

Nomenclatura Aldeidi e Chetoni

Il nome di una **aldeide** si ottiene dal nome dell'alcano corrispondente sostituendo la -o finale della desinenza -ano con **-ale**.

Nelle **aldeidi** la **numerazione** deve partire dal **carbonio della funzione carbonilica**.

Quando la funzione aldeidica è legata direttamente ad un ciclo la molecola è denominata aggiungendo il suffisso **-carbaldeide** dopo il nome dell'anello.

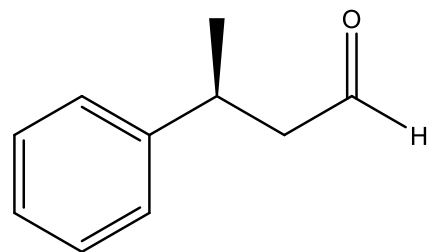
Il nome di un **chetone** si ottiene dal nome dell'alcano corrispondente sostituendo la -o finale della desinenza -ano con **-one**.

Nei **chetoni** la **numerazione** della catena principale (la più lunga secondo i criteri già considerati per i composti precedenti) deve attribuire al **carbonio carbonilico il più basso valore possibile**.

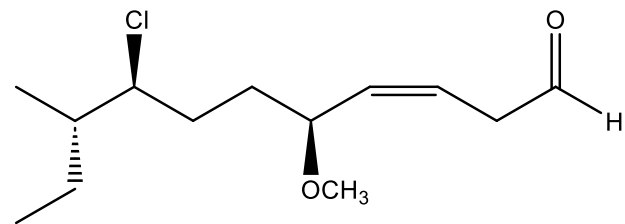
Quando il **gruppo carbonile è considerato come sostituente** (presenza di gruppi a maggiore priorità) le desinenze -ale e -one sono sostituite da **-osso**.

Esercizi – Nomenclatura aldeidi e chetoni

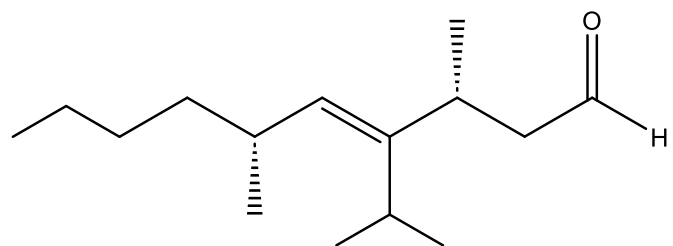
1.



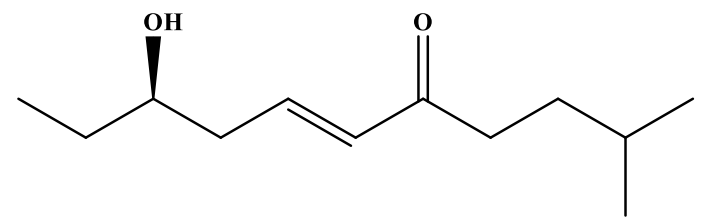
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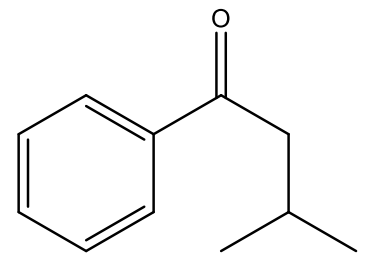
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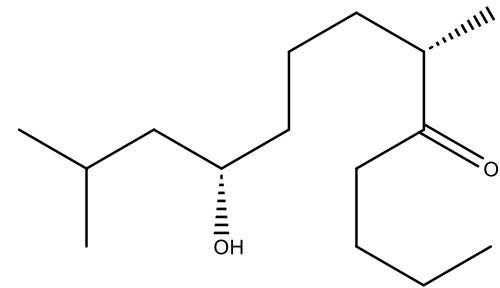
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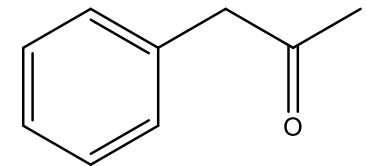
5.



6.

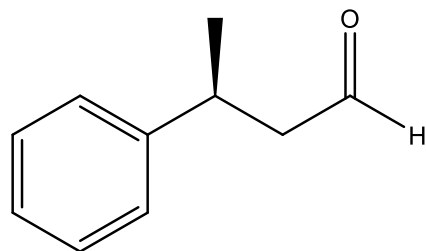


7.



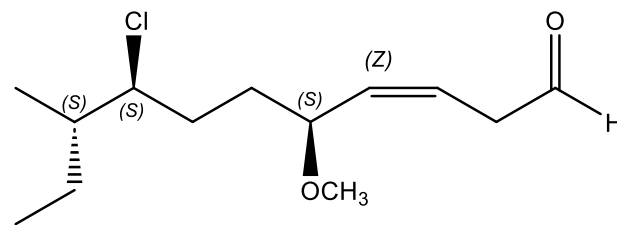
Esercizi – Nomenclatura aldeidi e chetoni - Soluzioni

1.



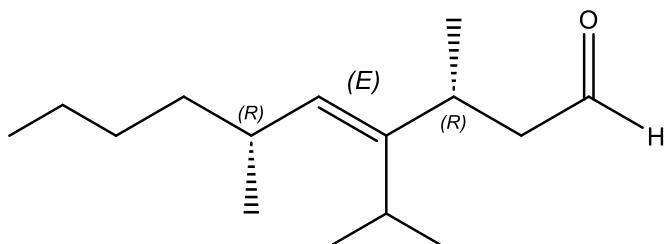
(3S)-3-fenilbutanale

2.



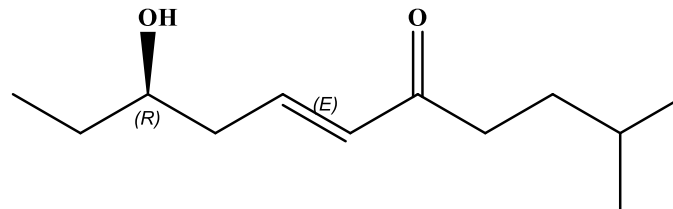
(5S,8S,9S,Z)-8-cloro-9-metil-5-metossiundec-3-enale

3.



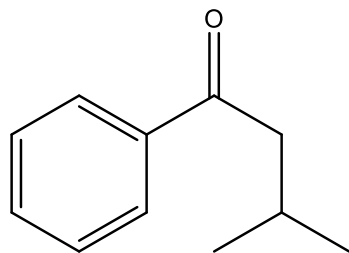
(3R,6R,E)-4-isopropil-3,6-dimetildec-4-enale

4.



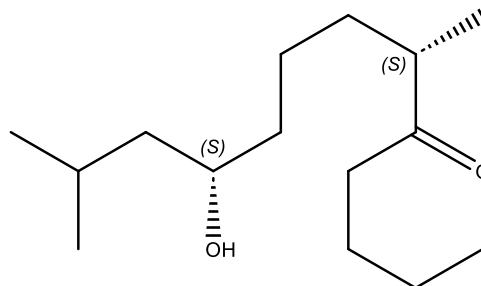
(9R,E)-9-idrossi-2-metilundec-6-en-5-one

5.



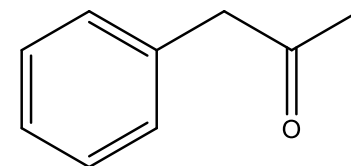
1-fenil-3-metilbutan-1-one

6.



(6S,10S)-10-idrossi-6,12-dimetiltridecan-5-one

7.



1-fenilpropan-2-one

Nomenclatura Acidi Carbossilici

La **funzione carbossilica** è quella caratterizzata dalla **più alta priorità**.

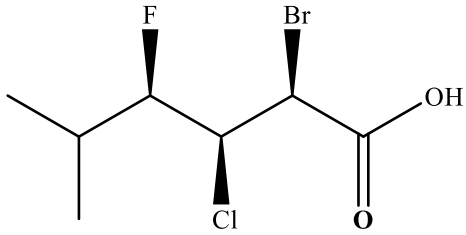
Pertanto nella nomenclatura IUPAC al **carbonio carbossilico** deve sempre essere attribuito **indice 1**.

Nella nomenclatura comune la posizione dei sostituenti è invece indicata con lettere greche.

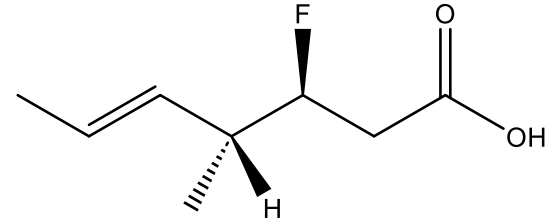
Nomi IUPAC di acidi alifatici: nel nome dell'alcano la **-o** finale del suffisso **-ano** è sostituito con **-oico**; il tutto va preceduto dalla parola **“acido”**.

Esercizi – Nomenclatura acidi carbossilici

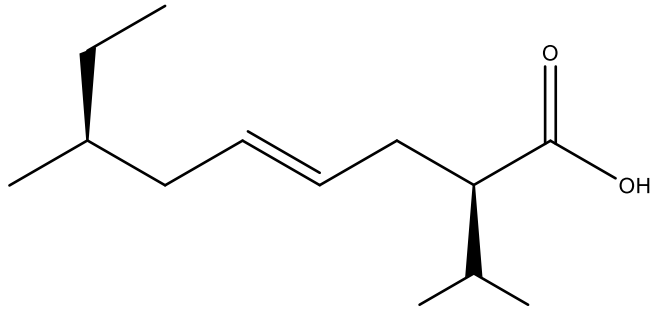
1.



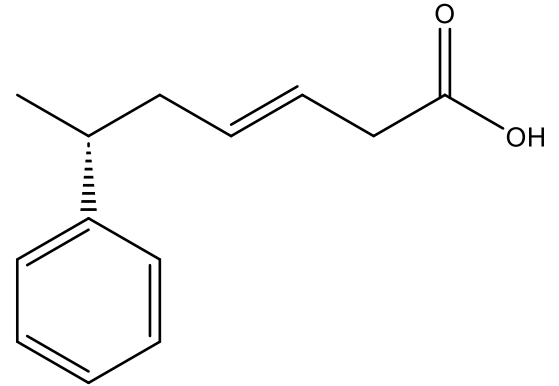
2.



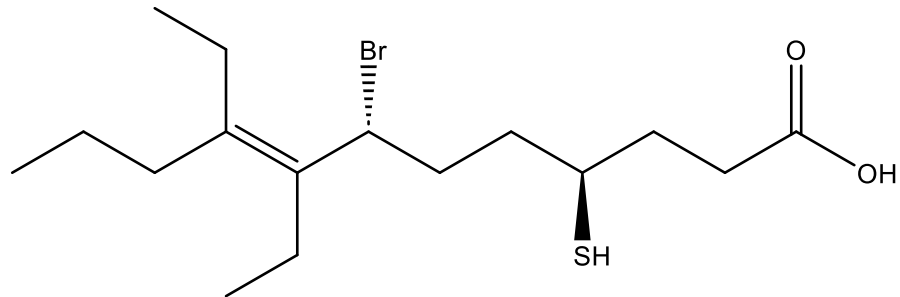
3.



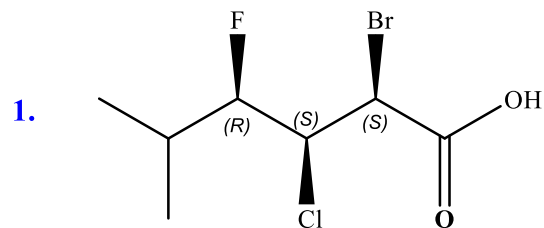
4.



5.

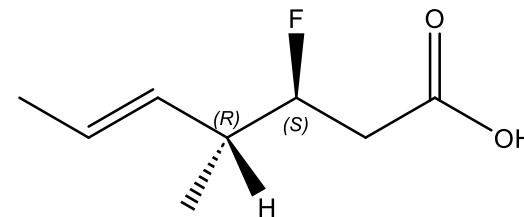


Esercizi – Nomenclatura acidi carbossilici - Soluzioni



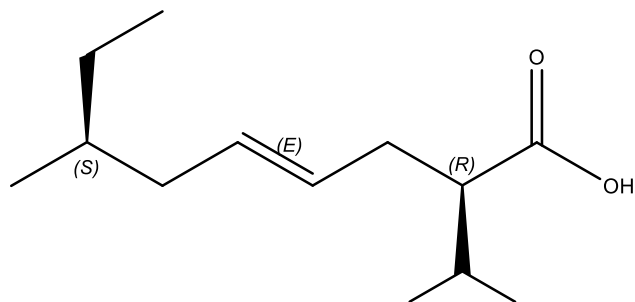
Acido (2*S*,3*S*,4*R*)-2-bromo-3-cloro-4-fluoro-5-etilanoico

2.



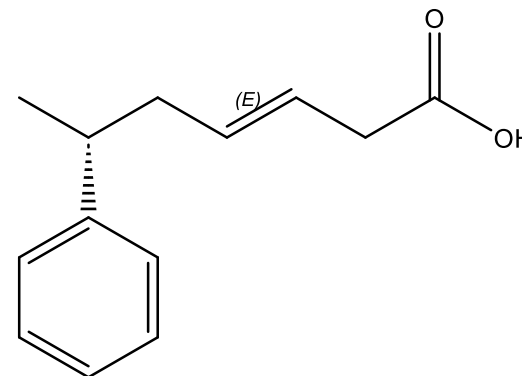
Acido (3*S*,4*R*,*E*)-3-fluoro-4-metilept-5-enoico

3.



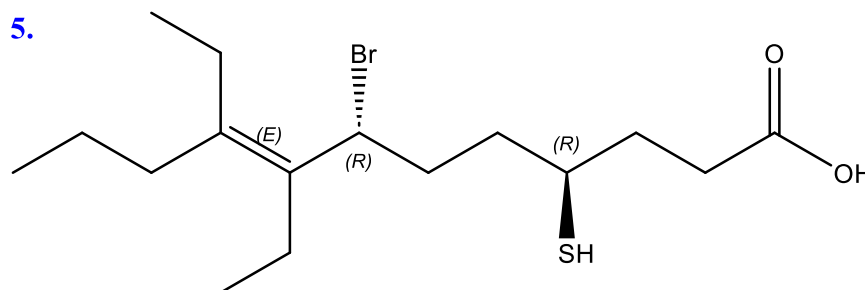
Acido (2*R*,7*S*,*E*)-2-isopropil-7-metilnon-4-enoico

4.



Acido (6*R*,*E*)-6-fenilept-3-enoico

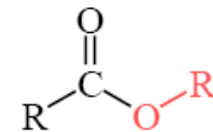
5.



Acido (4*R*,7*R*,*E*)-7-bromo-8,9-diethyl-4-mercaptododec-8-enoico

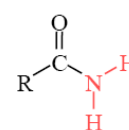
Nomenclatura Derivati di Acidi Carbossilici

Esteri: sostituire il suffisso **-ico** dell'acido con **-ato** e far seguire il nome dell'alchile **R'**.

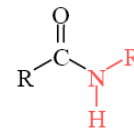


estere

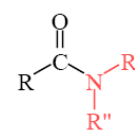
Ammidi: (sia nomenclatura IUPAC che comune) occorre sostituire il suffisso **-ico** dell'acido con **-ammide** e anteporre a tutto, quando necessario (ammidi secondarie e terziarie), il nome dei sostituenti legati all'atomo di azoto fatti precedere dalla lettera **N**.



ammide 1°

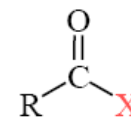


ammide 2°



ammide 3°

Alogenuri acilici: sostituire il suffisso **-ico** dell'acido con **-il** e far seguire il nome dell'alogenuro.

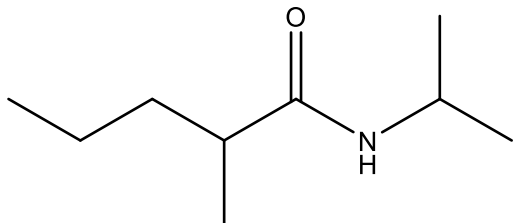


alogenuro
acido

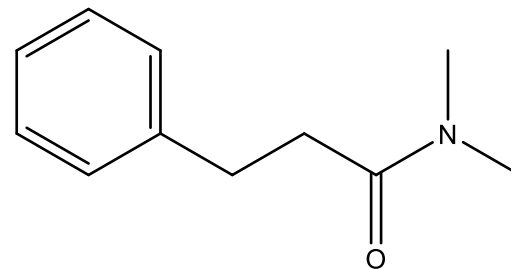
X = Cl, Br

Esercizi – Nomenclatura derivati di ammidi

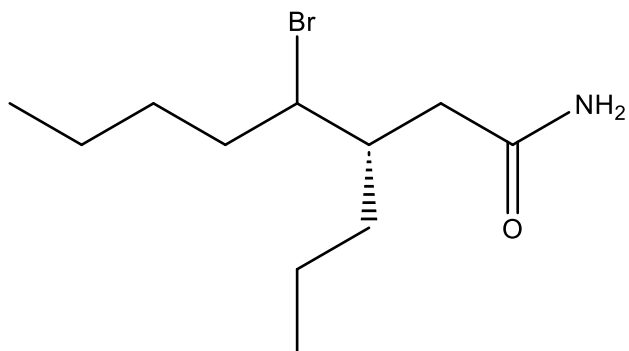
1.



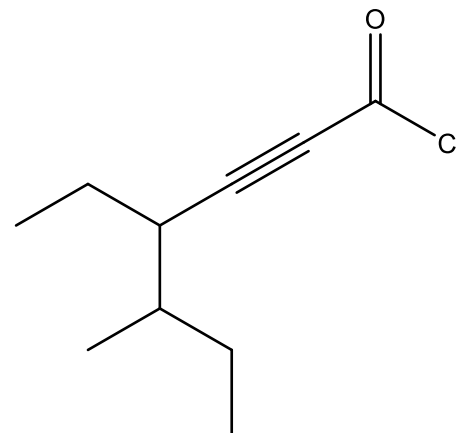
2.



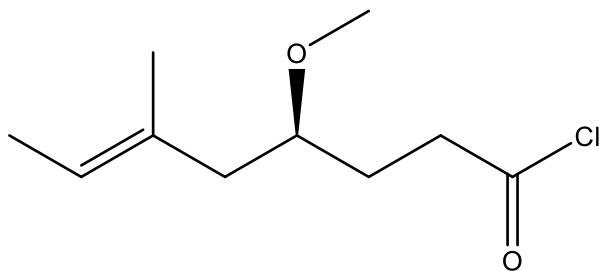
3.



4.

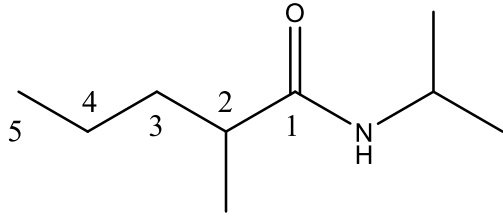


5.



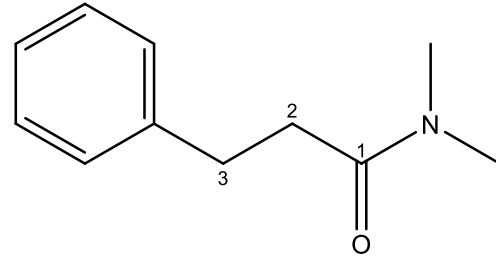
Esercizi – Nomenclatura derivati di ammidi - Soluzioni

1.



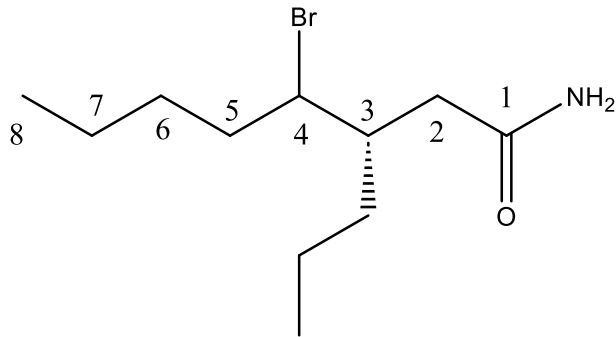
N-isopropil-2-metilpentanamide

2.



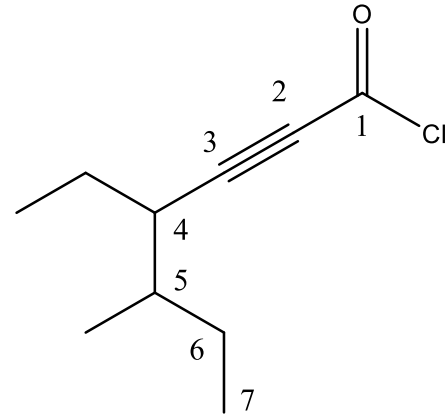
N,N-dimetil-3-fenilpropanamide

3.



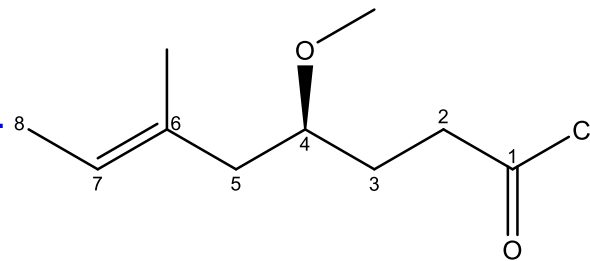
(*S*)-4-bromo-3-propilottanamide

4.



4-etil-5-metilept-2-inoil cloruro

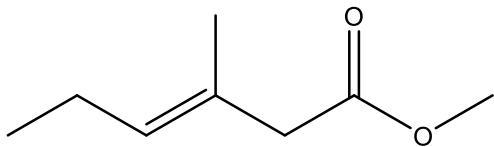
5.



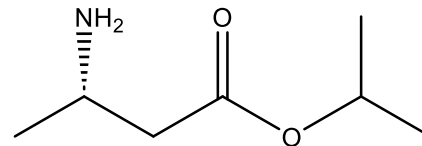
(*S,E*)-6-metil-4-metossiott-6-enoil cloruro

Esercizi – Nomenclatura derivati di esteri

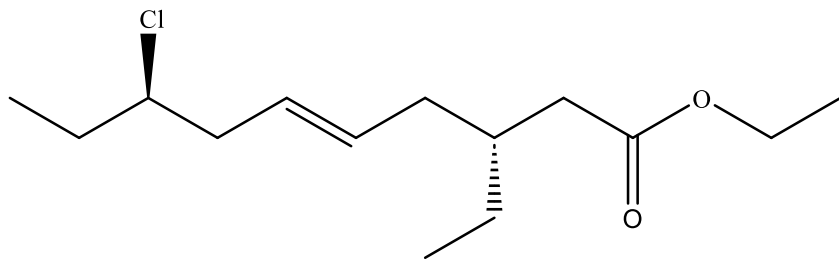
1.



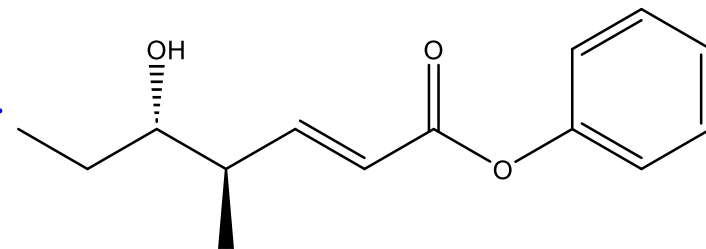
2.



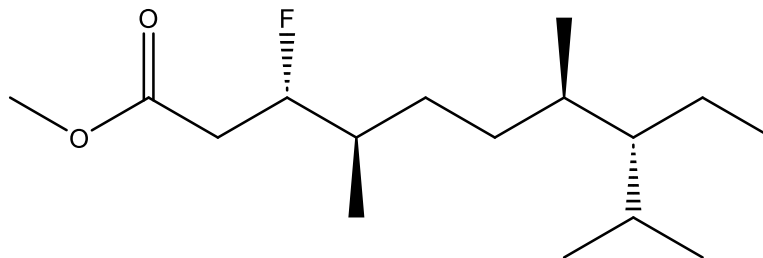
3.



4.

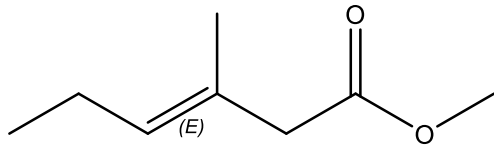


5.



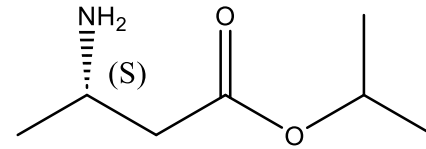
Esercizi – Nomenclatura derivati di esteri - Soluzioni

1.



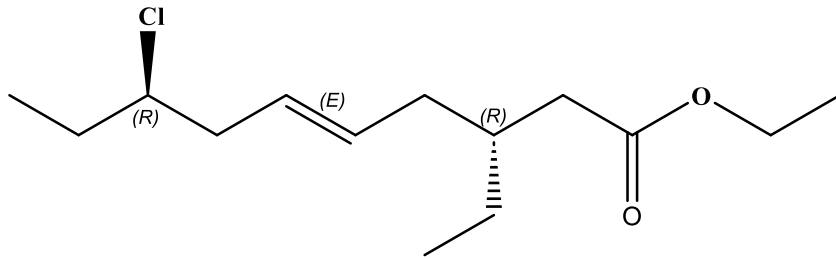
(*E*) 3-metiles-3-enoato di metile

2.



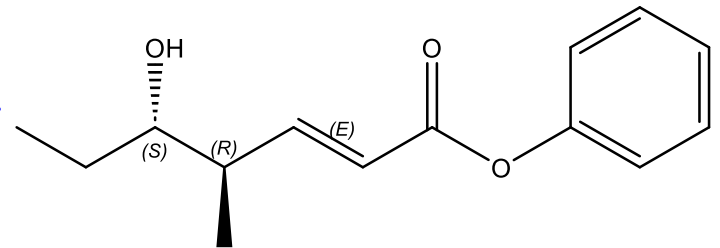
(*S*) 3-amminobutanoato di isopropile

3.



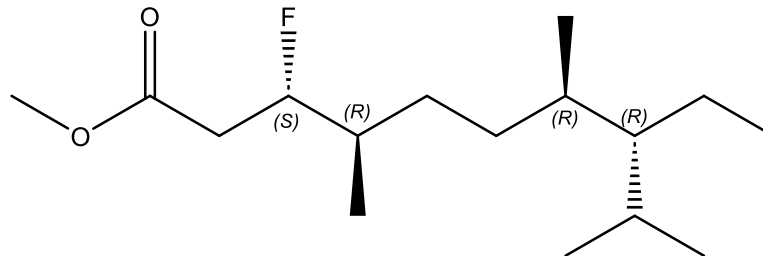
(*E,3R,8R*) 8-cloro-3-etildec-5-enoato di etile

4.



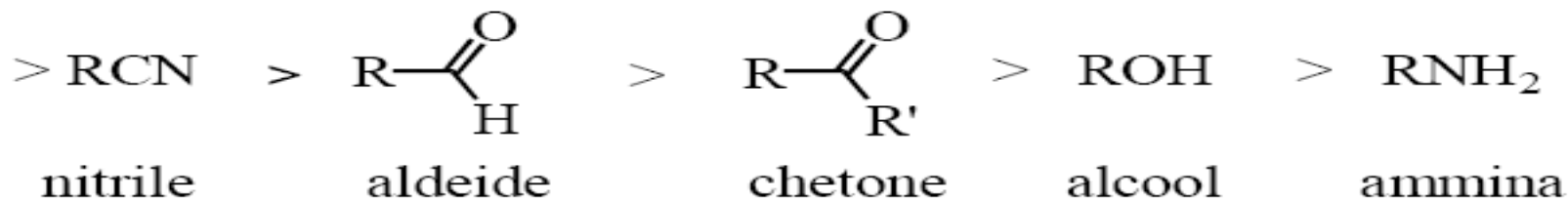
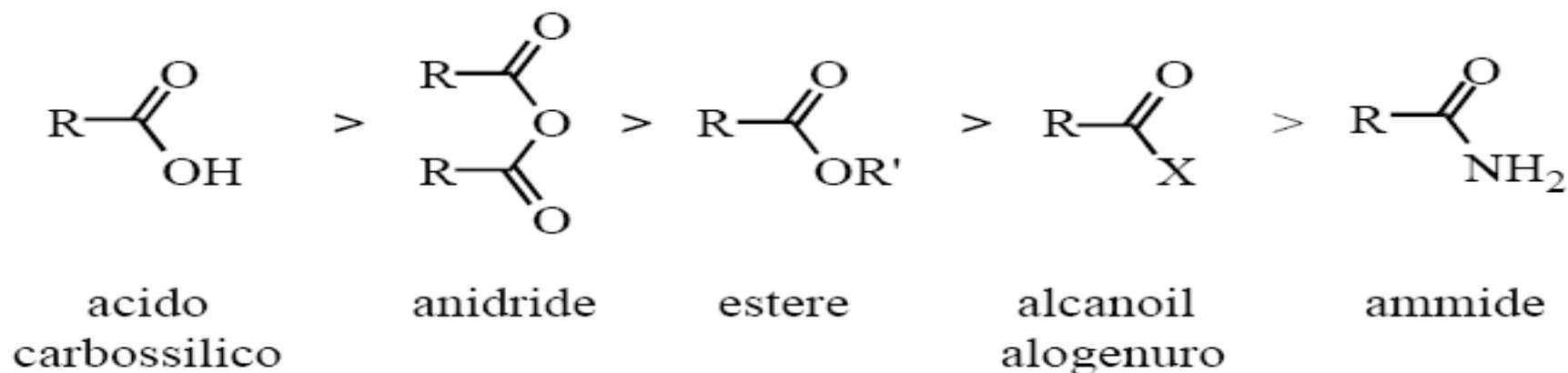
(*4R,5S,E*) 5-idrossi-4-metilept-2-enoato di fenile

5.

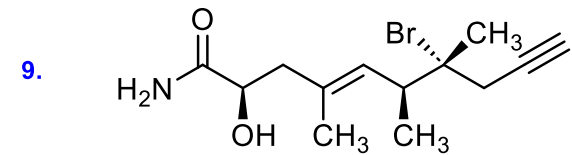
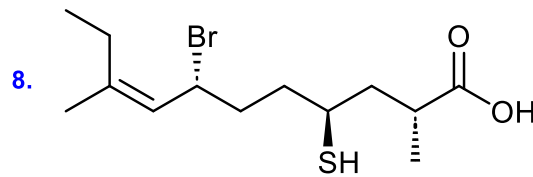
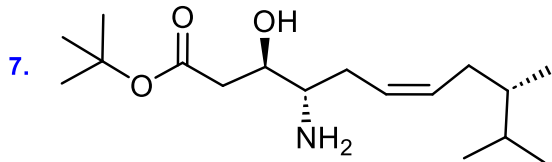
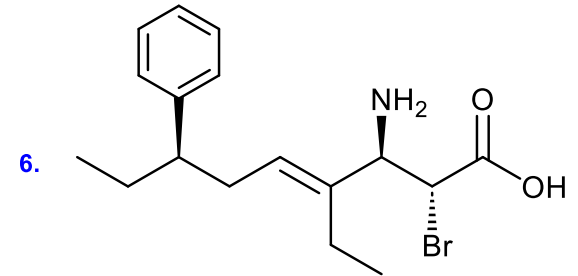
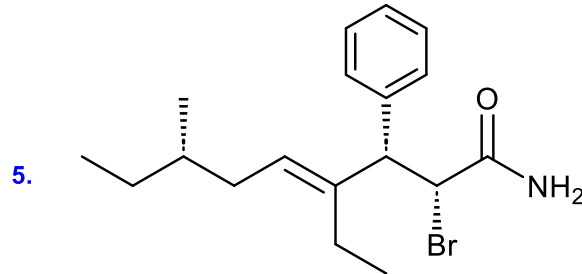
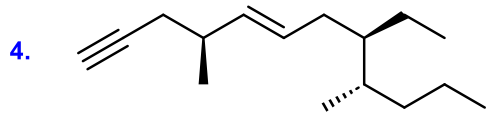
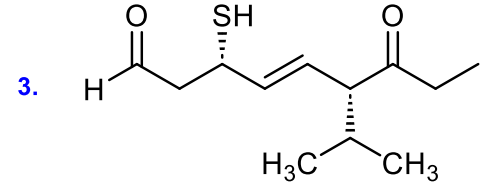
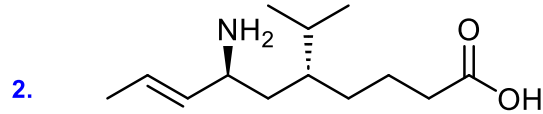
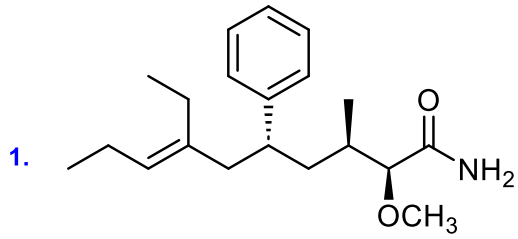


(*3S,4R,7R,8R*) 8-etil-3-fluoro-4,7,9-trimetildecanoato di metile

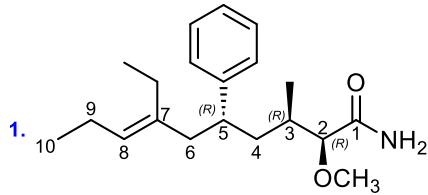
Ricordare che, in presenza di più gruppi funzionali, per l'attribuzione del nome è necessario rispettare l'ordine di priorità riportato in basso:



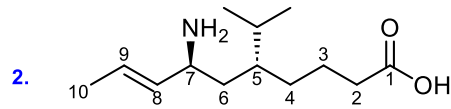
Esercizi d'esame



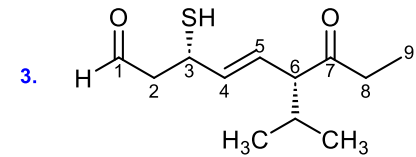
Esercizi d'esame - Soluzioni



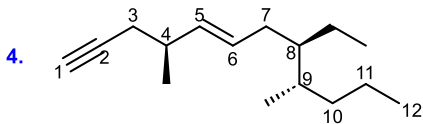
(2S,3R,5R,E)-7-etil-5-fenil-3-metil-2-metossidec-7-enamide



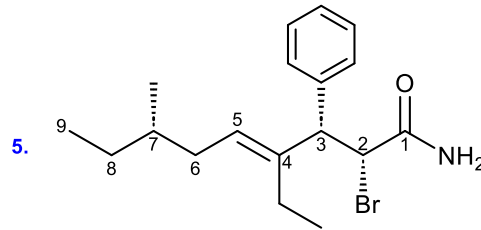
(5R,7S,E) Acido 7-ammino-5-isopropildec-8-enoico



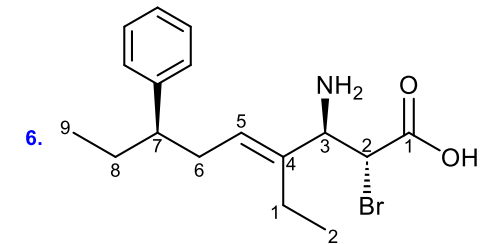
(3S,6R,E)-6-isopropil-3-mercapto-7-ossnon-4-enale



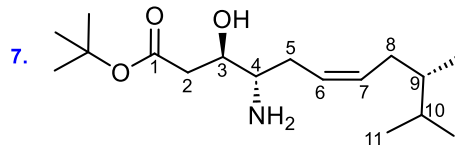
(4S,8R,9S,E)-8-etil-4,9-dimetildodec-5-en-1-ino



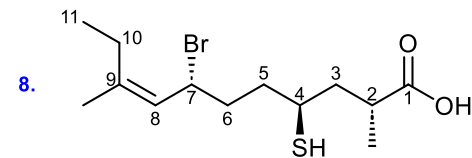
(2R,3R,7S,E)-2-bromo-4-etil-3-fenil-7-metilnon-4-enamide



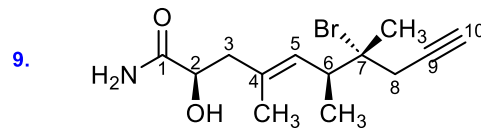
(2R,3R,7R,E)Acido 3-ammino-2-bromo-4-etil-7-fenilnon-4-enoico



(3R,4S,9S,Z)-4-ammino-3-idrossi-9,10-dimetilundec-6-enoato di terz-butile



Acido (2R,4S,7R,Z)-7-bromo-4-mercapto-2,9-dimetilundec-8-enoico



(2R,6S,7R,E)-7-bromo-2-idrossi-4,6,7-trimetildec-4-en-9-inamide