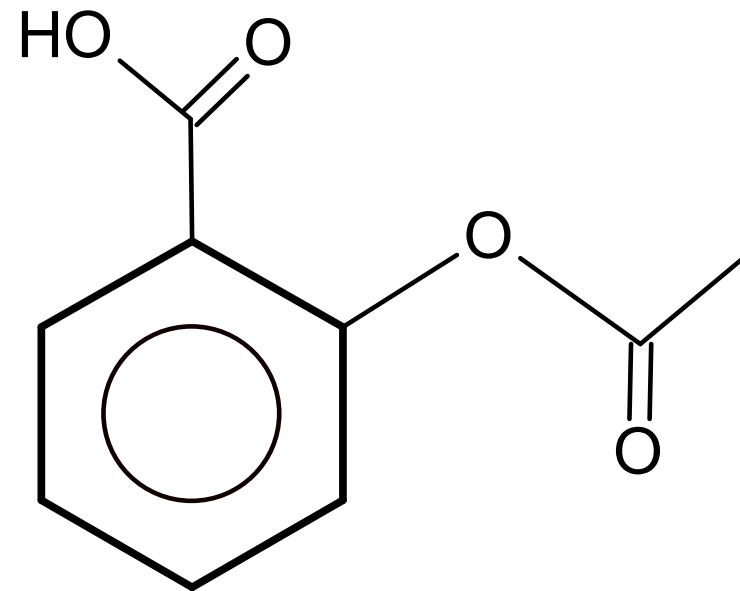
.....

Enkele stoffen uit de geneeskunde

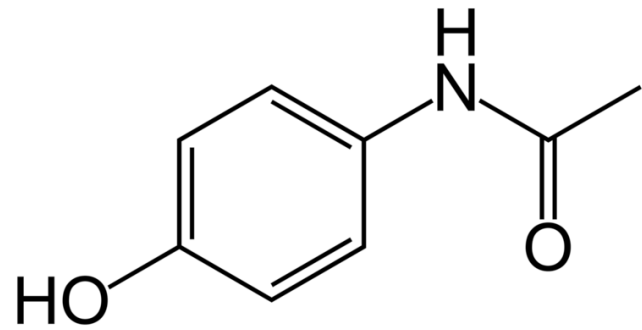


aspirine

.....

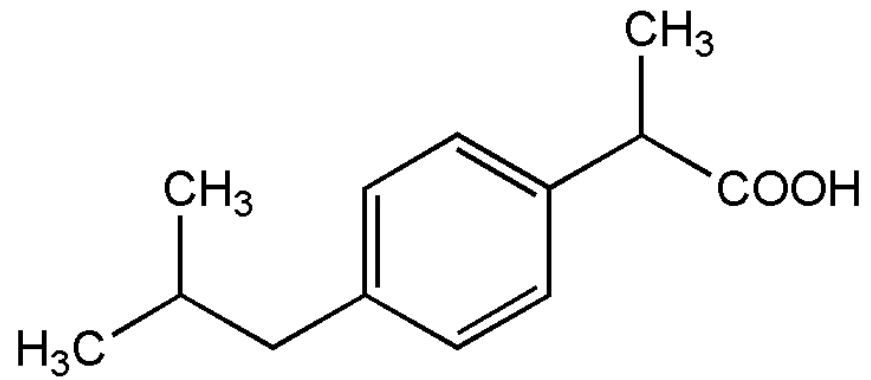


Enkele stoffen uit de geneeskunde



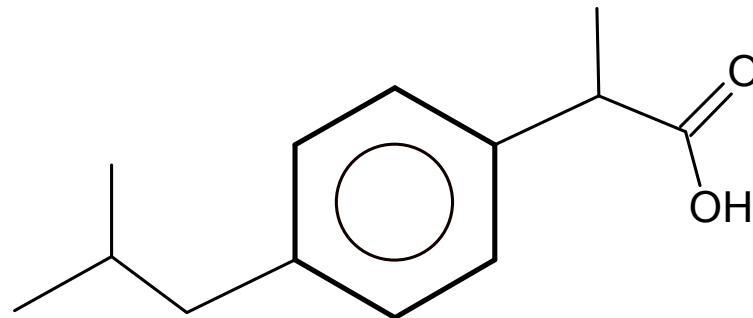
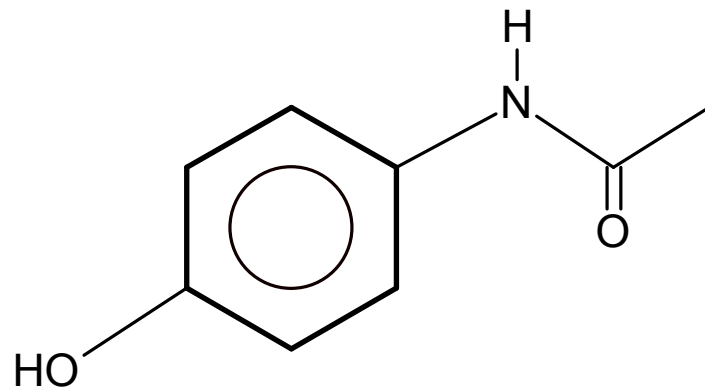
paracetamol

.....

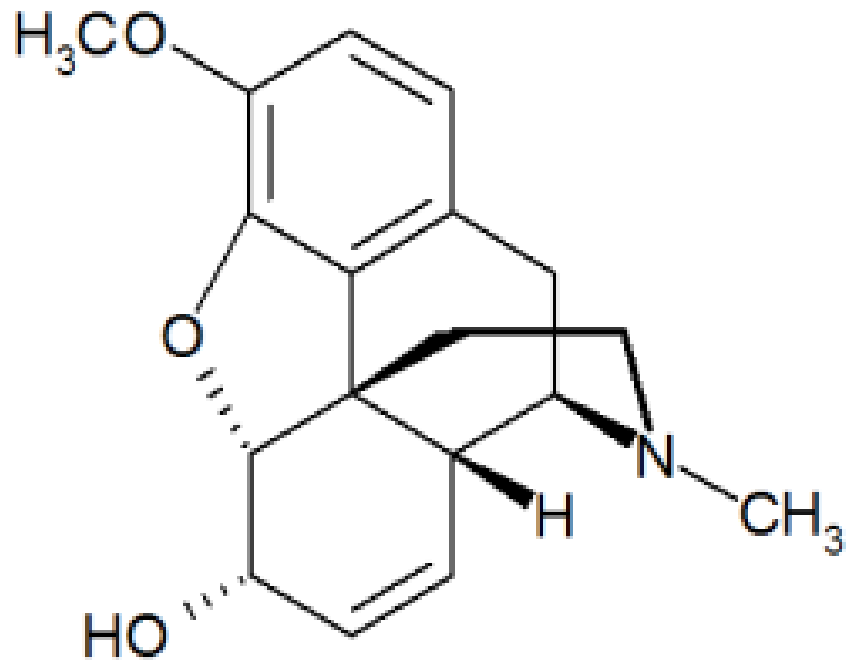


ibuprofen

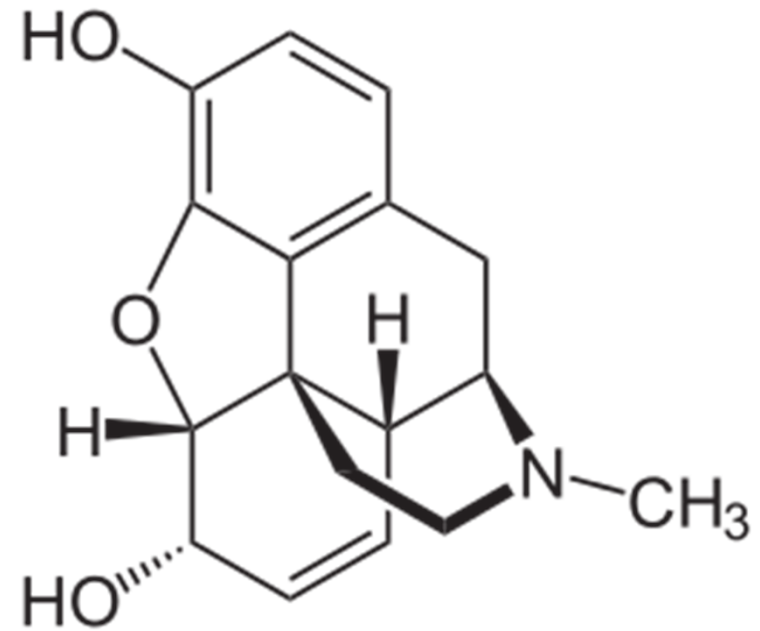
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Enkele stoffen uit de geneeskunde

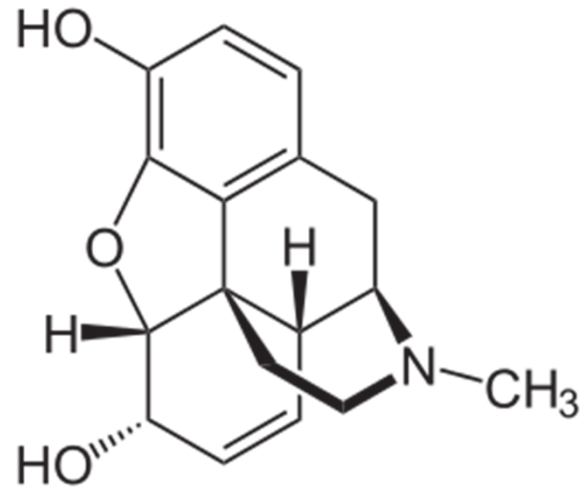


codeïne

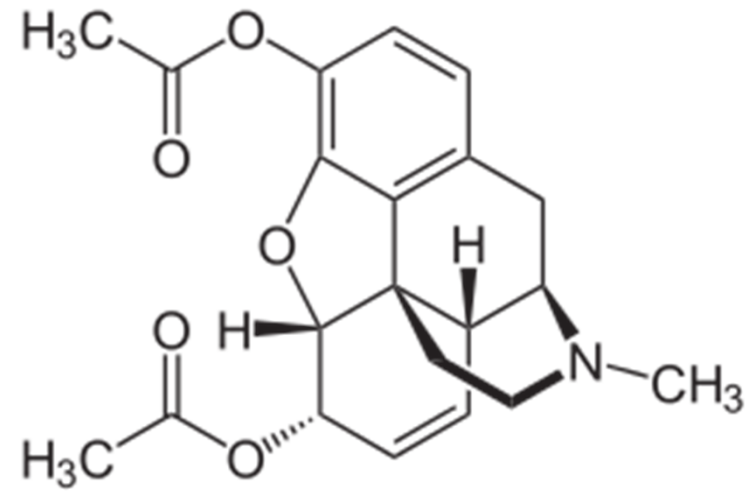


morfine

Enkele stoffen uit de geneeskunde

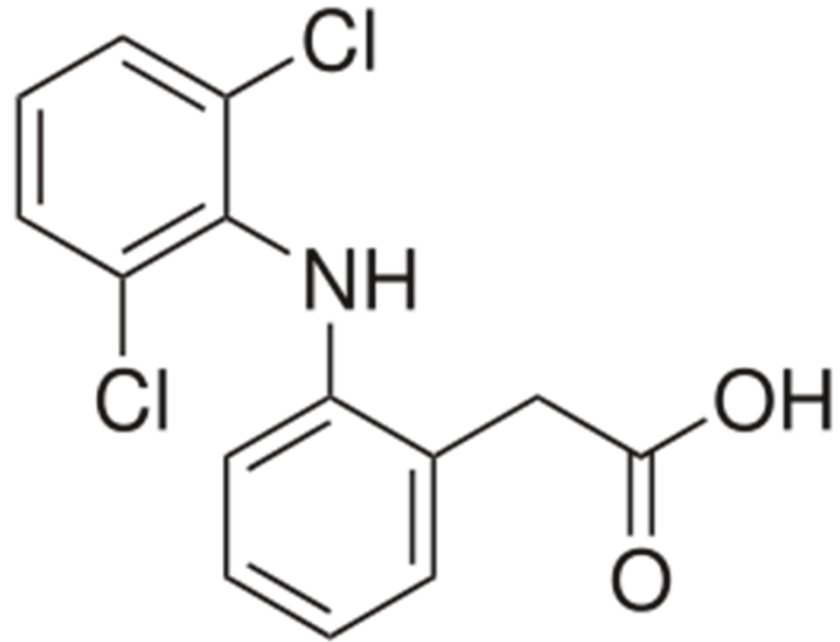


morfine

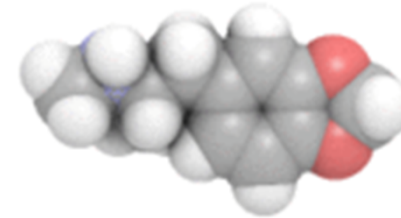
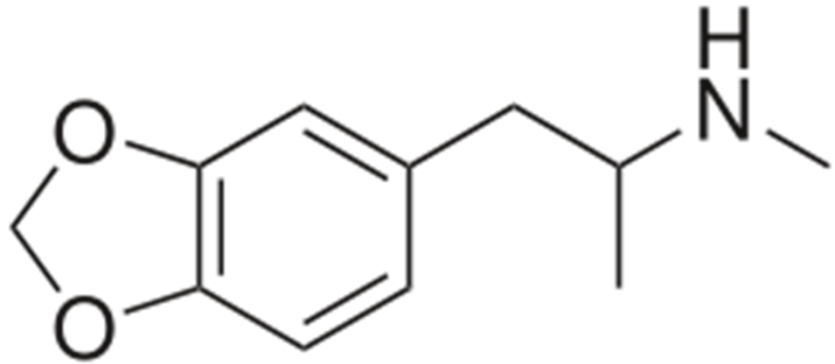


heroïne

Enkele stoffen uit de geneeskunde



diclofenac



XTC

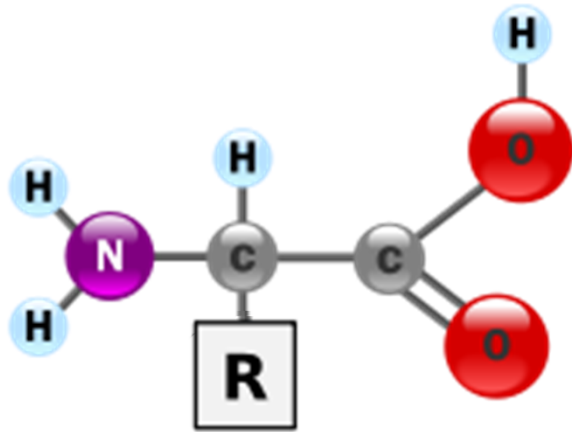
$C_{11}H_{15}NO_2$

Extacy (MDMA) ofwel MethyleenDioxyMethAmphetamine

Officiële naam

(*RS*)-1-(benzo[*d*][1,3]dioxol-5-yl)-*N*-methylpropaan-2-amine

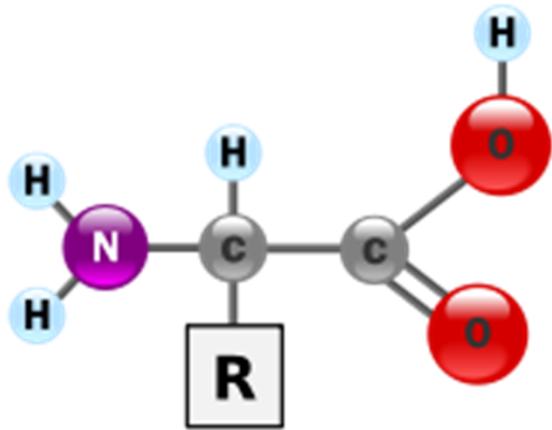
Voor de mens belangrijke aminozuren.



Alle 20 benodigde
aminozuren in eiwit kunnen
worden afgeleid van het
eenvoudigste amino-zuur
amino-ethaanzuur oftewel
glycine.

Hierbij wordt telkens een H-atoom van het
2^e C-atoom vervangen door een andere
groep. Je vindt ze allemaal in BINAS
tabel 67C

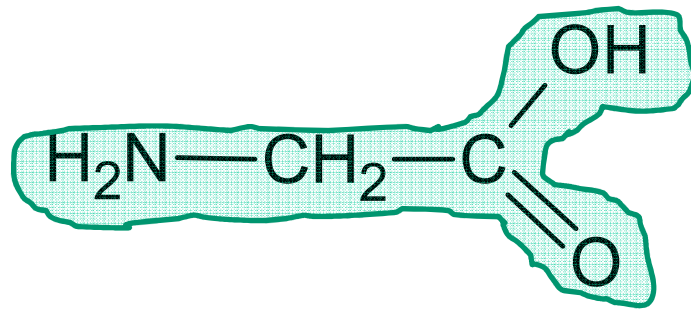
Voor de mens belangrijke aminozuren.



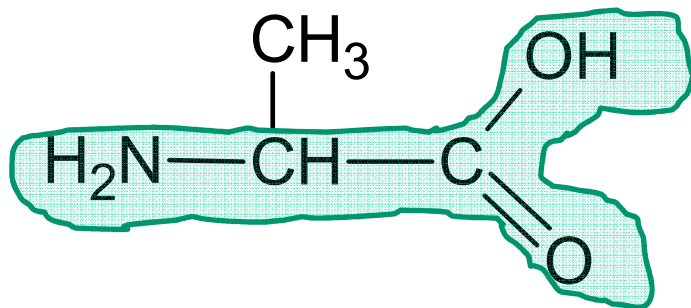
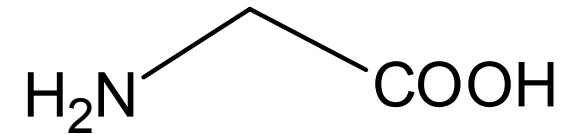
De meeste aminozuren kan je lichaam zelf aanmaken. Er zijn er echter 8 die je via voeding moet binnenkrijgen. Dit zijn de 8 essentiële aminozuren

Je hebt inmiddels zoveel kennis opgedaan dat je van een 10-tal aminozuren in BINAS tabel 67C de systematische naam moet kunnen vinden. Tevens moet je van alle aminozuren de skeletstructuur kunnen tekenen.

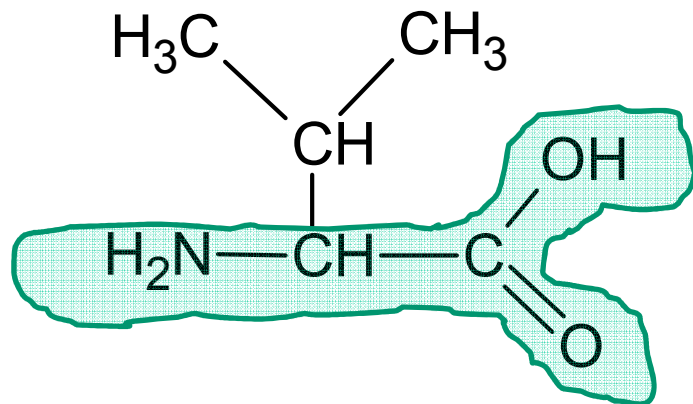
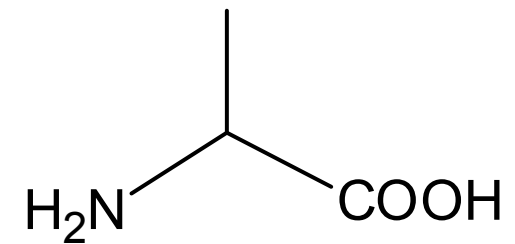
Voor de mens belangrijke aminozuren.



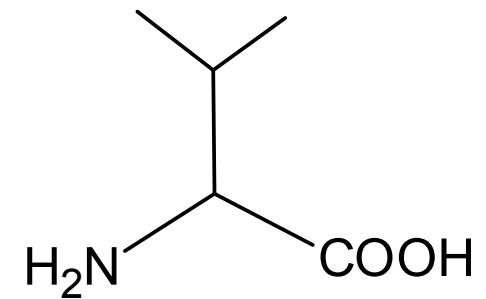
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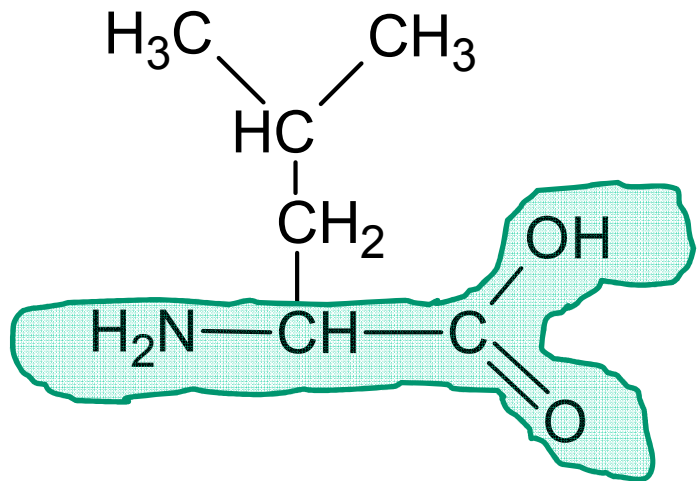


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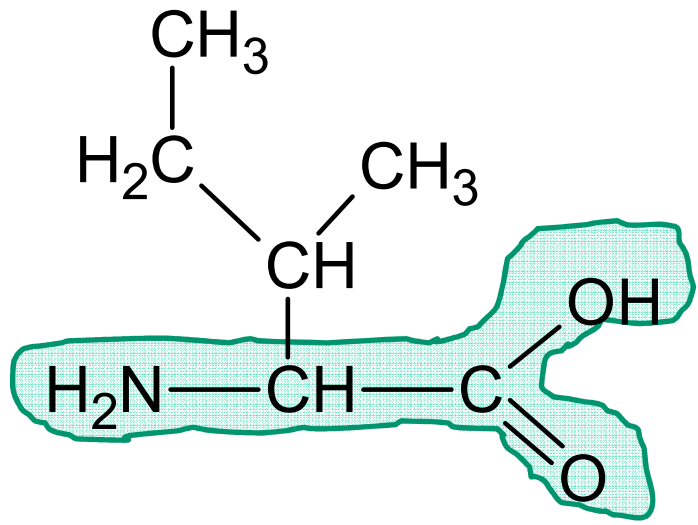
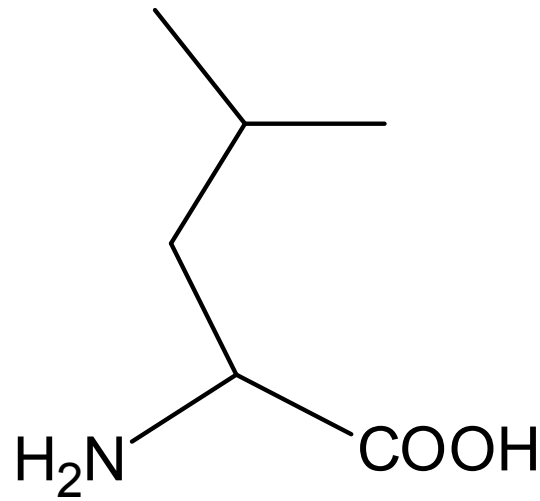


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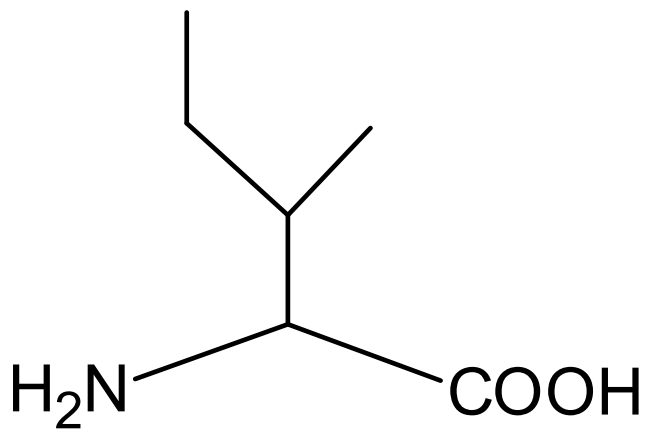


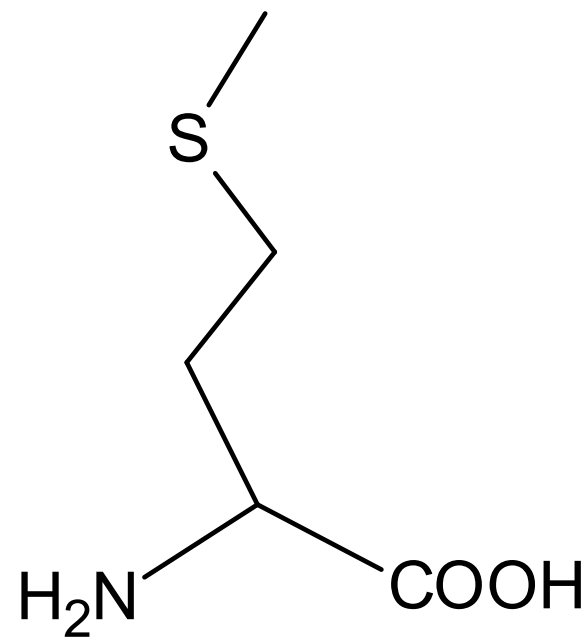
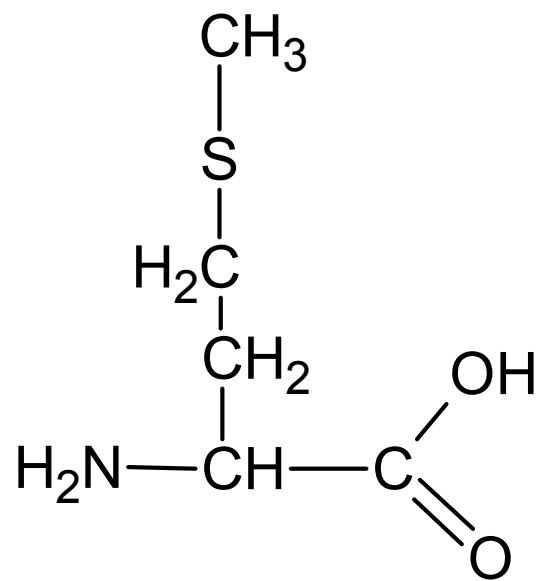


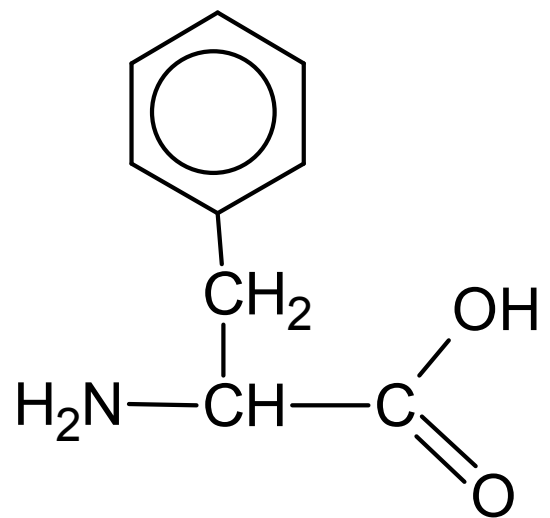
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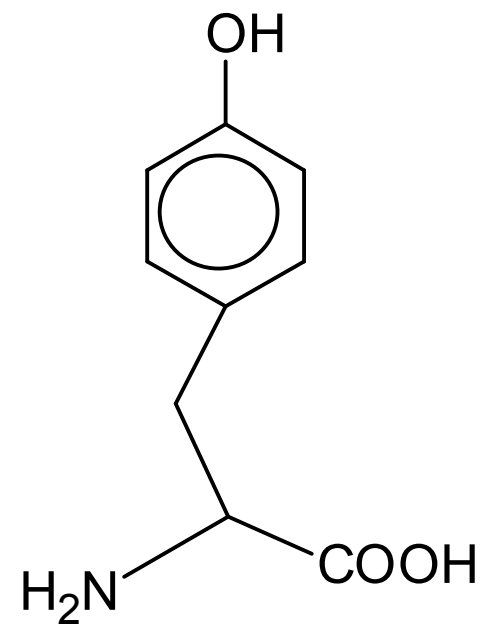
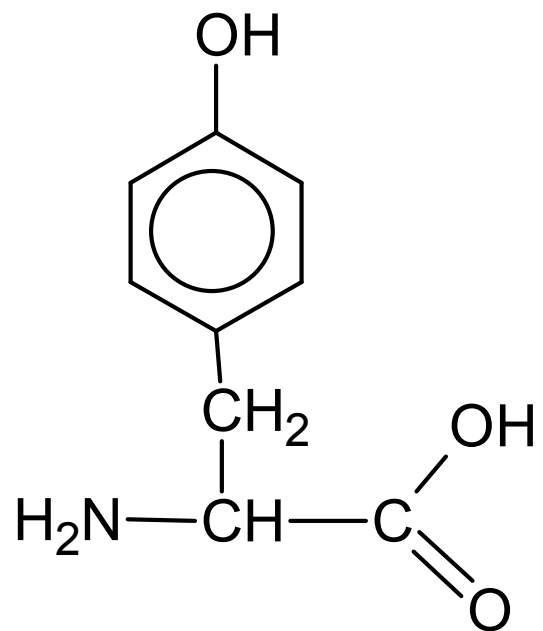
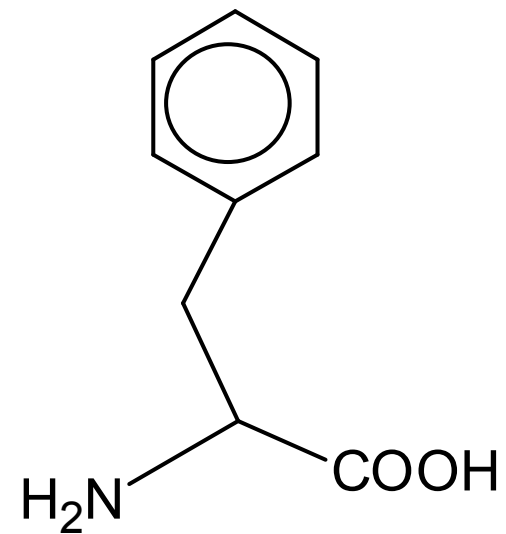
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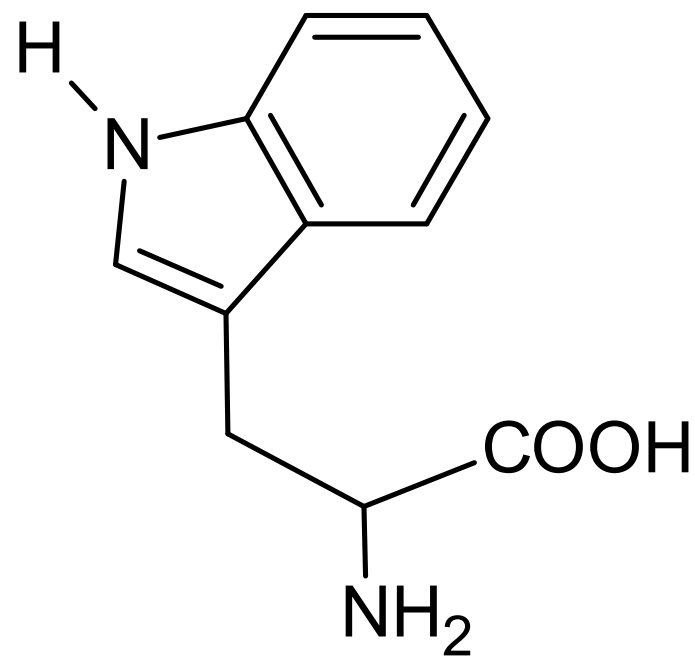
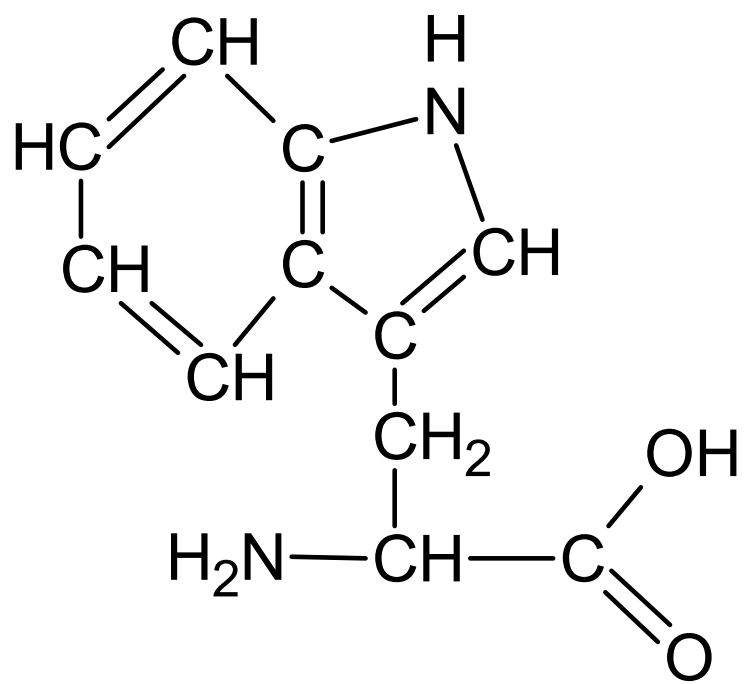


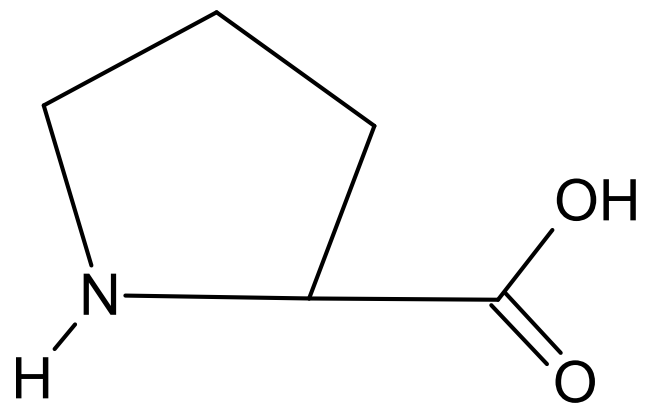
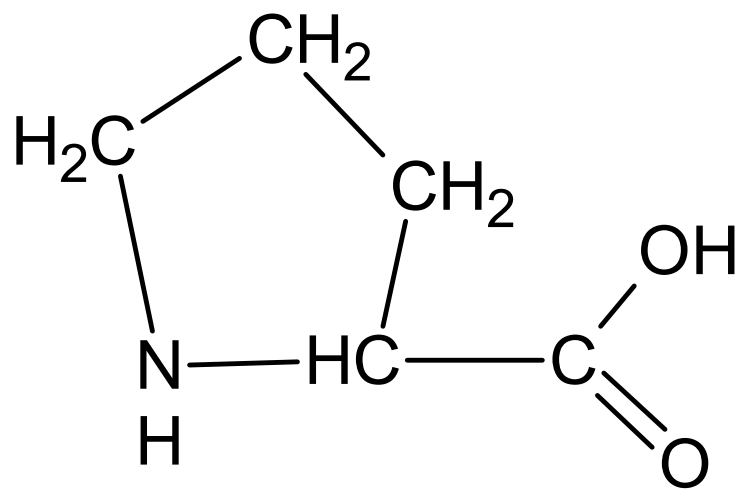
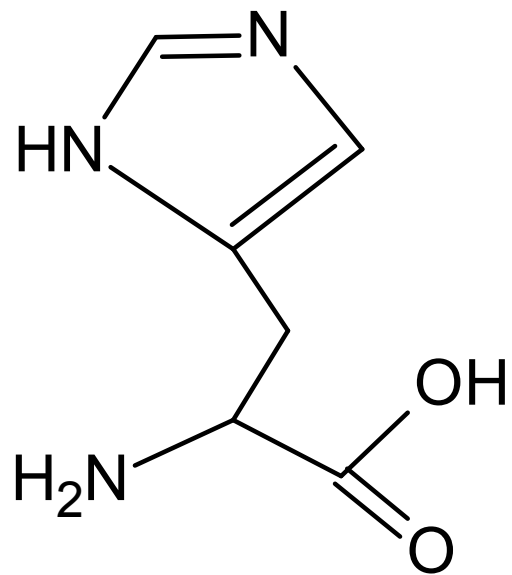
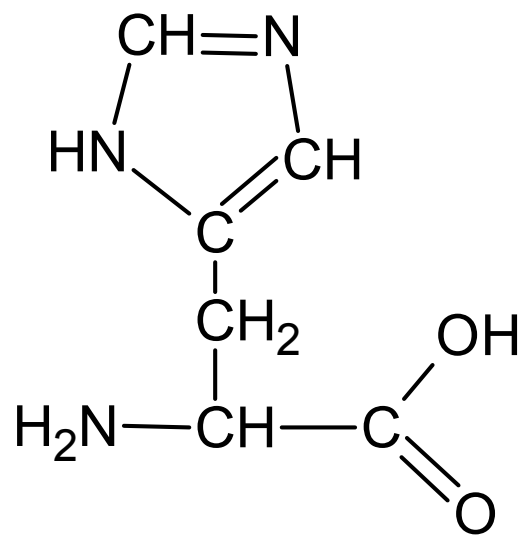


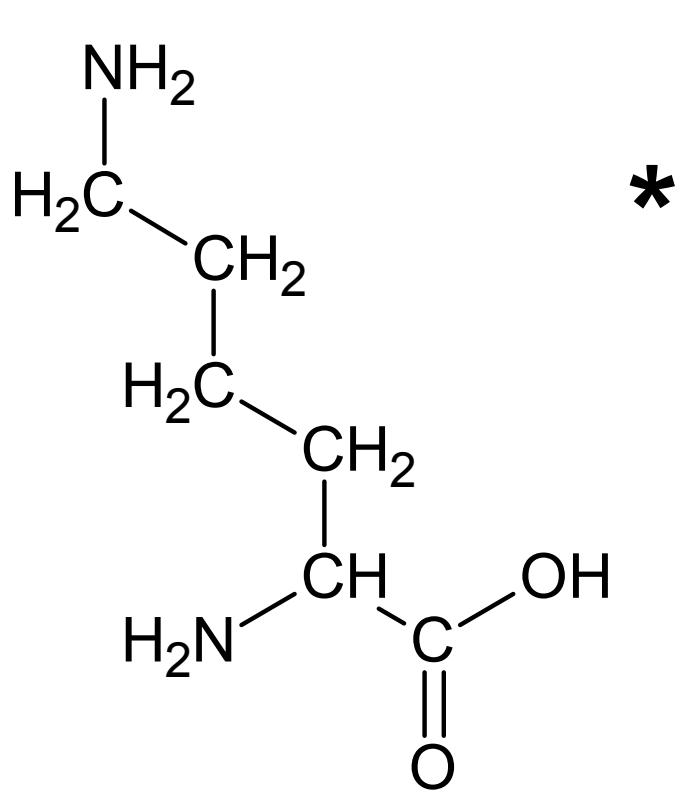


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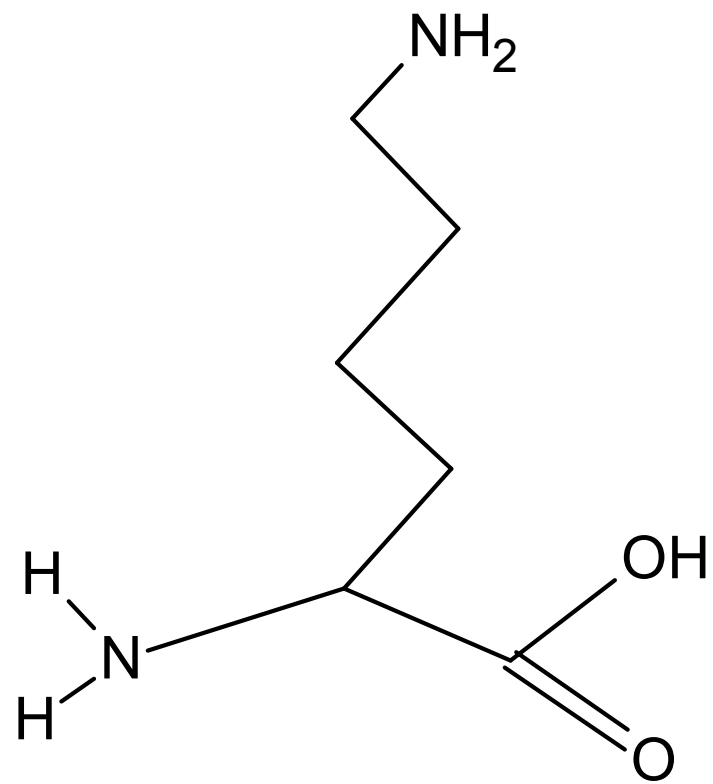


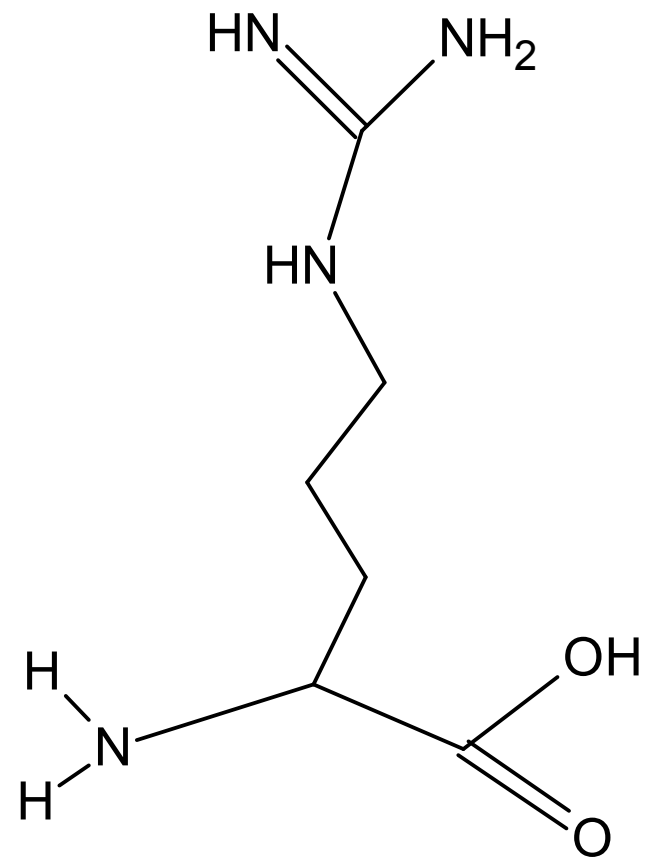
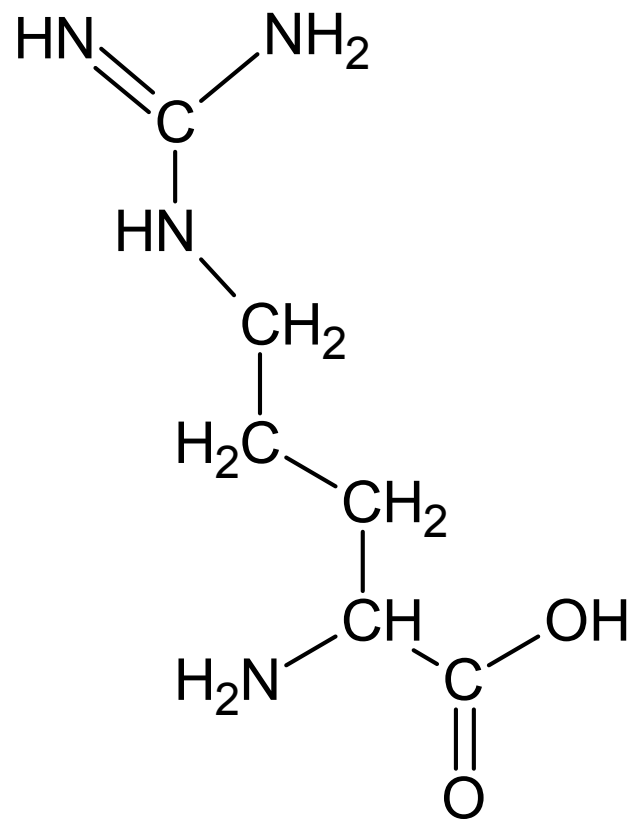


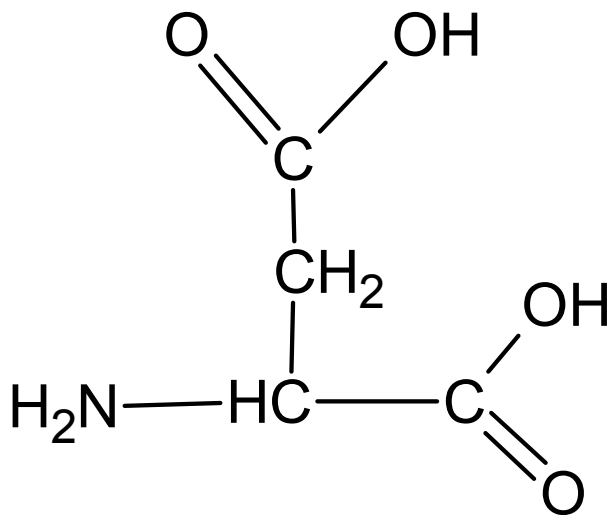




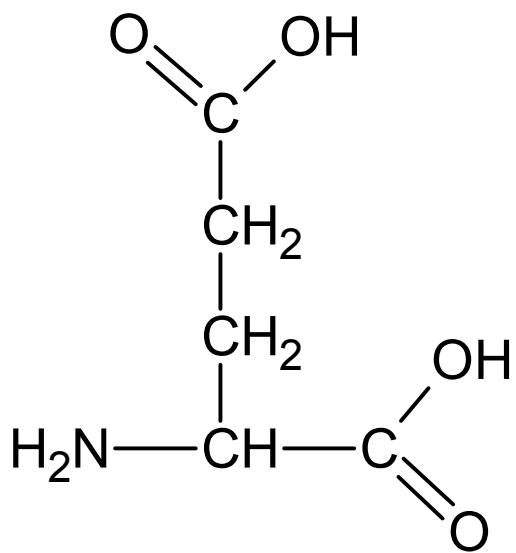
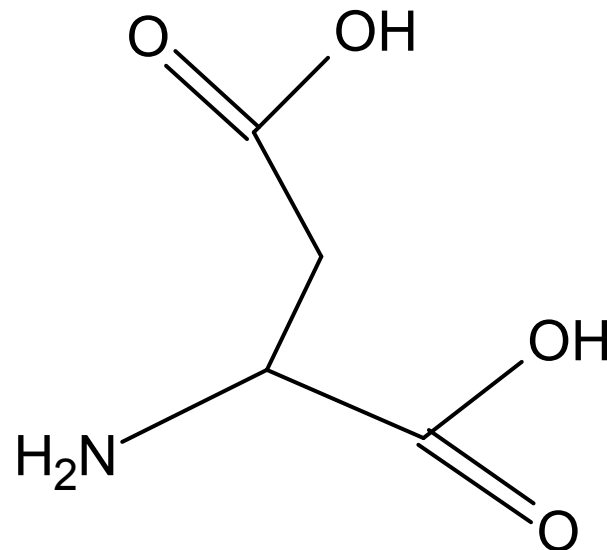
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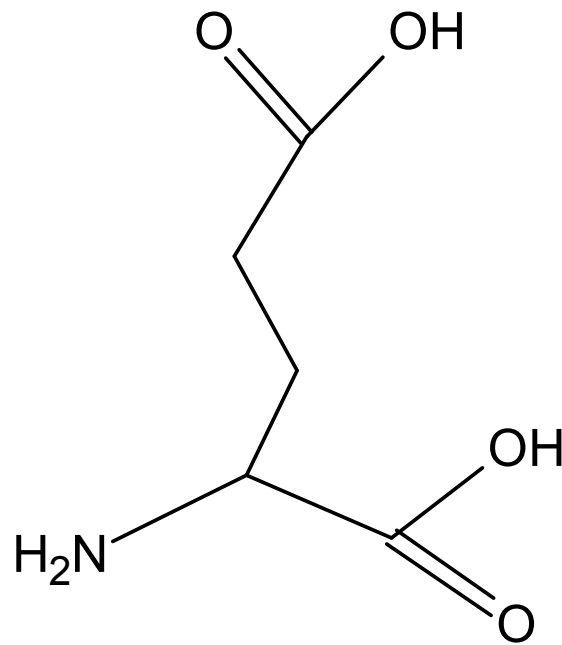


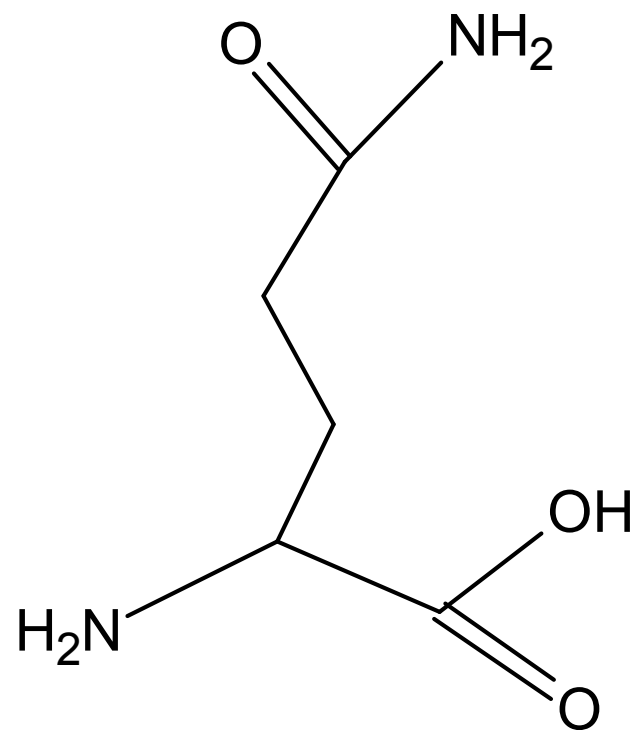
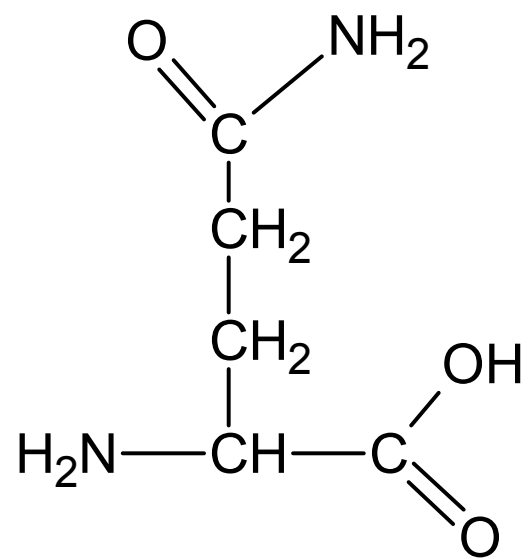
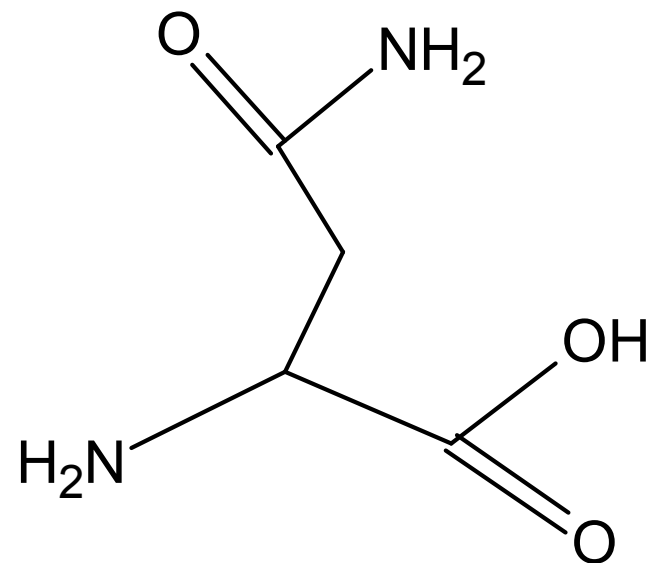
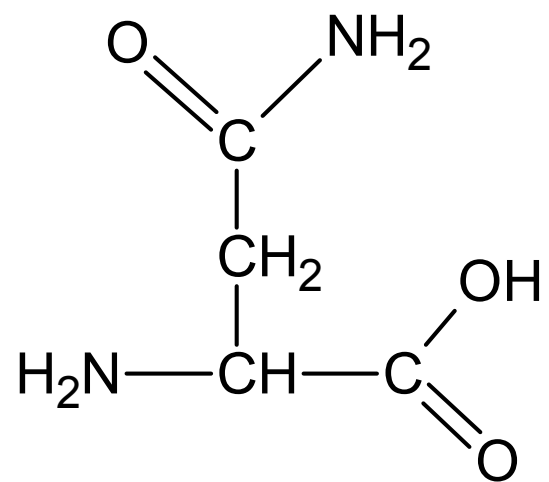


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*





Bij sommige verbindingen wordt naast de systematische naam tevens de vroeger gebruikte naam nog veel gebruikt.
Men noemt dit de triviale namen. BINAS tabel 66A

Nu volgen de triviale namen die je moet kennen.

Triviale namen die je moet kennen.

Systematische naam:

1,2-ethaan-diol

1,2,3-propaan-triol

methaanzuur

ethaanzuur

ethaan-dizuur

methyl-benzeen

benzenol

aminobenzeen

Triviale naam:

glycol

glycerol

mierenzuur

azijnzuur

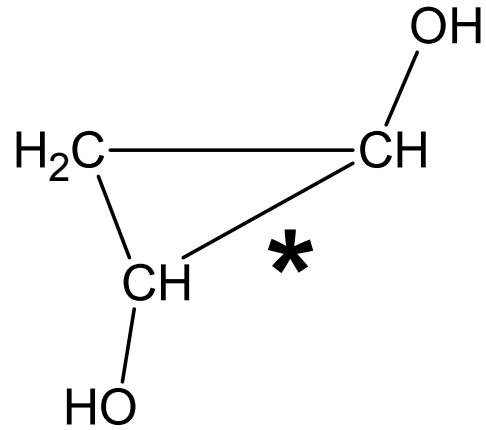
oxaalzuur

tolueen

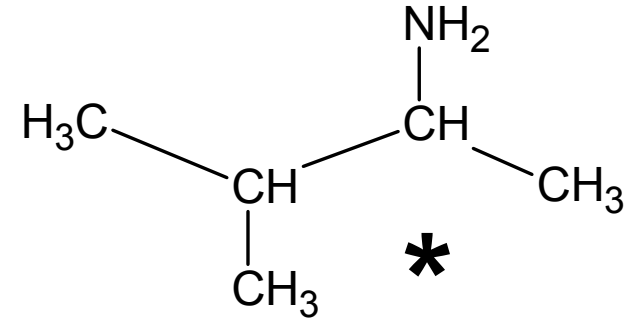
fenol

aniline

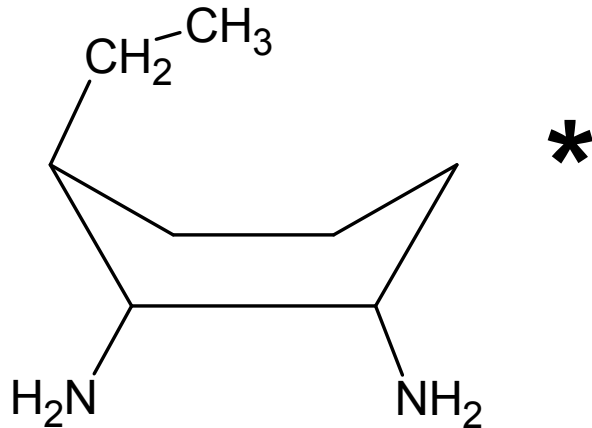
Nu enkele door elkaar:



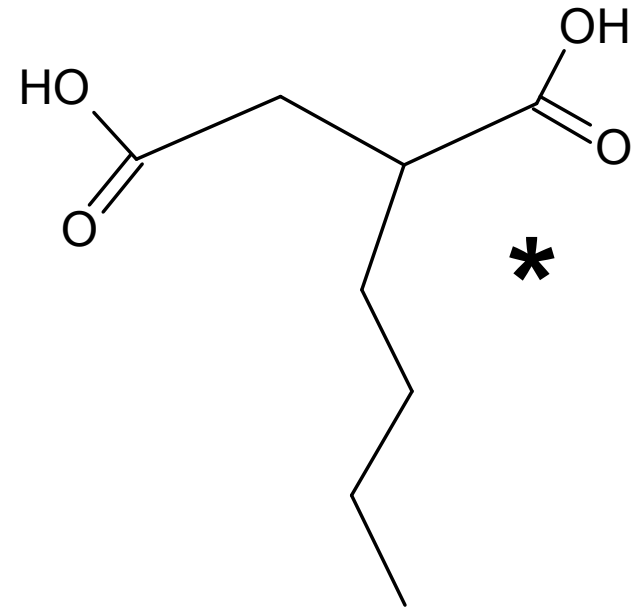
..... -, -cyclopropaandiol



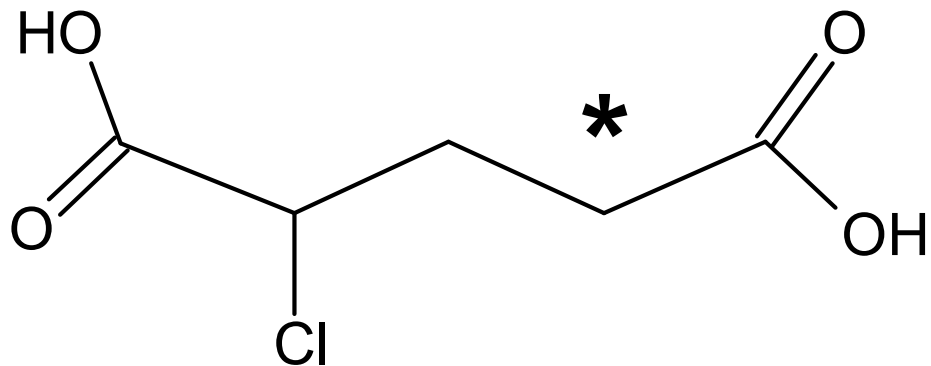
.... -methyl-.....-butaanamine



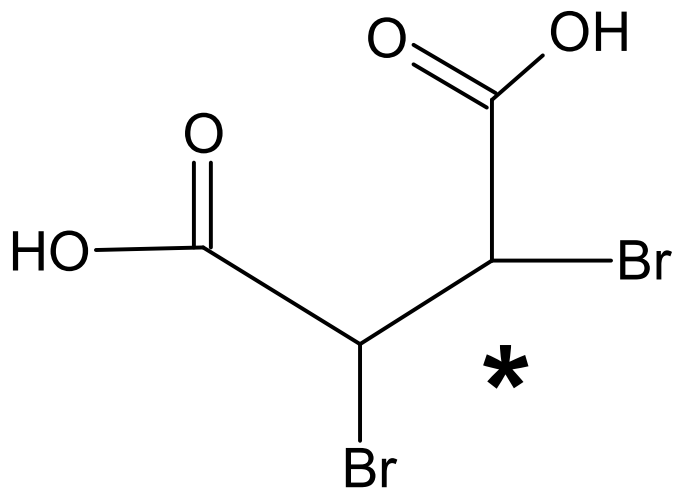
.... -ethyl-.....,-cyclohexaandiamine



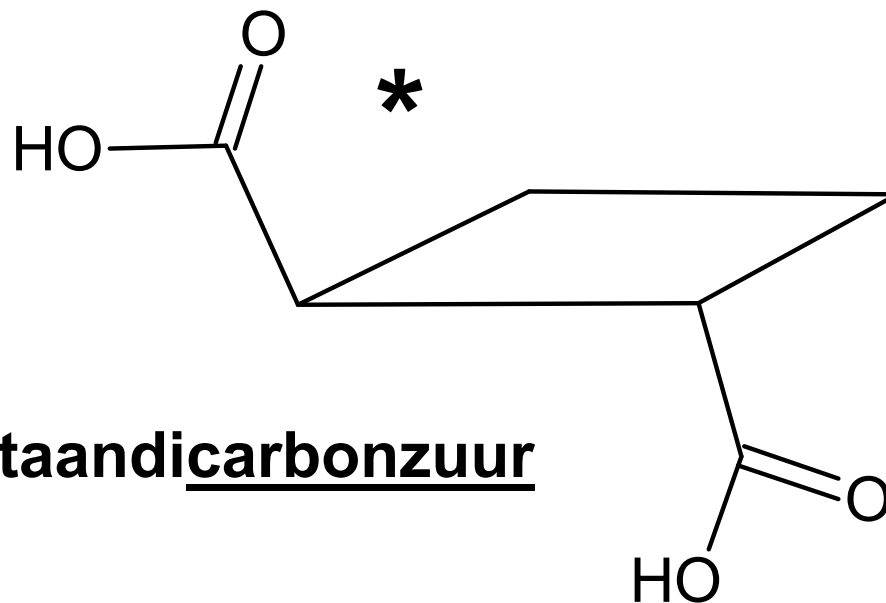
butylbutaandizuur



.....-chloropentaandizuur



.....,.....-dibroombutaandizuur



..... - ,-cyclobutaandicarbonzuur