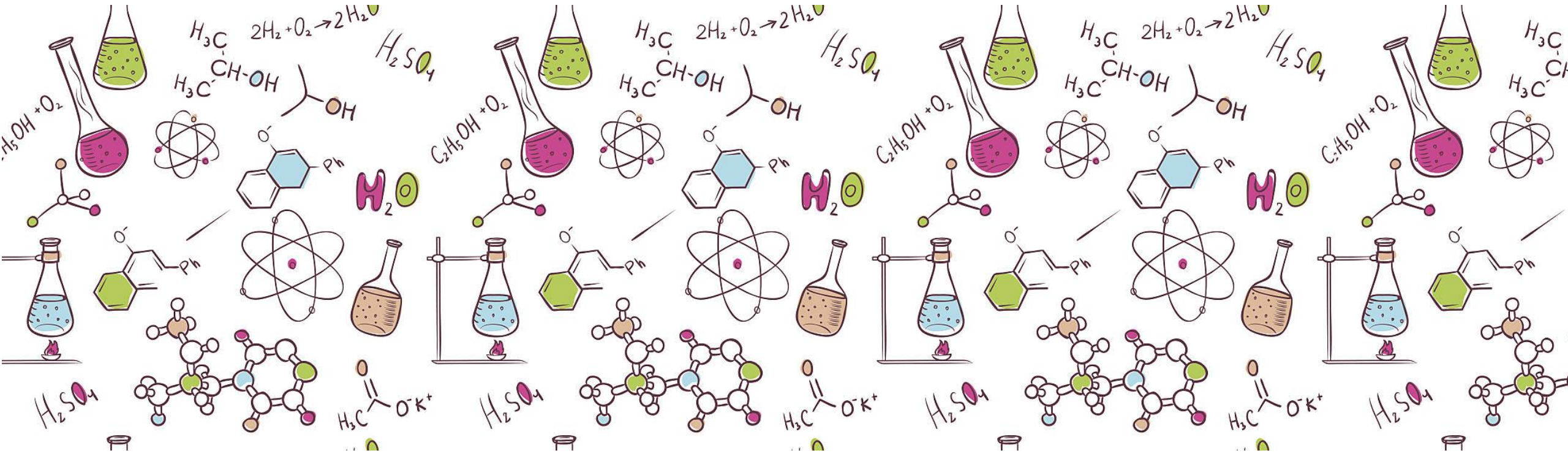
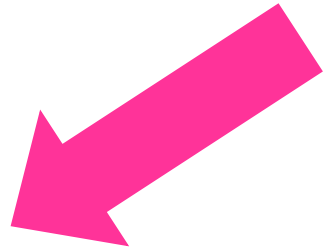




Clanna eile de chomhdhúile orgánacha

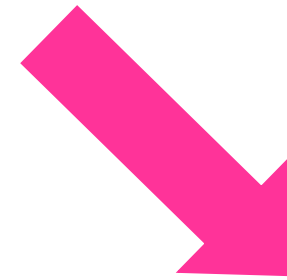
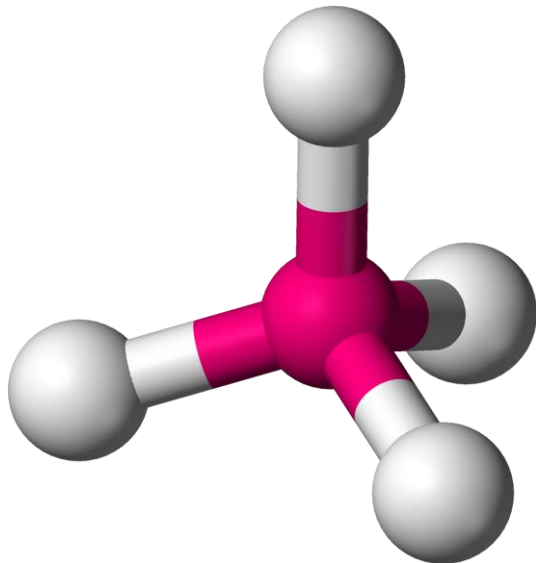


Na comhdhúile orgánacha eile



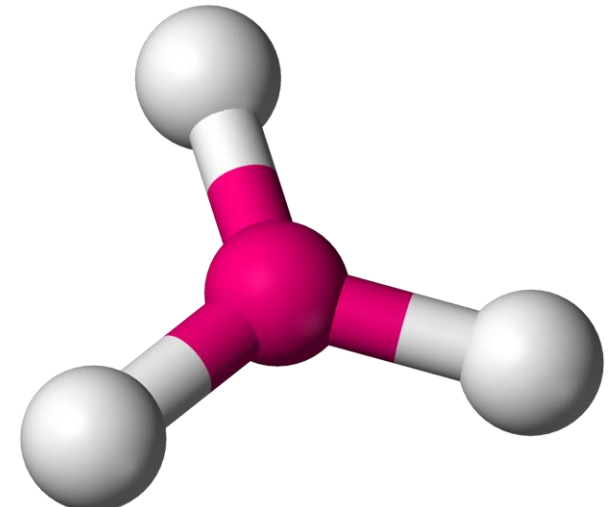
Teitrihéidreach

- ~ Clóralcáin
- ~ Alcóil



Plánach

- ~ Aildéid
- ~ Céatóin
- ~ Aigéid carbocsaileacha
- ~ Eistir
- ~ Aramatacha



Ceimic Orgánach

- 'Sí is an cheimic orgánach ann an staidéar ar chomhdhúile carbóin.
- Is dúil neamhghnách é an carbón sa chaoi is gur féidir leis slabhraí nó fáinní carbóin a dhéanamh.
- Inár gcuid staidéir ar an gceimic orgánach beimid ag díriú ar ghrupaí de na comhdhúile orgánacha seo a leanas:
 - (1) Na hidreacarbóin (Clúdófar iad sa mhír seo)
 - (2) Na halcóil ~ OH
 - (3) Na haidéid ~ CHO
 - (4) Na céatóin ~ COC
 - (5) Na haigéid charbocsaileacha ~ COOH
 - (6) Na heistir ~ -COO-
 - (7) Roinnt comhdhúile aramatacha



Torthaí foghlama: Na heistir

Faoi dheireadh na míre seo ar eistir, beidh tú in ann:

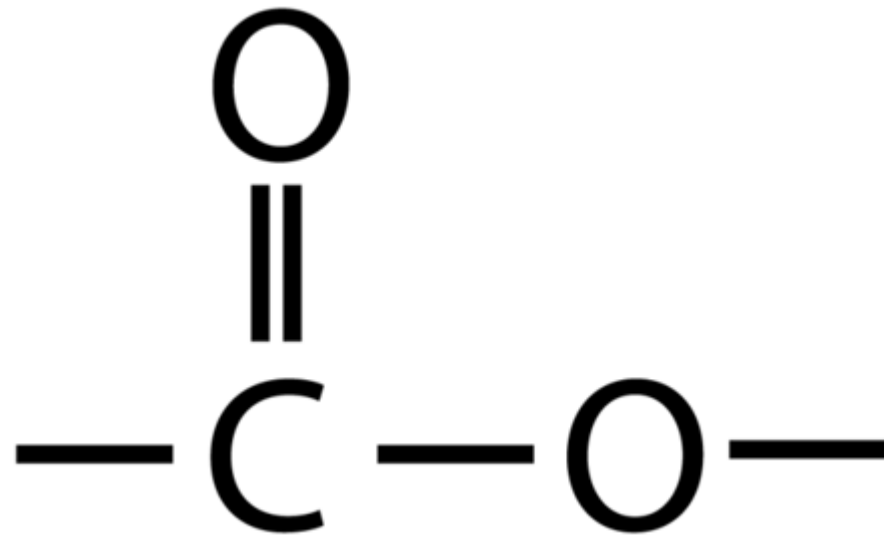
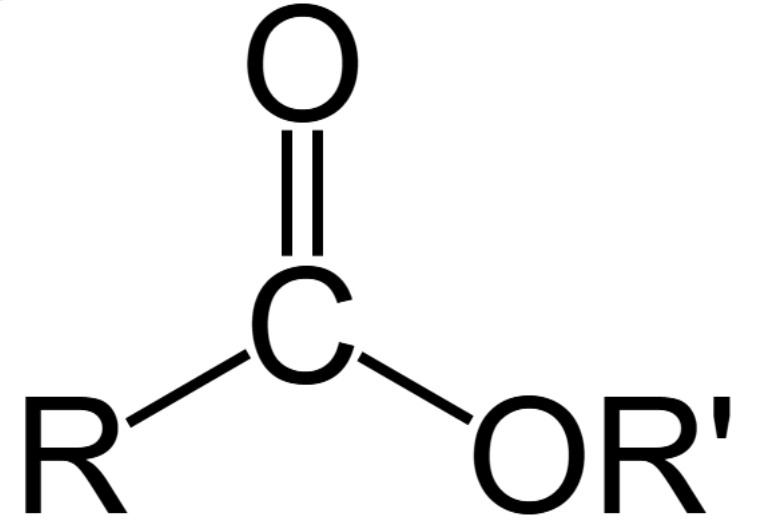
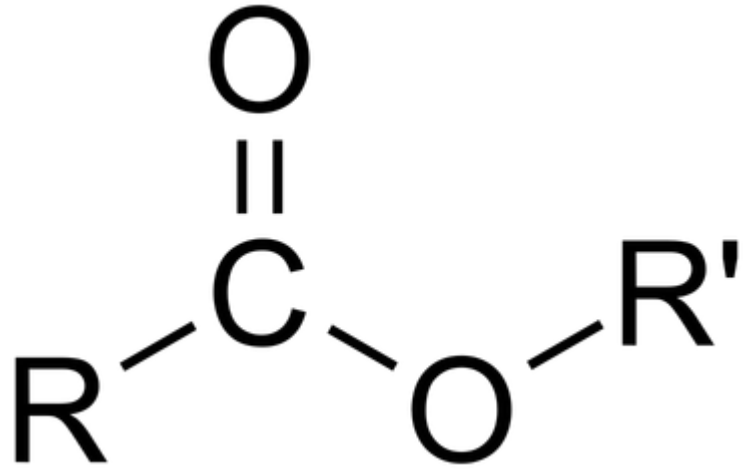
- ✓ **A thuiscint cad is eistir ann** - comhdhúile orgánacha a fhaightear trí imoibriú idir aigéad carbocsaileach agus alcól, ina bhfuil an feidhmghrúpa $-COO-$.
- ✓ **Struchtúr agus samplaí d'eistir a shainaithint** - m.sh. eatánóait eitile (aigéad eatánóch agus eatánóil), lena bhfoirmle mhóilíneach, a struchtúr comhdhlúite agus a léaráid mhóilíneach forbartha.
- ✓ **Cur síos a dhéanamh ar úsáidí praiticiúla eistear** - mar chumhráin agus mar bhlasóir i dtionscal an bhia, i bplaidistigh (m.sh. PVC), agus i dtuaslagóirí tionsclaíocha.
- ✓ **Ainmneacha beachta a thabhairt ar eistir** - ag baint úsáid as rialacha IUPAC (ainm an aigéid le "-óait" + ainm alcóil mar ghrúpa alcaileach), suas go dtí comhdhúile le 6 adamh carbóin.
- ✓ **Airíonna fisiceacha eistear a mhíniú** - m.sh. boladh aramatach milis, fiuchphointe níos ísle ná aigéid nó alcóil (mar gheall ar easpa nascadh hidrigine idir móilíní), intuaslagthacht theoranta in uisce.
- ✓ **An nasc idir struchtúr agus feidhm a thuiscint** - conas atá an grúpa feidhme $-COO-$ freagrach as na hairíonna ceimiceacha agus fisiceacha seo.
- ✓ **Comparáid a dhéanamh idir eistir agus comhdhúile gaolmhara** - m.sh. alcóil (a úsáidtear ina ndéantús), aigéid (a dtúsphointe ceimiceach), agus aimíní (a bhfuil feidhmghrúpa éagsúil acu ach ar féidir imoibriú le haigéid freisin).

Sraith Homalógach

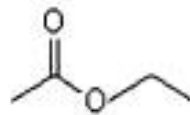
Is é an sainmhíniú atá ar **sraith homalógach** ná:

- comhdhúile de chlann ag a bhfuil airíonna ceimiceacha comhcosúla
- grádú in airíonna fisiceacha
- foirmle ghinearálta chéanna ag na baill
- modh cosúil ullmhaithe ag gach ball
- agus difríocht de CH_2 idir gach ball agus a chomharsana.

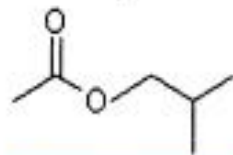
Na hEistir



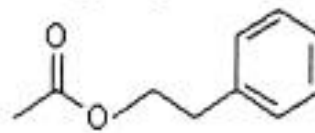
Ethyl acetate



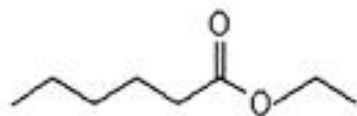
Isobutyl acetate



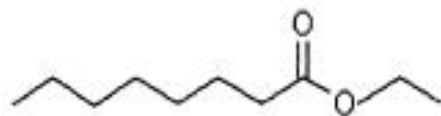
Phenyl ethyl acetate



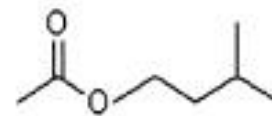
Ethyl caproate



Ethyl caprylate

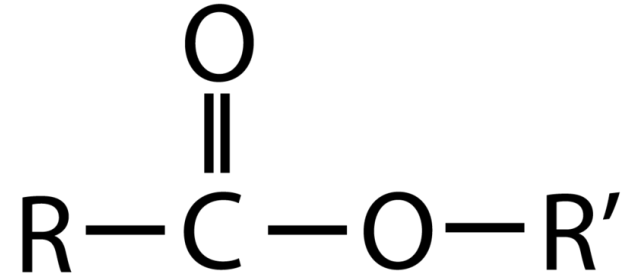


Isoamyl acetate



(9) Eistir:

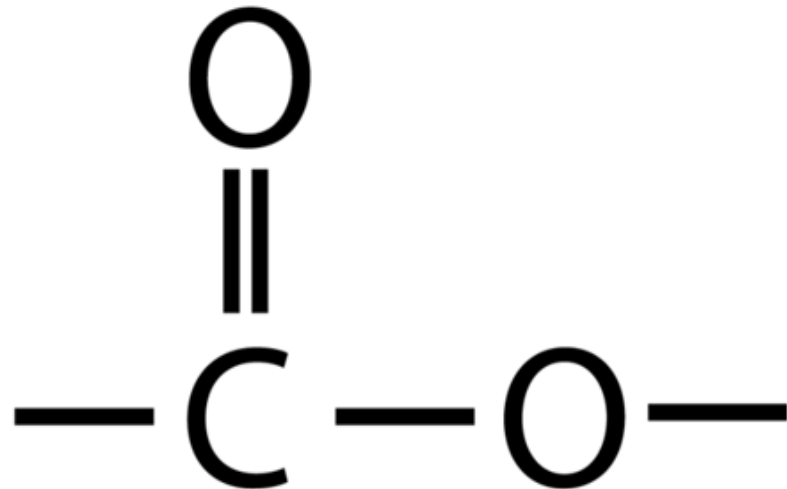
● Feidhmghrúpa na n-eistear:



- Díorthaithe/Déanta ó na haigéid carbocsaileacha nuair a ionadaítear an H sa ghrúpa OH le grúpa ailcilí.
- Ullmhaítear na heistir sa tsaotharlann trí alcól a imoibriú le haigéad carbocsaileach.
- Tugtar imoibriú comhdhlúthaithe ar an imoibriú seo toisc go gcailltear móilín uisce sa phróiseas.
- Tá ceithre eistear ar ár gcúrsa

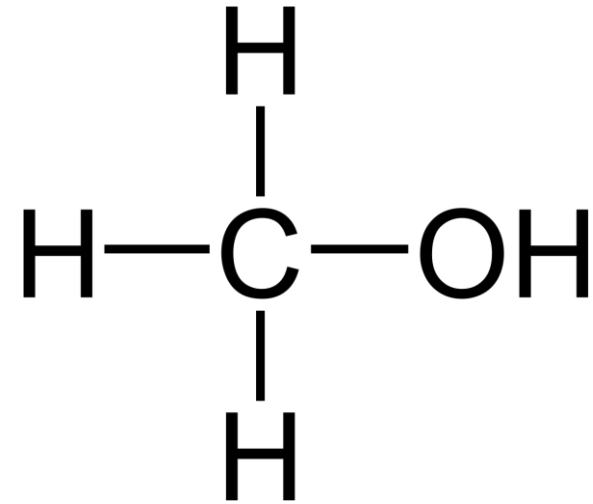
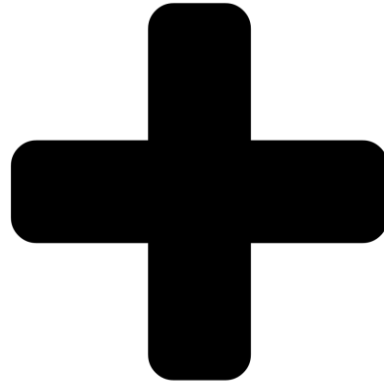
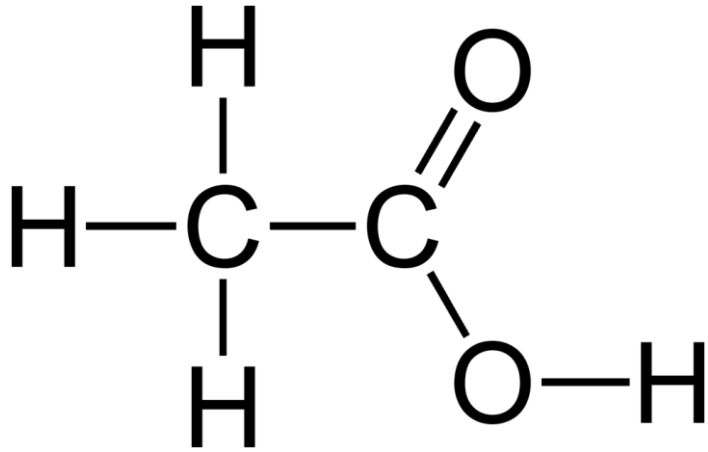
Ag tarraingt eistear:

- (1) Tarraing an feidhmghrúpa (féach thíos).
- (2) Baineann an C leis an aigéad carbocsaileach.
- (3) Téann an t-aigéad carbocsaileach ar chlé
- (4) Téann an t-alcól ar dheis.
- (5) Chun é an ainmniú, téann an t-aigéad roimh an alcól!



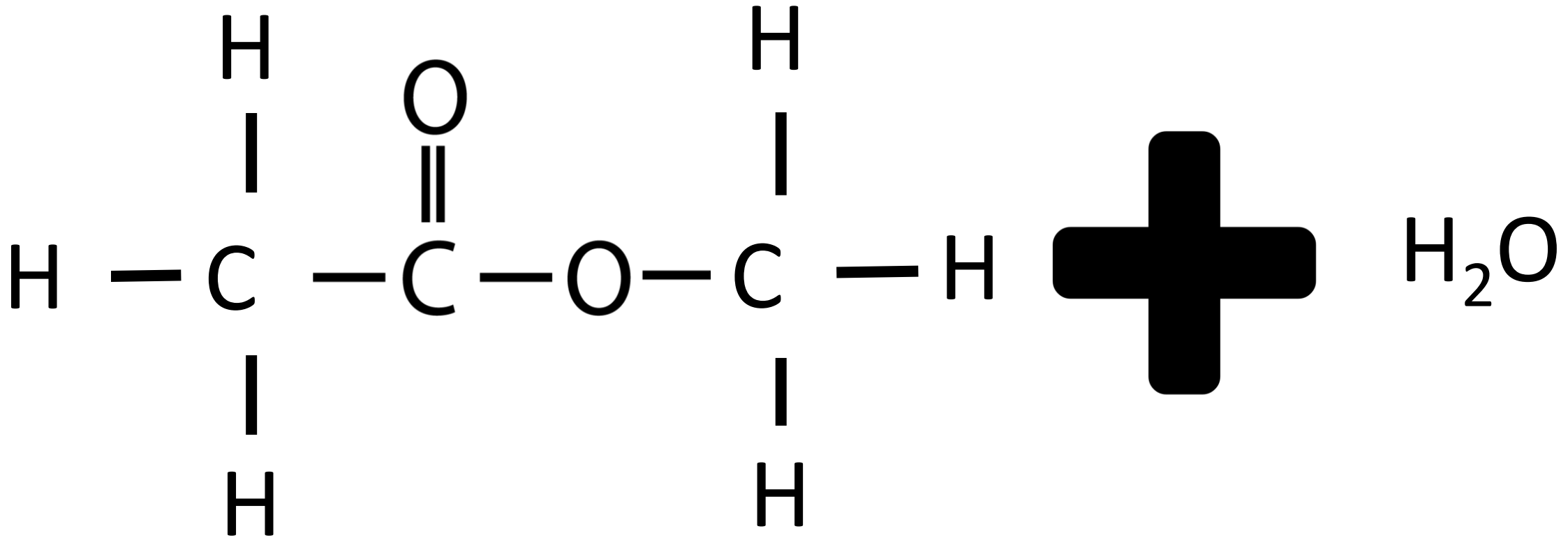
(1) Eatánóáit mheitle

- Meitil = meatánól
- Eatánóáit = aigéad eatánóch



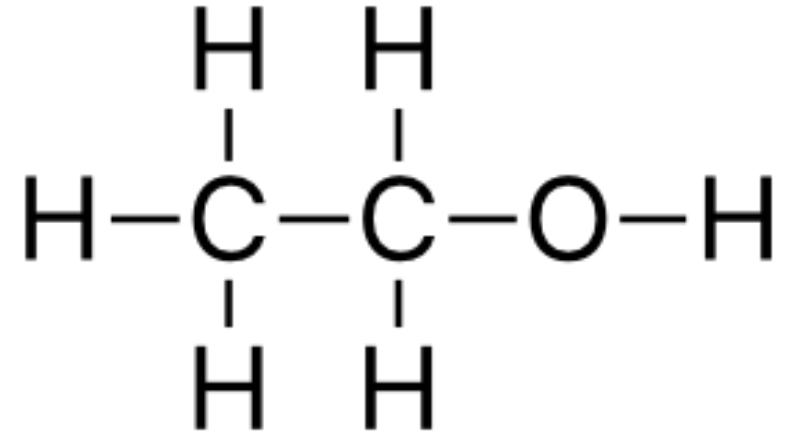
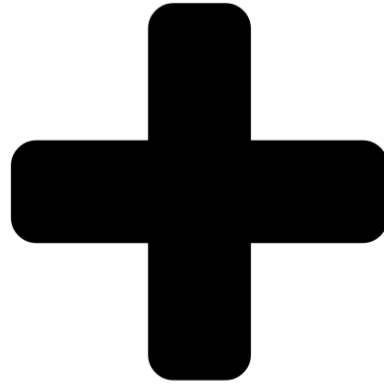
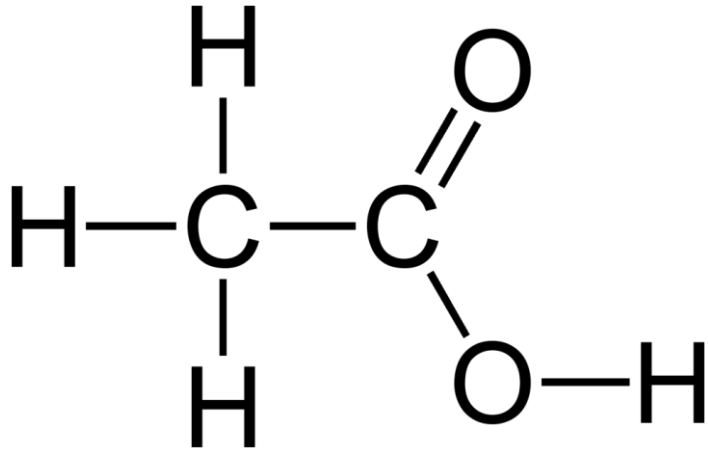
(1) Eatánóáit mheitile

- Meitil = meatánól
- Eatánóáit = aigéad eatánóch



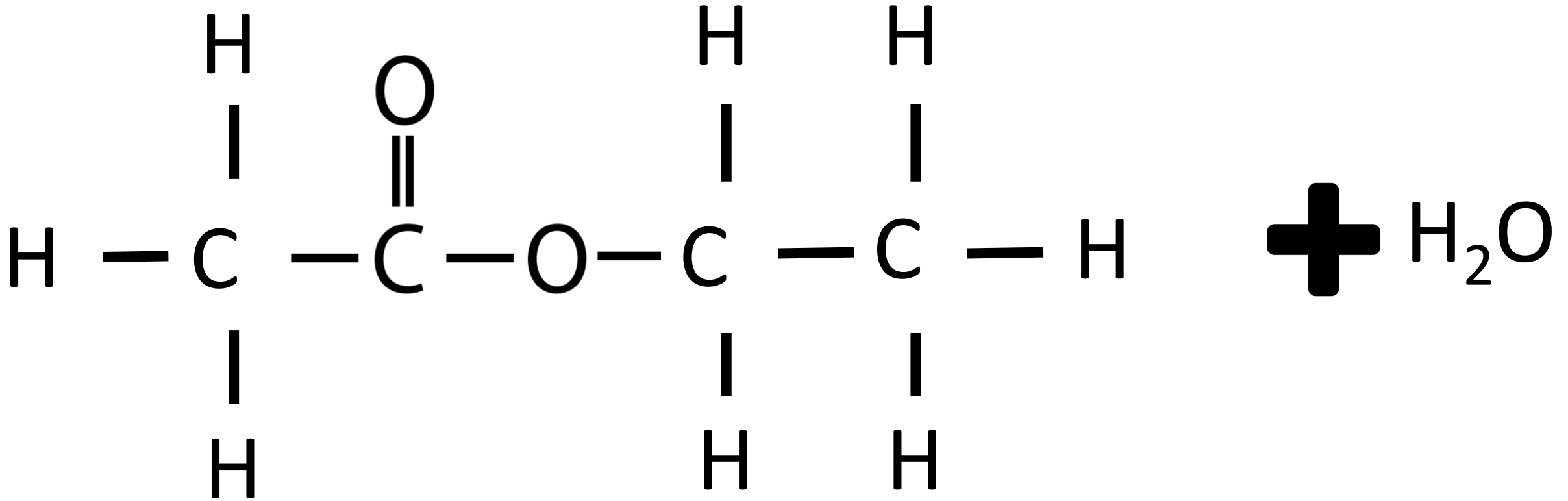
(2) Eatánóáit eitile

- Eitil = eatánól
- Eatánóáit = aigéad eatánóch



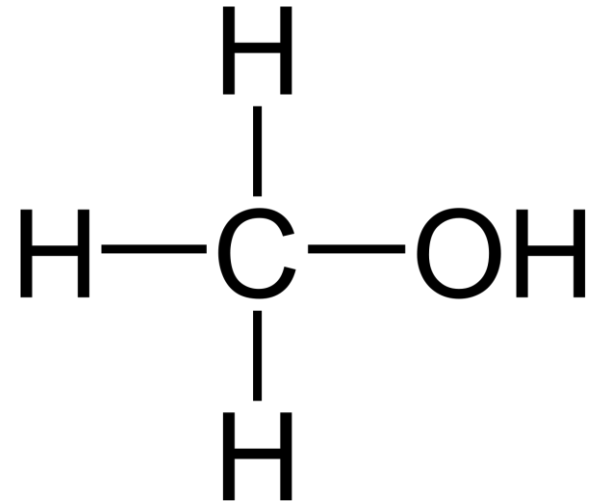
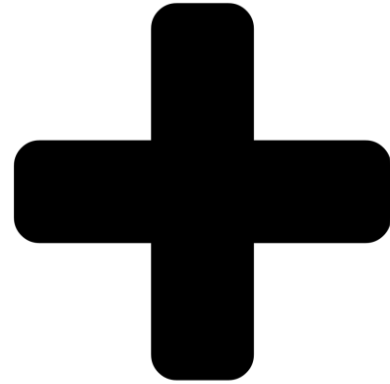
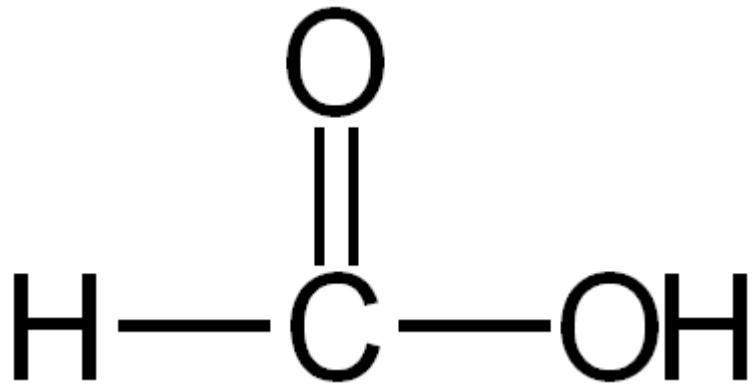
(2) Eatánóáit eitile

- Eitil = eatánól
- Eatánóáit = aigéad eatánóch



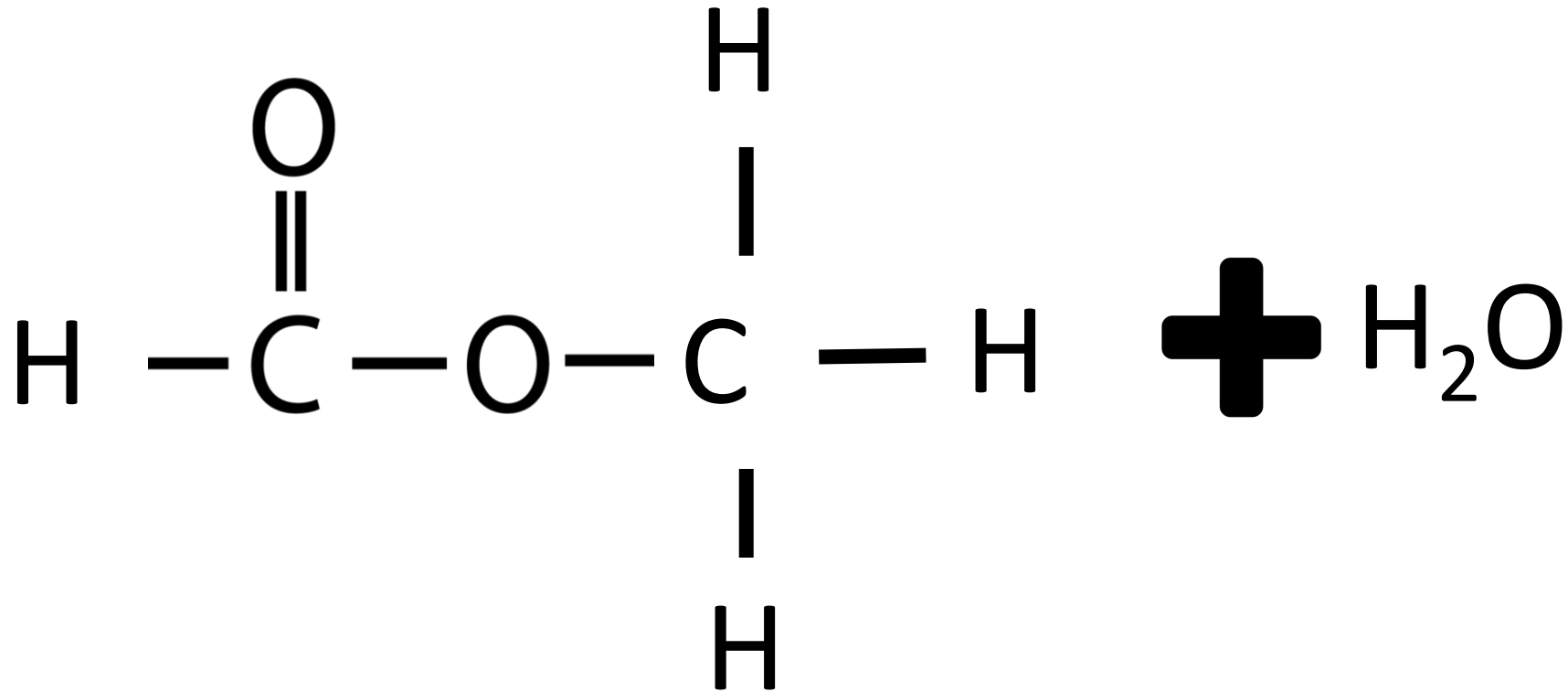
(3) Meatónóáit mheitile

- Meitil = meatónól
- Meatónóáit = aigéad meatónóch



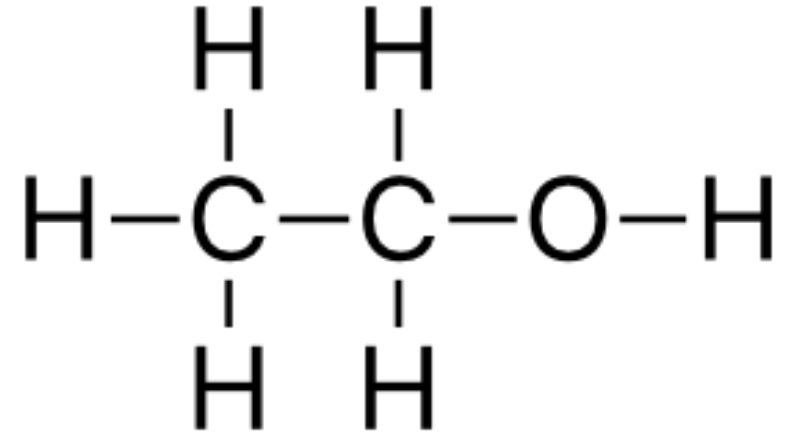
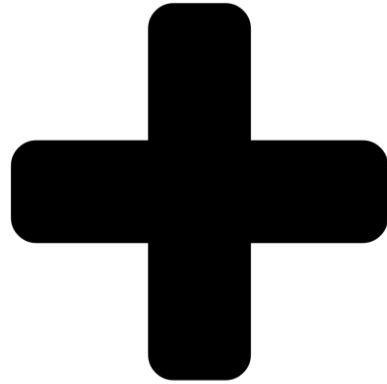
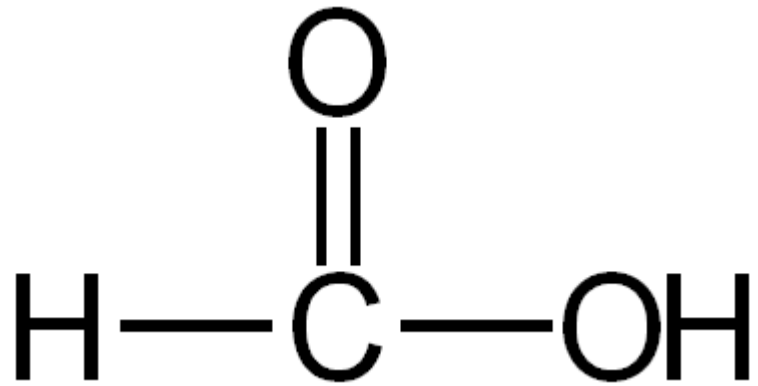
(3) Meatóáit mheitile

- Meitil = meatóól
- Meatóáit = aigéad meatóóch



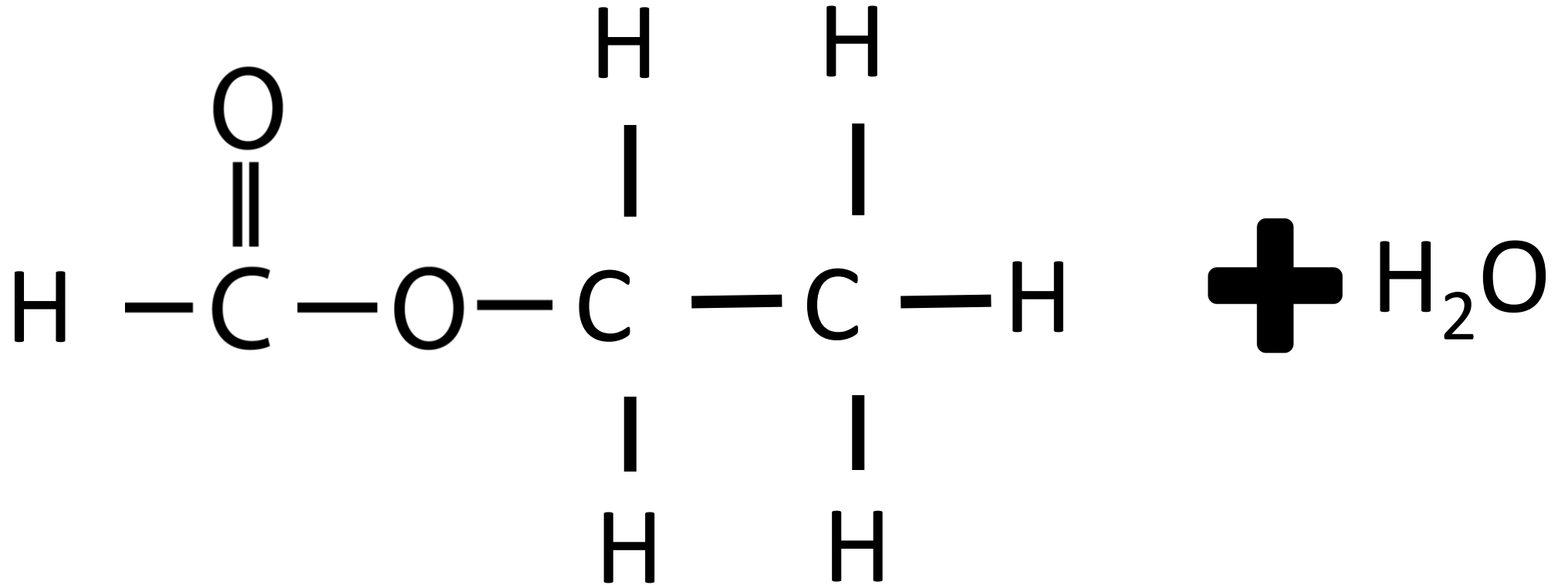
(4) Meatónoáit eitile

- Eitil = eatánól
- Meatónoáit = aigéad meatónóch



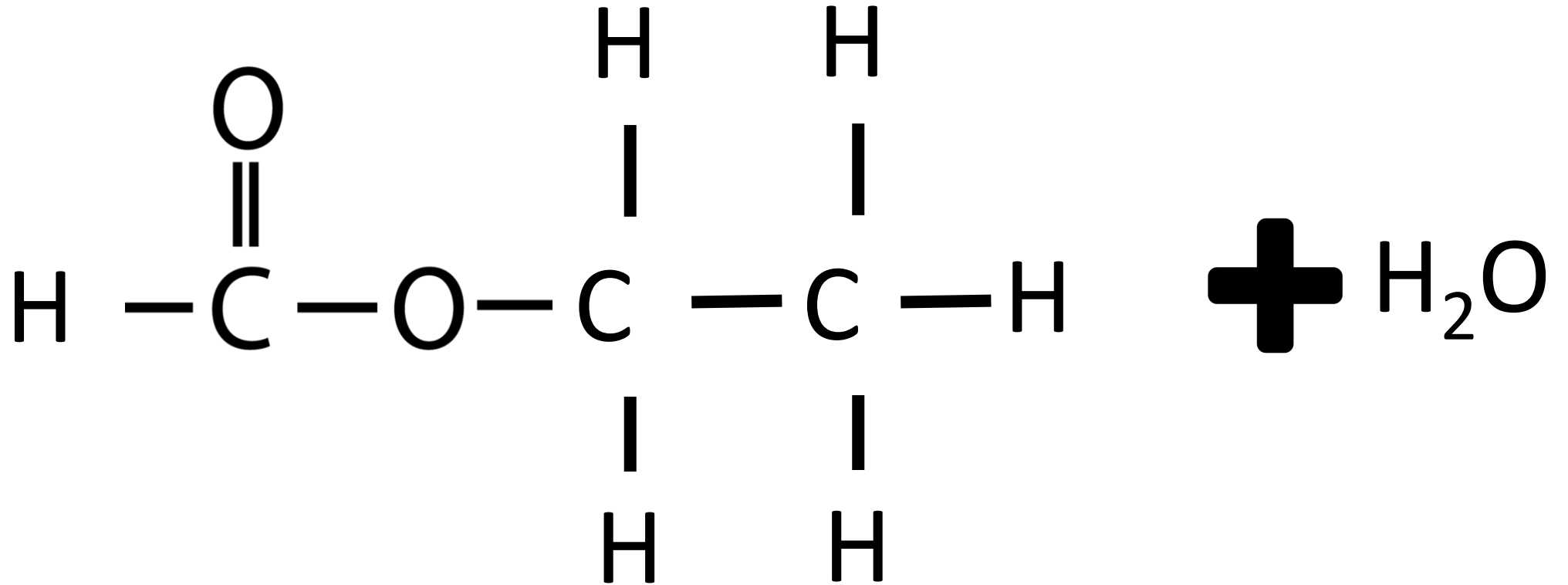
(4) Meatanóáit eitile

- Eitil = eatánól
- Meatanóáit = aigéad meatánóch



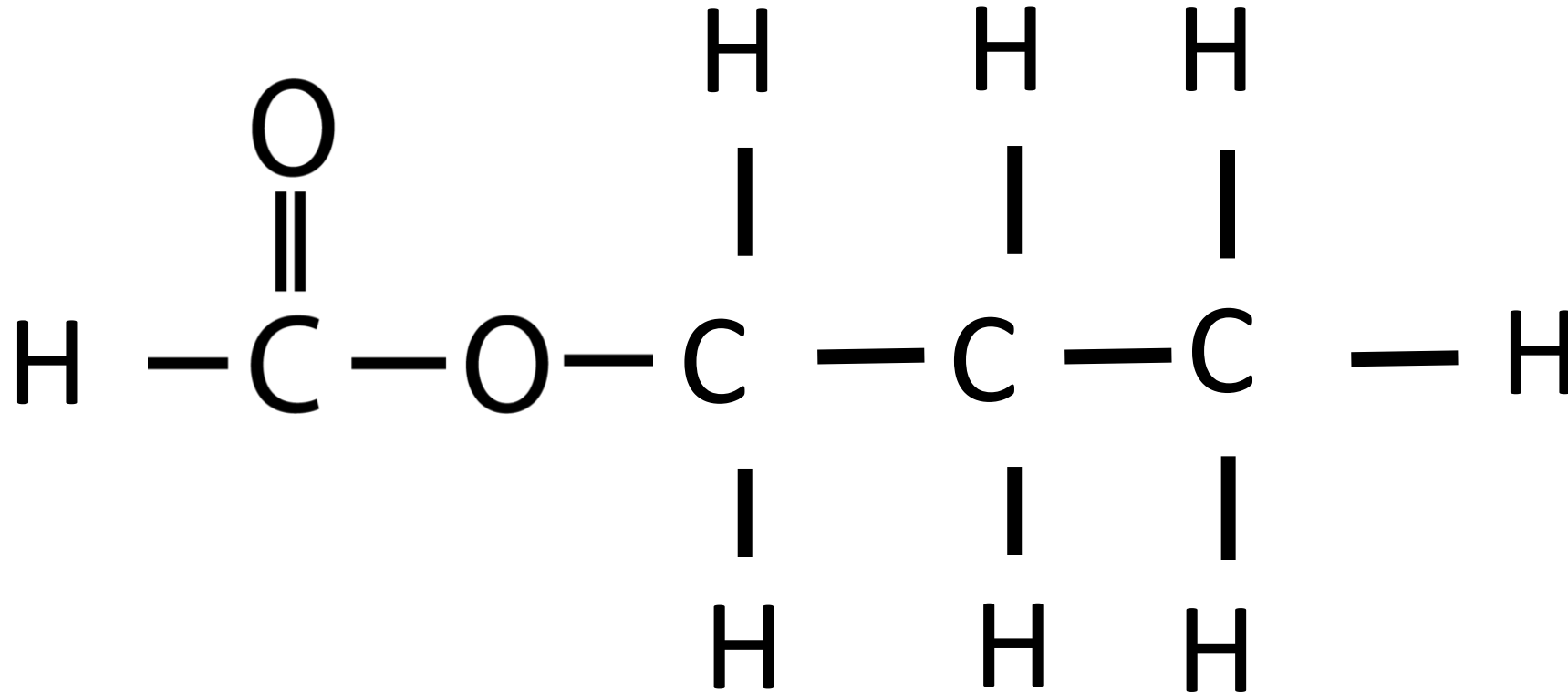
(4) Meatanóáit eitile

- Eitil = eatánól
- Meatanóáit = aigéad meatánóch



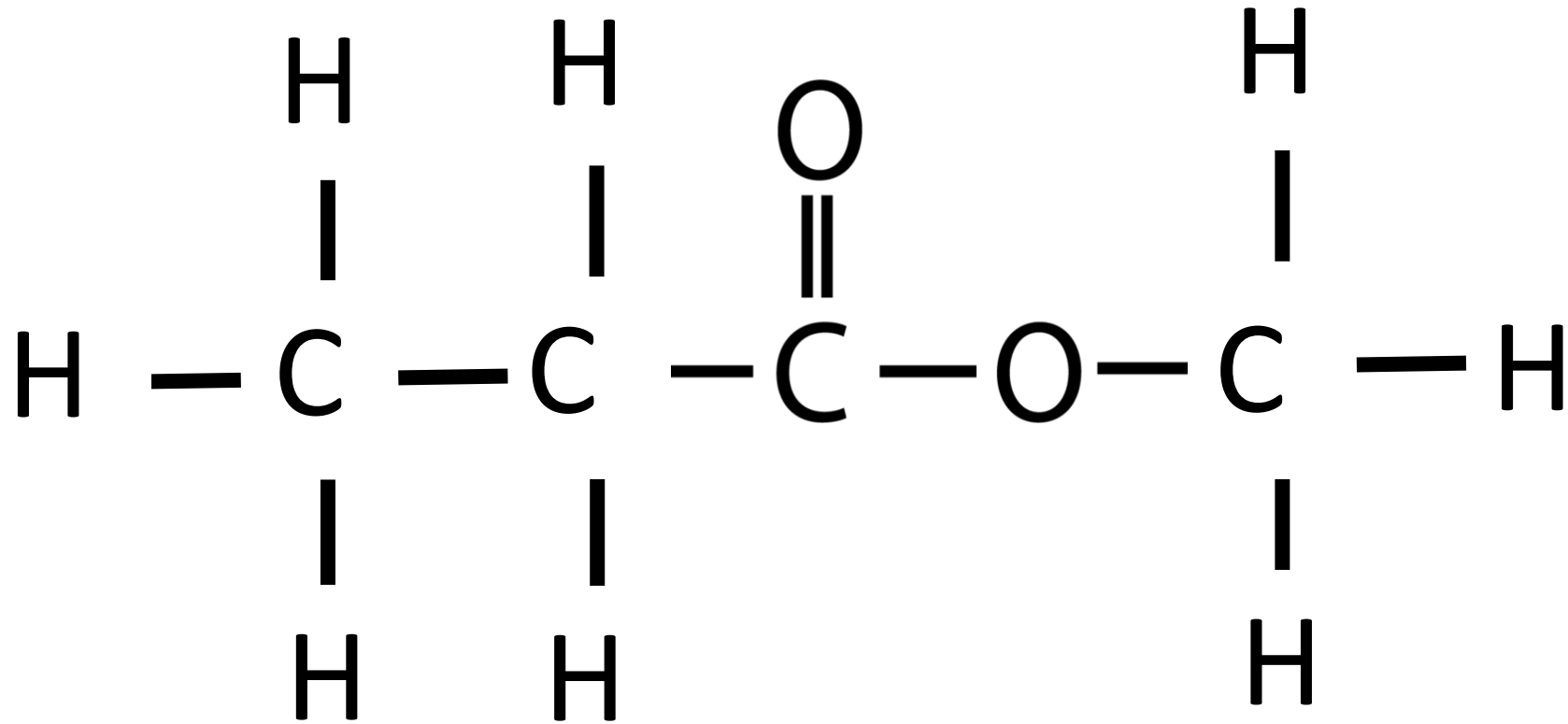
(5) Meatónóait phróipile

- Próipil = própánól
- Meatónóait = aigéad meatónóch



(6) Própánóáit mheitile

- Meitil = méatánól
- Própánóáit = aigéad própánóch



Airíonna fisiceacha:

(1) Fiuchphointí

Fiuchphointí ísle mar gheall nach féidir leo naisc hidrigine a dhéanamh ach tá siad níos airde ná a n-alcáin chomhfhreagracha de bharr polaraíocht grúpa carbóinile ($>C=O$).

(2) Intuaslagthacht

Beagán intuaslagtha in uisce mar gheall ar naisc hidrigine le huisce. Laghdaíonn intuaslagthacht le méadú ar fhad an tslabhra carbóin.

Foinsí na nÍomháanna

<https://upload.wikimedia.org/wikipedia/commons/b/b5/Carboxylic-acid.svg>

[https://www.thoughtco.com/thmb/1nixytkhMBNOrFNmo9eyjLE3_f0=/1500x0/filters:no_upscale\(\):max_bytes\(150000\):strip_icc\(\)/carboxylgroup-56a129e15f9b58b7d0bca5e9.jpg](https://www.thoughtco.com/thmb/1nixytkhMBNOrFNmo9eyjLE3_f0=/1500x0/filters:no_upscale():max_bytes(150000):strip_icc()/carboxylgroup-56a129e15f9b58b7d0bca5e9.jpg)

https://www.sciencemadness.org/smwiki/images/thumb/2/2a/Formic_acid.svg.png/250px-Formic_acid.svg.png

https://study.com/cimages/multimages/16/rsz_768px-ester-2dsvg3075576439747484926.png

<https://upload.wikimedia.org/wikipedia/commons/3/34/Ester-general.svg>

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