

# KLASKAMER 10

## GRAAD 12 FISIIESE WETENSKAPPE

### ORGANIESE CHEMIE – KARBOKSIELSURE EN ESTERS

'n Vinnige recap oor die konsepte:

- Karboksielsure
- Esters
- Verestering / Esterifikasie

#### Vraag 1:

Skryf die IUPAC naam neer van elk van die volgende verbindings:

1.1	1.2
<p><math display="block">\begin{array}{cccc} \text{H} &amp; \text{H} &amp; \text{H} &amp; \text{H} \\   &amp;   &amp;   &amp;   \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{C}-\text{H} \\   &amp;   &amp;   &amp;   \\ \text{H} &amp; \text{H} &amp; \text{H}-\text{C}-\text{H} &amp; \text{H} \\ &amp; &amp;   &amp; \\ &amp; &amp; \text{C}=\text{O} &amp; \\ &amp; &amp;   &amp; \\ &amp; &amp; \text{O}-\text{H} &amp; \end{array}</math></p>	<p><math display="block">\begin{array}{ccccccc} \text{H} &amp; \text{H} &amp; \text{H} &amp; \text{O} &amp; &amp; \text{H} &amp; \text{H} &amp; \text{H} \\   &amp;   &amp;   &amp;    &amp; &amp;   &amp;   &amp;   \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{C}-\text{O}- &amp; &amp; \text{C}-\text{C}-\text{C}-\text{H} \\   &amp;   &amp;   &amp; &amp; &amp;   &amp;   &amp;   \\ \text{H} &amp; \text{H} &amp; \text{H} &amp; &amp; &amp; \text{H} &amp; \text{H} &amp; \text{H} \end{array}</math></p>

#### Vraag 2:

- 2.1 Gebruik STRUKTUURFORMULES om die vorming van die ester etielmetanoaat te toon.
- 2.2 Gebruik STRUKTUURFORMULES en skryf 'n gebalanseerde vergelyking neer vir die reaksie tussen 3-metielpentan-1-ol en 3,3-dimetielbutanoësuur.

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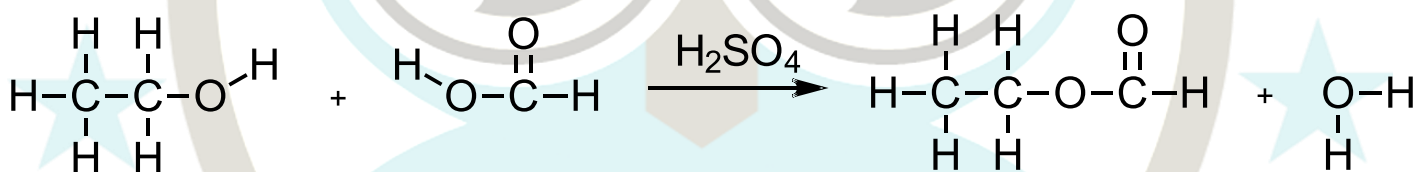
GRAAD 12 FISIIESE WETENSKAPPE (MEMORANDUM)  
 ORGANIESE CHEMIE – KARBOKSIELSURE EN ESTERS

1.

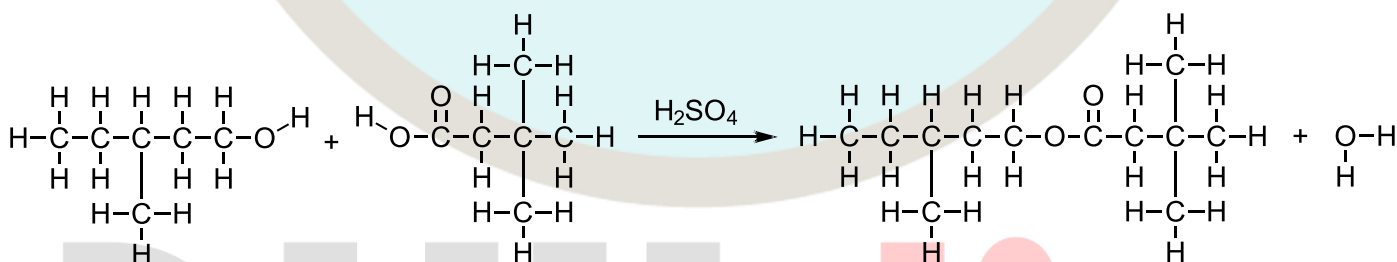
1.1	3-metielpentanoësuur
1.2	propielbutanoaat

2.

2.1



2.2

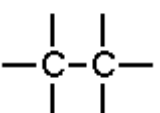
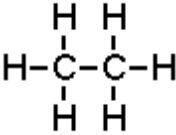
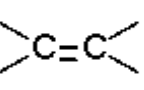
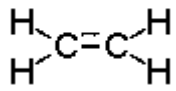
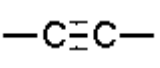
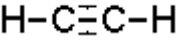
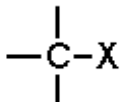
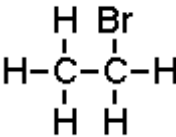
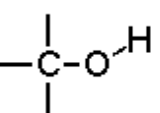
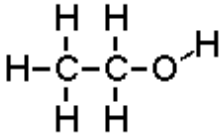
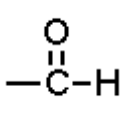
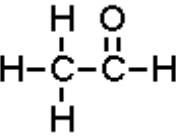
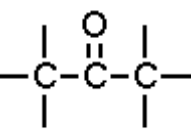
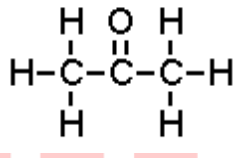
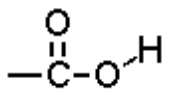
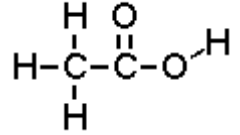
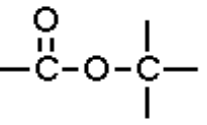
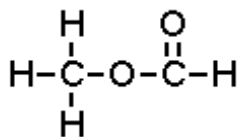


3-metielpentan-1-ol

3,3-dimetielbutanoësuur

3-metielpentiel-3,3-dimetielbutanoaat

## ONTHOU:

Homoloë Reeks	Agtervoegsel	Funksionele groep struktuur	Funksionele groep naam	Voorbeeld
Alkane	-aan		enkel koolstof-koolstof bindings	 etaan
Alkene	-een		dubbel koolstof-koolstof bindings	 eteen
Alkyne	-yn		drievoudige koolstof-koolstof bindings	 etyne
Haloalkane	-aan	 X = F, Cl, Br of I	halogeenatoom vervang ten minste een H-atoom in alkaan	 1-bromoetaan
Alkohole	-ol		hidroksielgroep	 etan-1-ol
Aldehiede	-aal		formielgroep	 etanaal
Ketone	-oon		karbonielgroep gebind aan twee C-atome	 propan-2-oon
Karboksielsure	-oësuur		karboksielgroep	 etanoësuur
Esters	-oaat			 metielmetanoaat