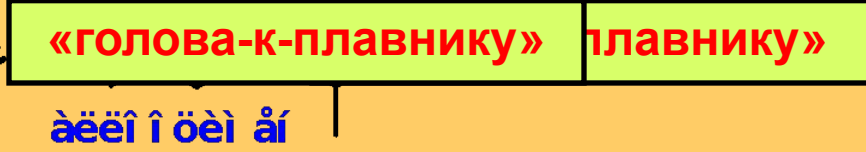
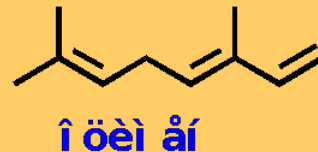
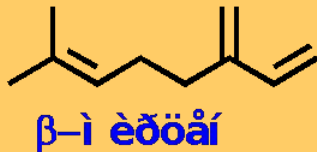
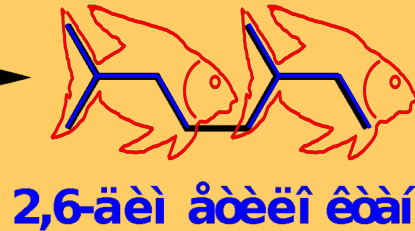


A misty forest scene with tall trees and a fallen log in the foreground. The text is overlaid on a semi-transparent grey box.

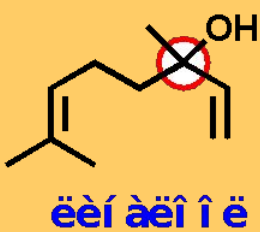
Терпены и терпеноиды

Монотерпеновые ациклические соединения.

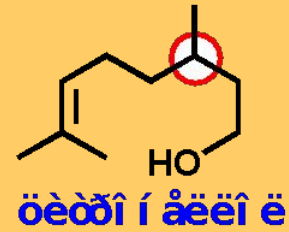
1



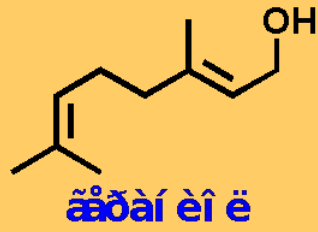
èàâð, èàì äù ø, âððááì à, õì äèù



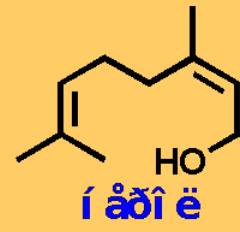
èààáì äà, õì çà
èèàì à-èèàì à



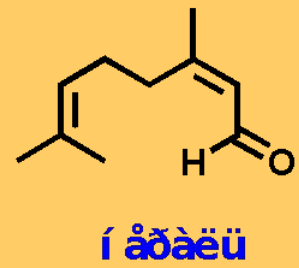
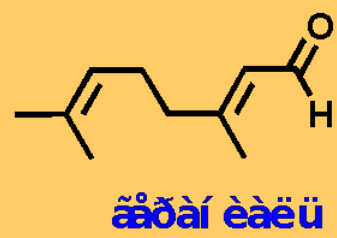
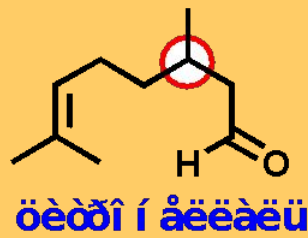
äððáì ù, õì çà,
à ñàèððòèè àèèèäðð òì á



èààáì äà, õì çà
ø èì î áì èè

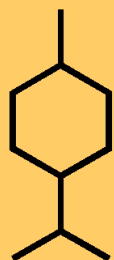


áððáì î õì áì à ì àñèì,
ì ì äððáì óááì à ì àñèì

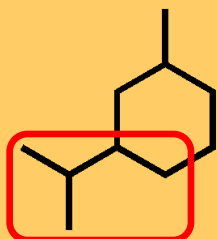


öèòððíí àù á,
à èàì î í äððáì áì ì ì àñèà - >80%

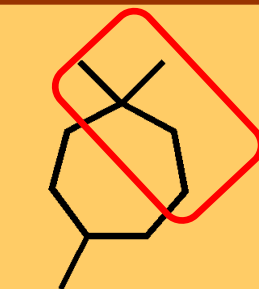
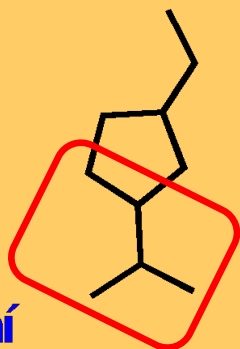
Монотерпеновые моноциклические соединения.



ī -ī áí òàí



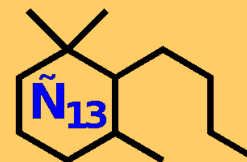
ì -ì áí òàí



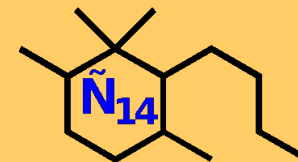
ýéèàðàáí



ñàò ðàí àí



èî í àí



èðàí



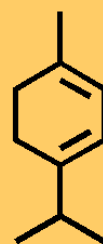
ëè î í áí

öèðòíî âú â

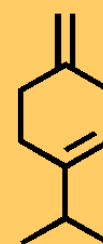


òàðî èí î äàí

èàðààì î í, ì àèí ðàí, èî ðèàí äð



α-òàðî èí áí



β-òàðî èí áí



γ-òàðî èí áí

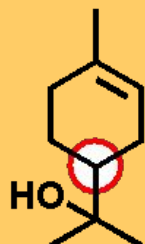


α- è β-ò àëëàí äðàí ù

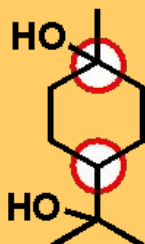


óèðî ï, ýàèèèè ò, ýî î í ñèèé ï äðòò

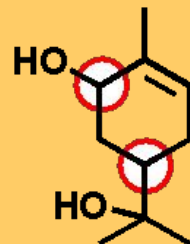
Монотерпеновые моноциклические соединения.



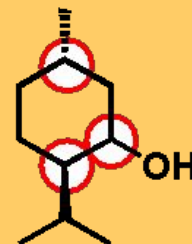
α -òãđĩ èí âĩ ë



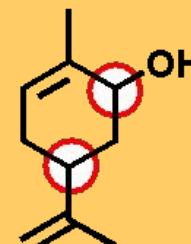
òãđĩ èí ãëãðàò



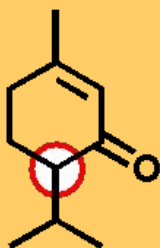
ĩĩ áðãđĩ ë



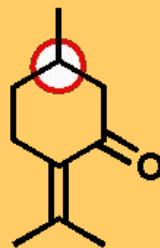
ì áí òĩ ë
ì ÿòà



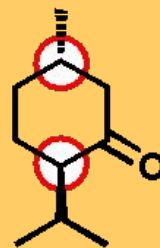
ëàðãâĩ ë



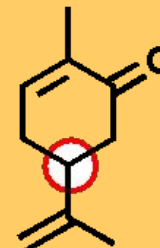
ĩ èĩ ãðëòĩ í



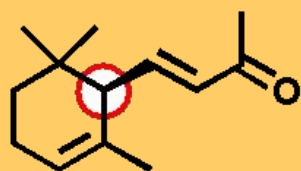
ĩ óëãâĩ í



ì áí òĩ í
ì ÿòà

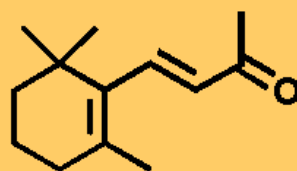


ëàðãâĩ í
òĩ èĩ , óëđĩ ì



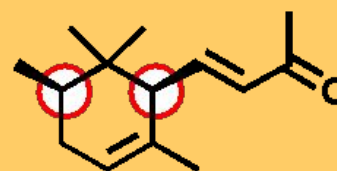
α -èĩ í í í

ì óñëóñĩ ù á ãëëãçũ



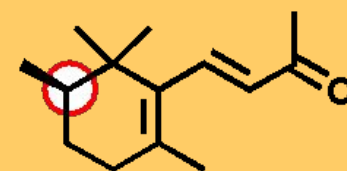
β -èĩ í í í

ëáí àãñëëò áí áóĩ â



öëñ- α -ëðĩ í

èðëñũ



β -ëðĩ í

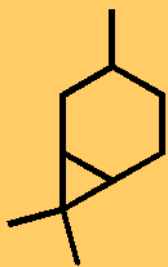
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Монотерпеновые бициклические соединения.

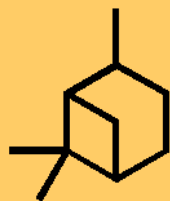
4



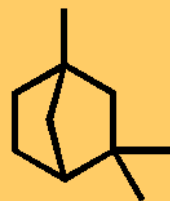
òóéàí



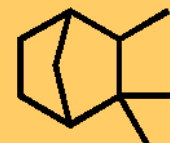
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ĩ èí àí



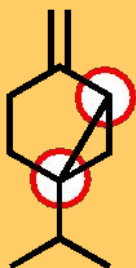
ô áí òàí



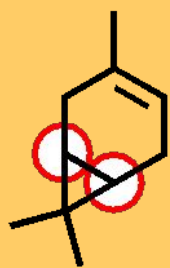
èçí êàí ô àí



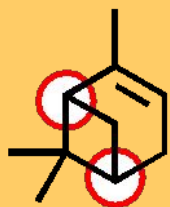
êàí ô àí



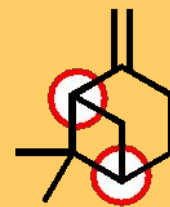
òóéàí



3-êàďàí



α-ĩ èí àí



β-ĩ èí àí

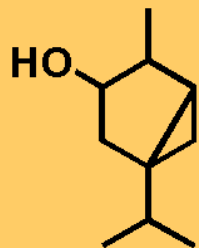


êàí ô àí

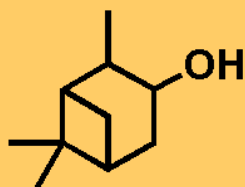
Монотерпеновые бициклические соединения.

5

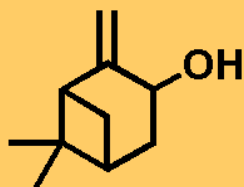
ï èí î êàì ò âî ë



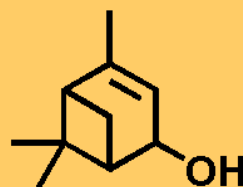
òóéî ë



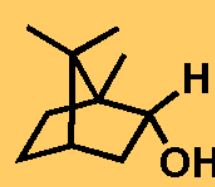
ï èí î êàðââî ë



âãðâáí î ë



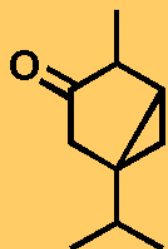
áî ðí âî ë



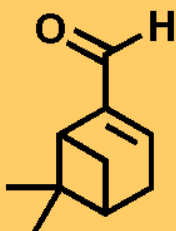
èçî áî ðí âî ë



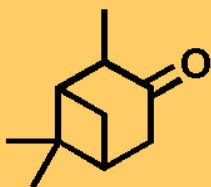
ì èðòáí àëü



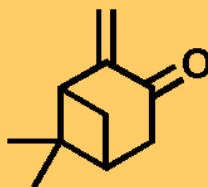
òóéî í



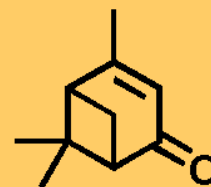
ï èí î êàì ò î í



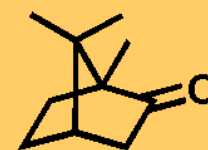
ï èí î êàðâî í



âãðâáí î í

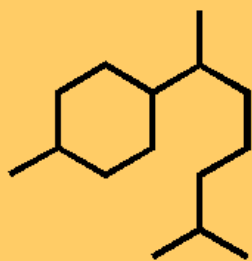


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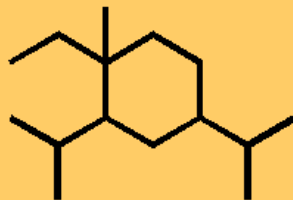


Сесквитерпеновые соединения.

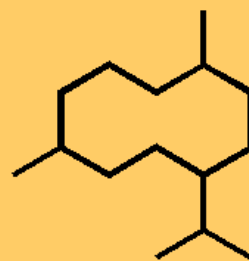
7



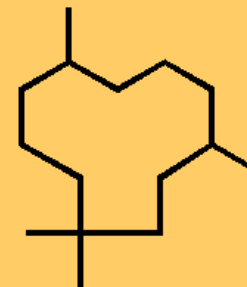
áèçàáí èàí



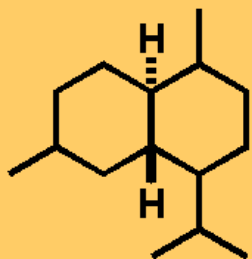
ýèàí àí



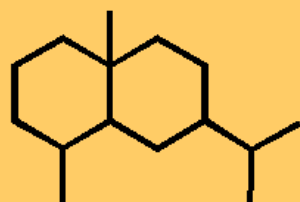
ãðì àèðàí



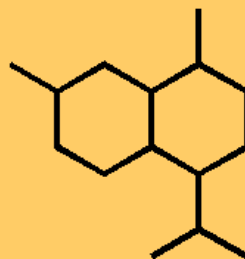
ãòì óèàí



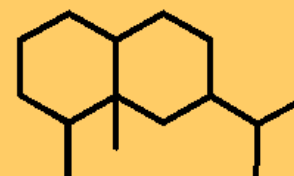
èàäèí àí



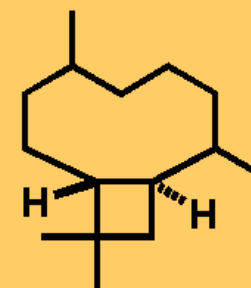
ýéääñí àí



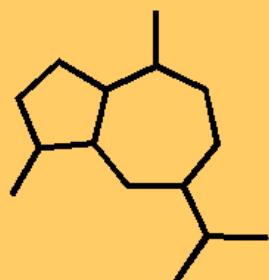
ääóèàí



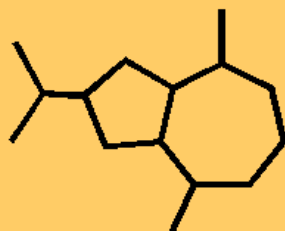
ýðàí î ô èèàí



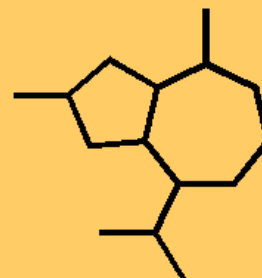
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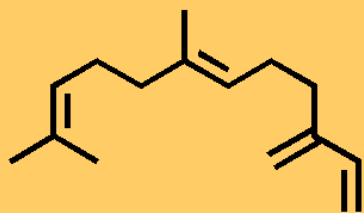
òèðàí



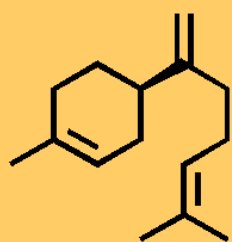
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Сесквитерпеновые соединения.

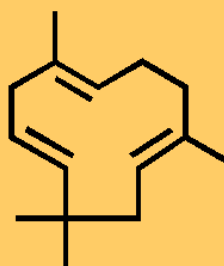
8



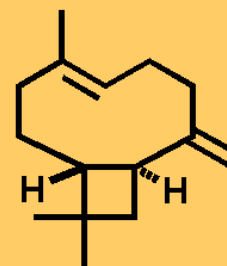
β -бисаболен



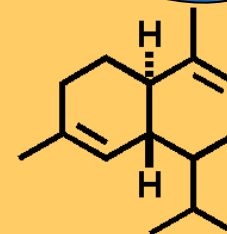
β -бисабол



α -бисабол

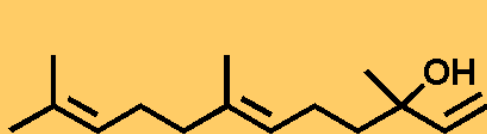


α -бисабол

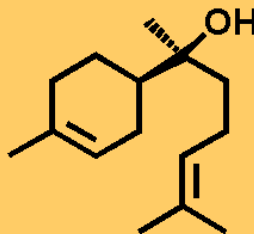


α -бисабол

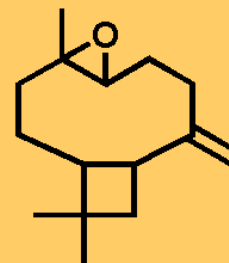
Сесквитерпеновые соединения



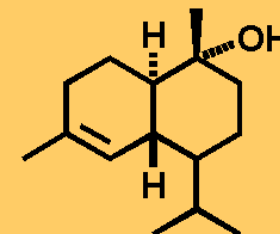
β -бисабол



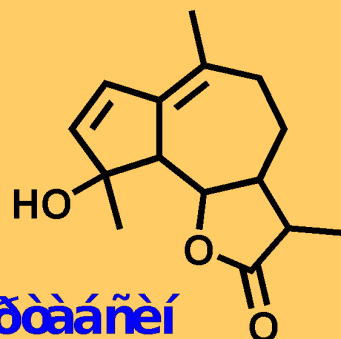
α -бисабол



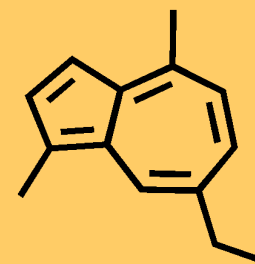
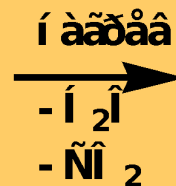
α -бисабол



α -бисабол



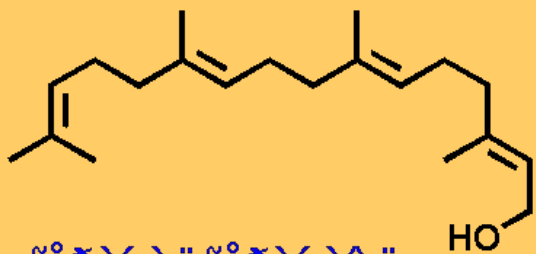
α -бисабол



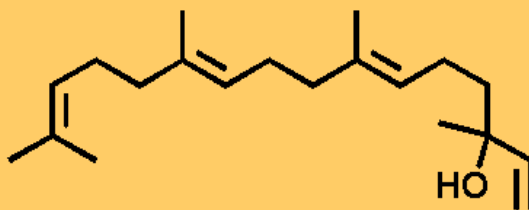
α -бисабол

Дитерпеновые соединения.

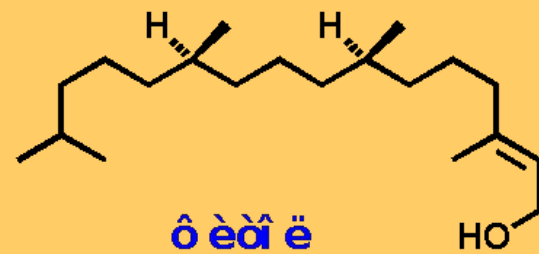
9



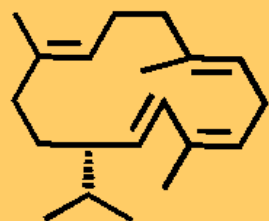
äöäí èèäöäí èí ë



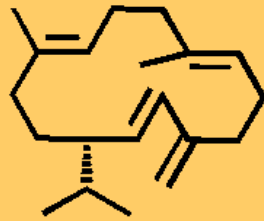
äöäí èèèèí àèí î ë



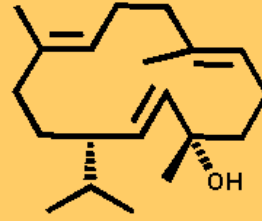
ô èöî ë
(â öèí öí ô èèèä)



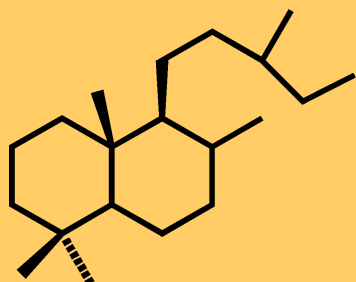
öäí áäáí



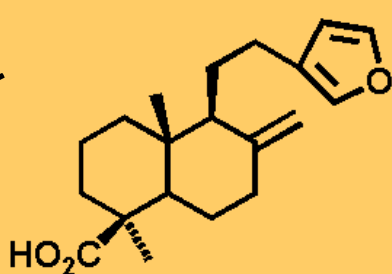
èçí öäí áäáí



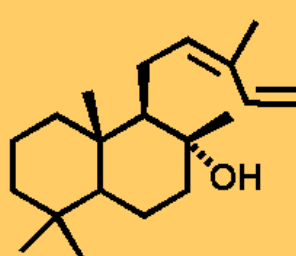
èçí öäí áäí ë



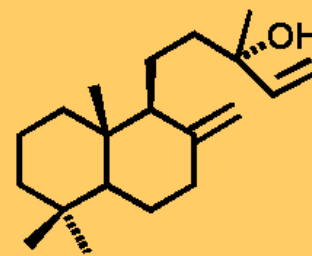
ëäääí î èäü



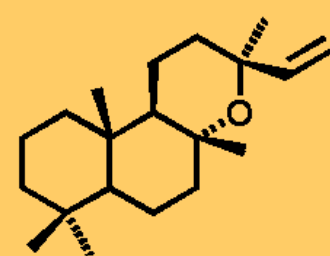
ëäí áäöèäí î ääü
èèñèí öä



öèñ-ääèäí î ë

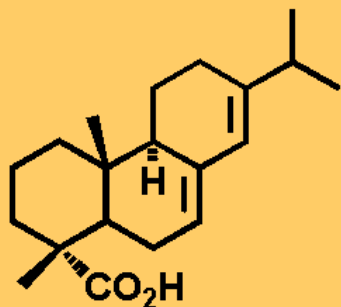


ýí èí äí î î ë

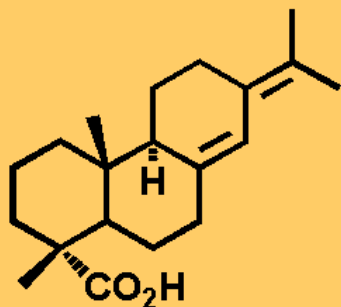


ýí èí äí î èè-
î èñèä

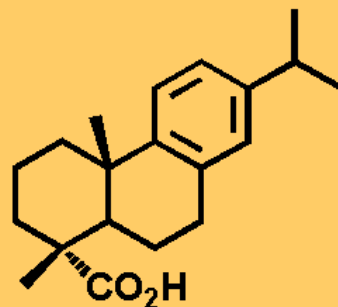
Ñì î ëÿí û ã èèñëî òù .



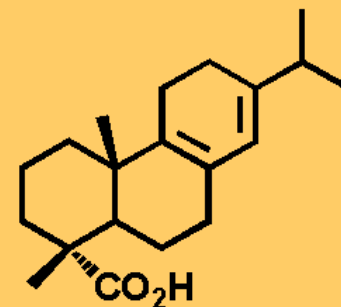
àáèàòèí î âàÿ
èèñëî òà



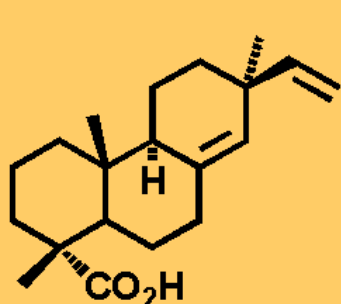
í âî àáèàòèí î âàÿ
èèñëî òà



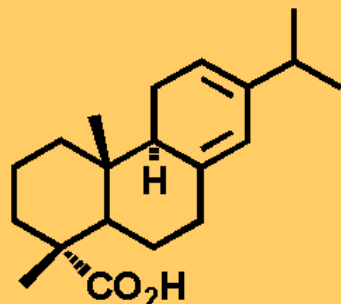
äãèäöí àáèàòèí î âàÿ
èèñëî òà



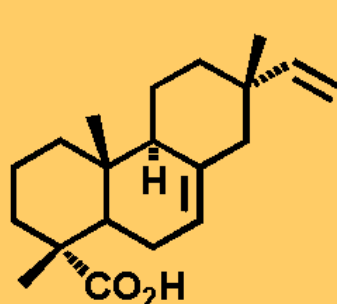
ï àèþ ñòîî âàÿ
èèñëî òà



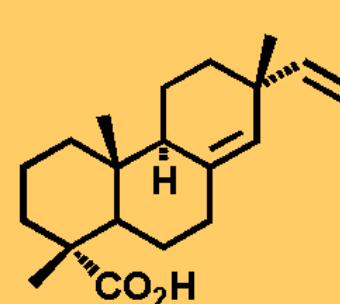
ï èì àöí âàÿ
èèñëî òà



ëääî ï èì àöí âàÿ
èèñëî òà



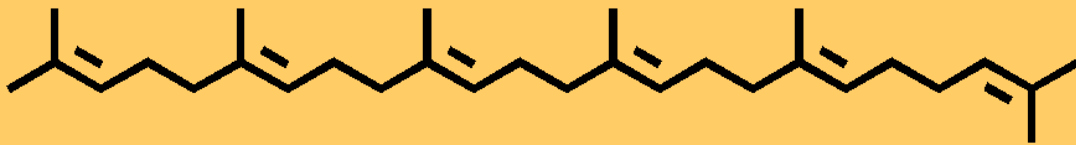
èçí ï èì àöí âàÿ
èèñëî òà



ñàí ààöàè ï èì àöí âàÿ
èèñëî òà

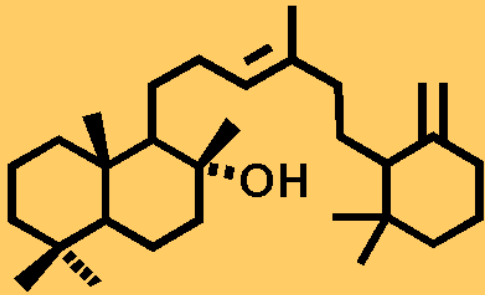
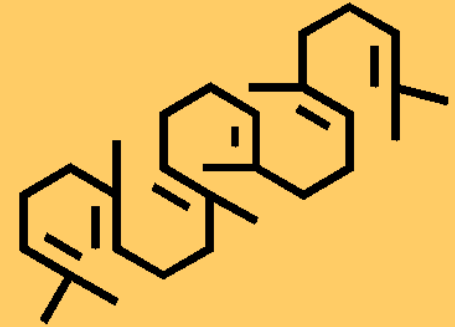
Кислоты преимущественно фенантренового ряда формулы $C_{19}H_{27-31}COOH$.
 Продуцируются хвойными растениями семейства *Pinaceae*; главная составная часть живиц (50–70% по массе), экстрактивных смолистых веществ соснового осмола (45–60%), таллового масла (30–45%), канифоли (75–95%).

Тритерпеновые соединения.

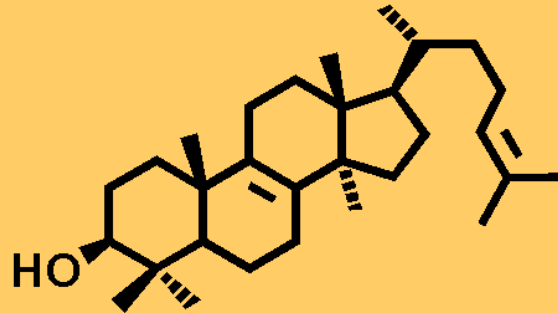


скален

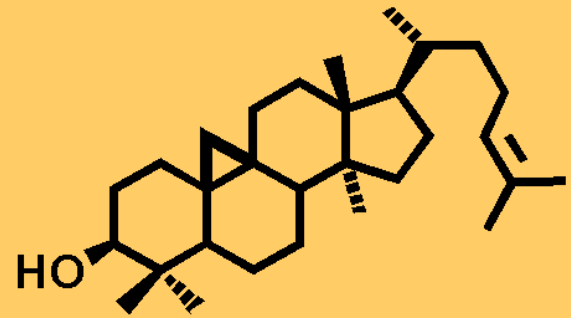
≡



ахиллен
(скален + фенилпропан)



кадилен

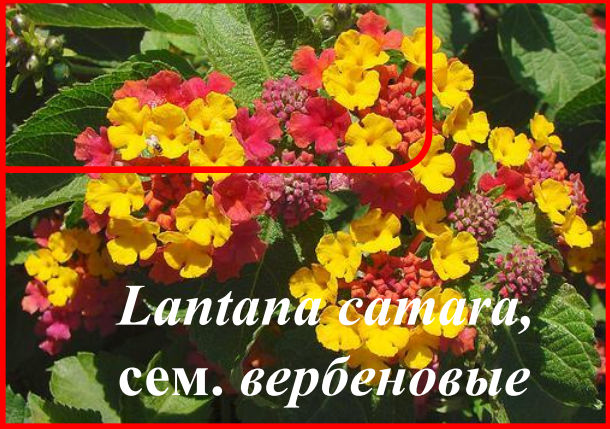
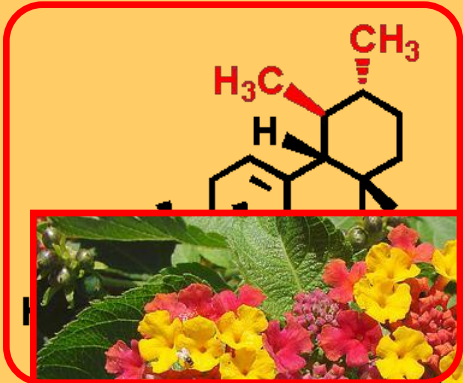


скаленол

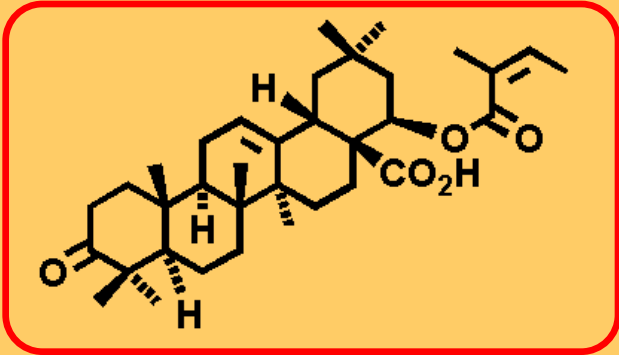
Тритерпеновые соединения.



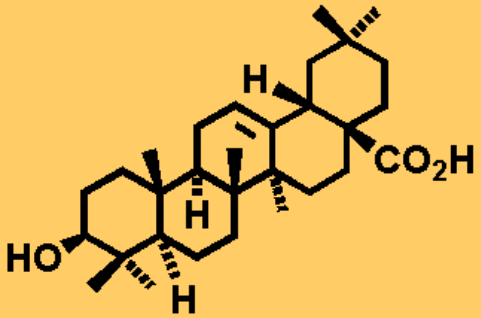
Brosimum utile,
сем. тутовые



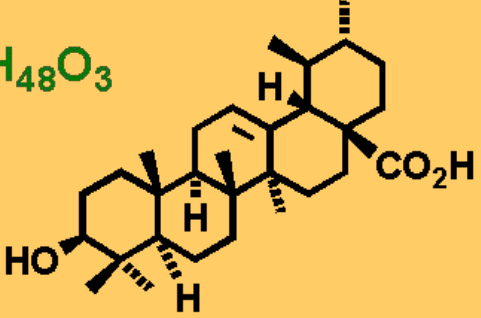
Lantana camara,
сем. вербеновые



Lantana camara,
сем. вербеновые



Brosimum utile,
сем. тутовые



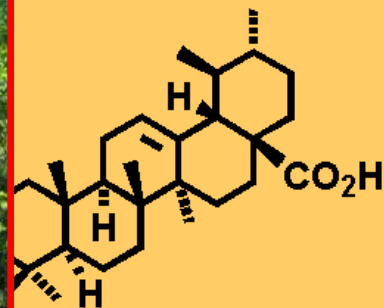
Brosimum utile,
сем. тутовые

Тритерпеновые соединения.

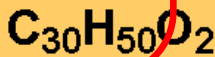
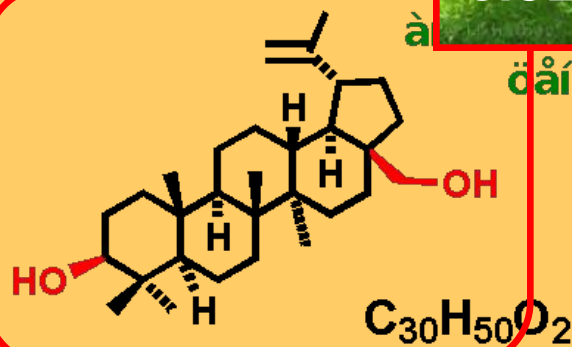


Corylus avellana

лещина обыкновенная

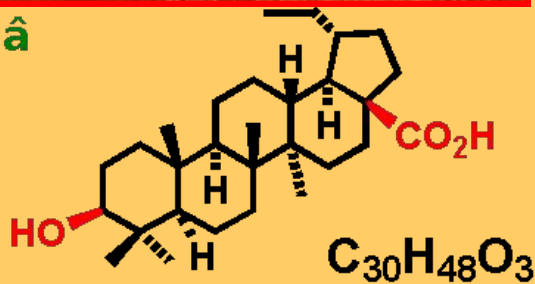


нї í î âàÿ êèñëî òà

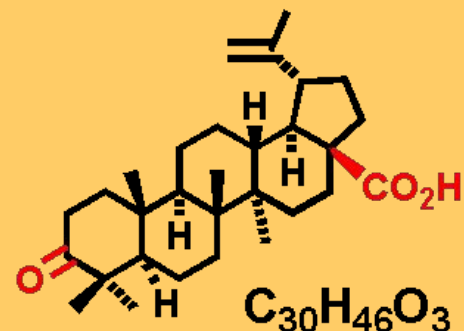


áàòòëèí

(áàòòâçî âàÿ êî òà, êî òà î òàø í êèà)



áàòòëèí î âàÿ êèñëî òà



áàòòëèí î âàÿ êèñëî òà

î òî òèâî âî ñî àèèòàëüî î à, ãî àòî - è
ãñòòî î òî òàëòî òî ù à ñâî êñòàà

Три терпены

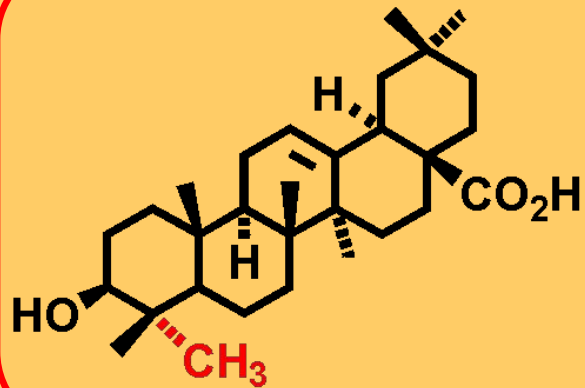


**Плющ вьющийся,
*Hedera helix***

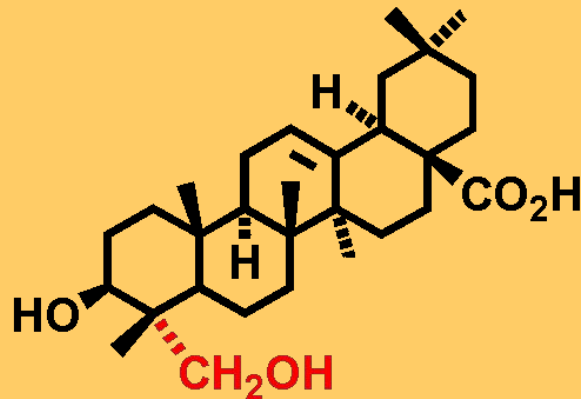


**Мыльнянка лекарственная,
*Saponaria officinalis***

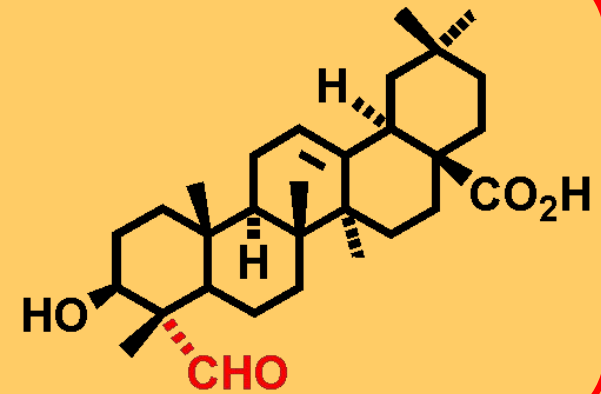
онины
(весу)
дража-
сокой
стью.
чески
и тонизирующи



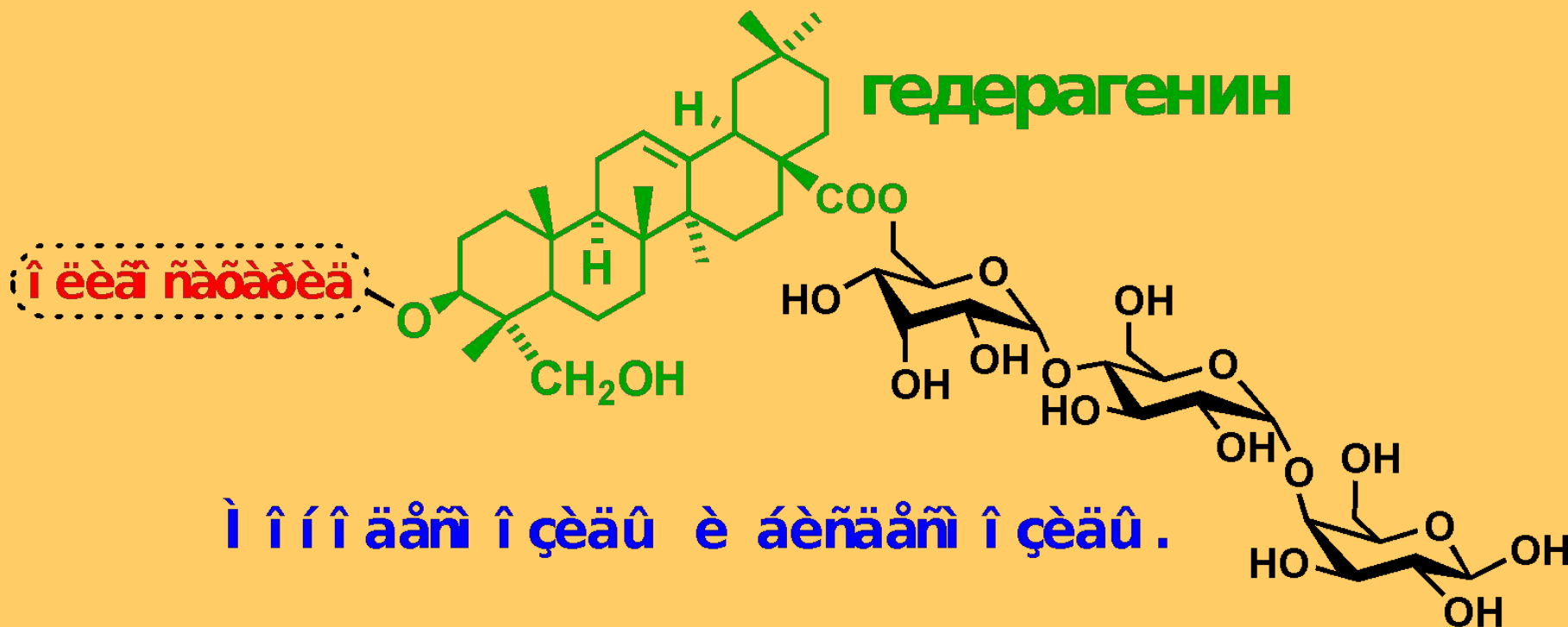
î ëâàí î ëî âàÿ êèñëî à



õãäãðããí èí

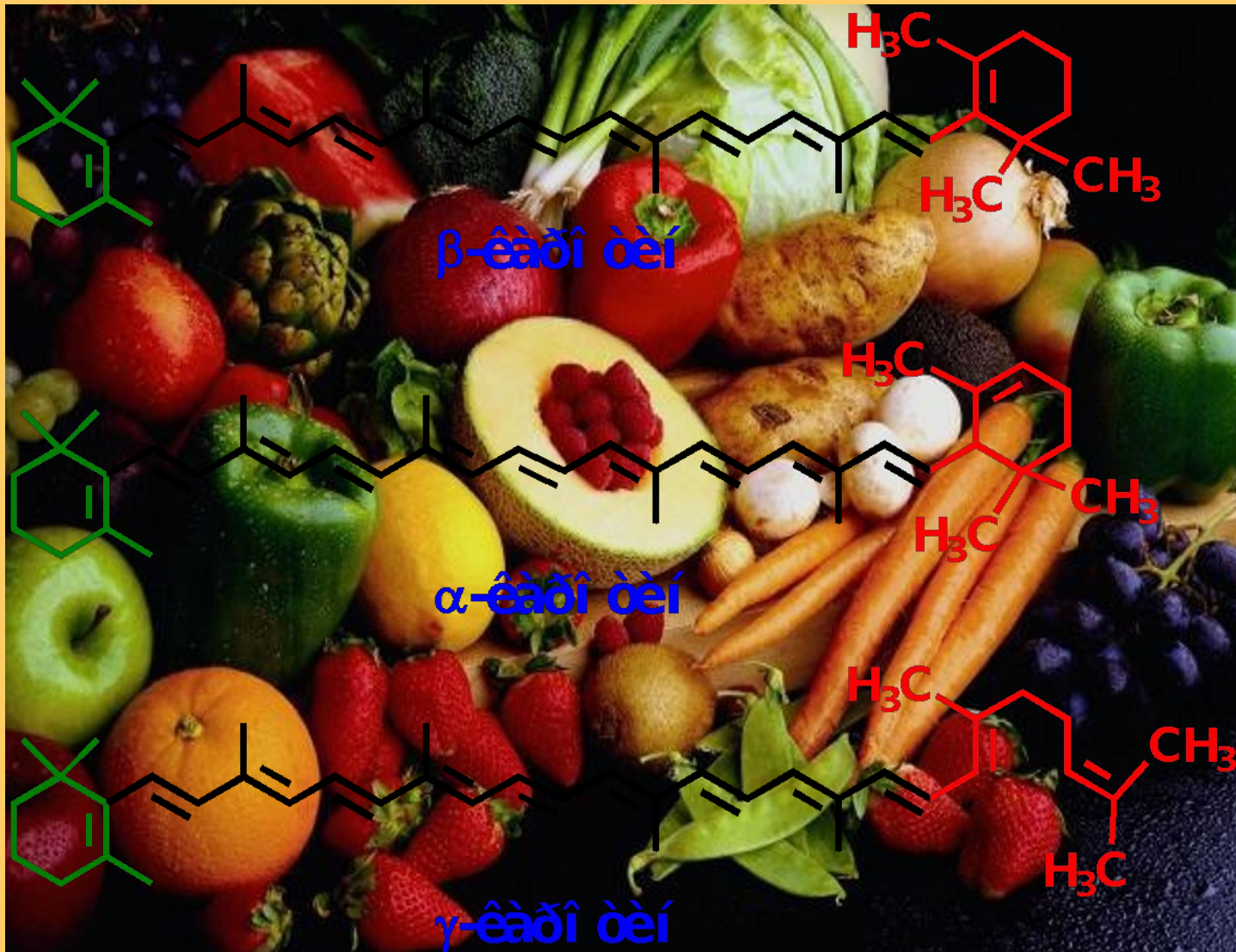


ãèï ñî ãí èí



Гемолитическая (вызывают разрушение эритроцитов), гепатопротекторная и гипохолестеринемическая активности.

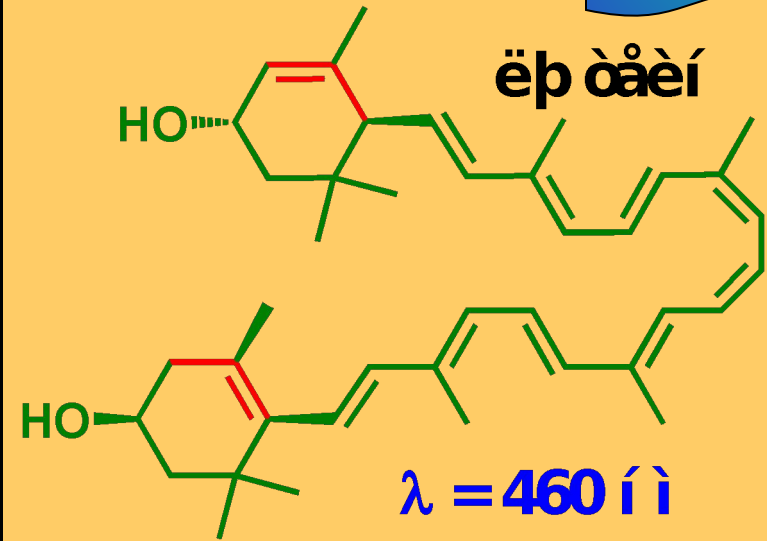
Сапонины женьшеня обладают адаптогенным действием, стимулируют деятельность ЦНС, биосинтез ДНК, РНК и белка.



Тетратерпеноиды. Ксантофилы.

18

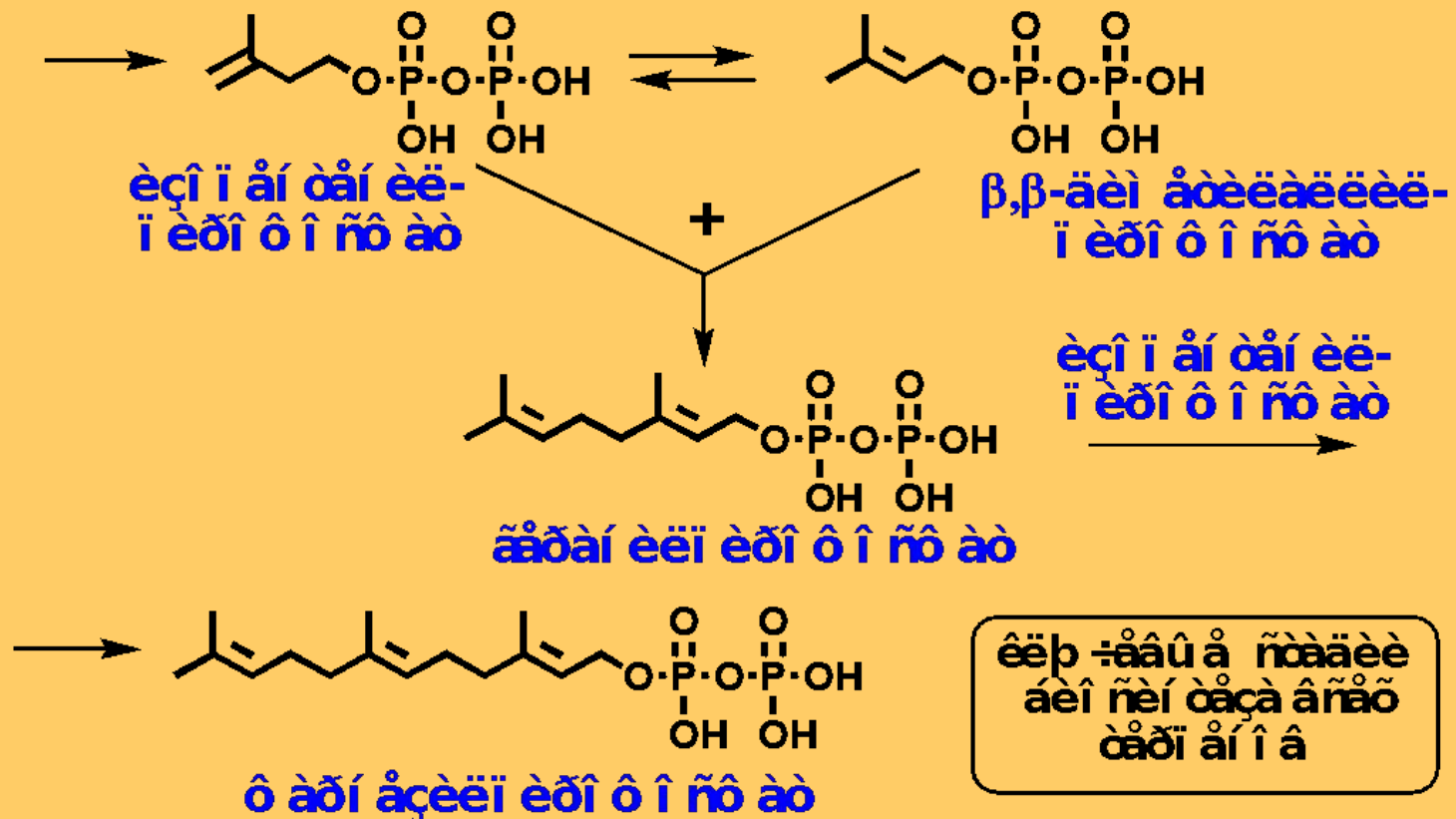
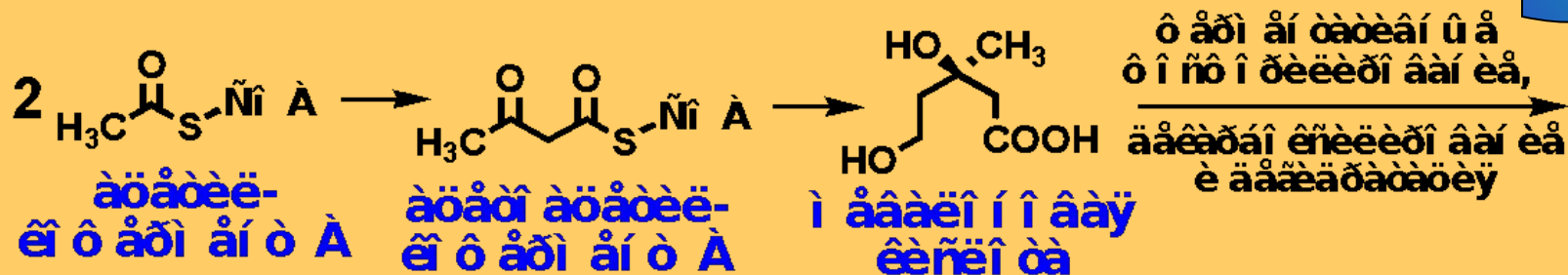
Продукты	Лютеин (мкг/100)
Бобы	616
Морковь	335
Сельдерей	229
Кукуруза	356
Яйцо (желток)	32
Горошек	1292
Персики	51
Хурма	346
Шпинат	11 607
Мандарины	131
Тыква	8173



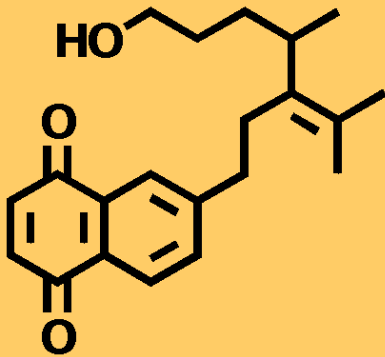
Максимальная концентрация в организме человека – в глазной сетчатке: в 10000 раз больше, чем в плазме крови.

Биосинтез лютеина осуществляется только в растениях путём гидроксирования α -каротина. Человек и животные получают лютеин только с пищей.

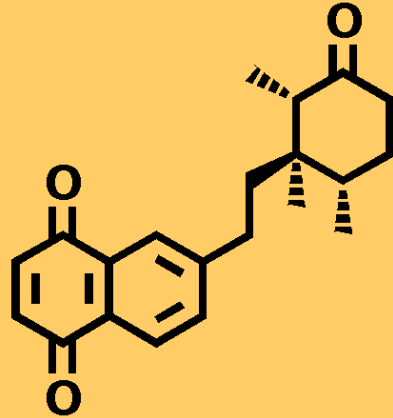
Биосинтез терпенов.



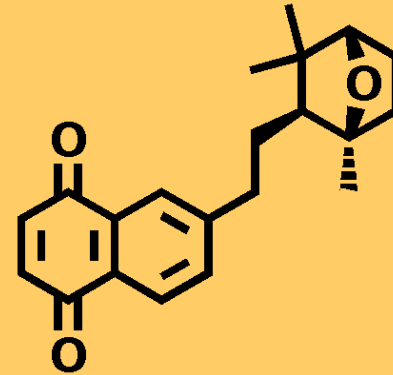
Меротерпеноиды.



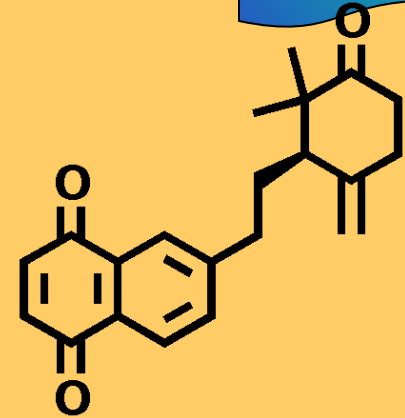
Êî ðäèàöèí î í A



Êî ðäèàöèí î í B



Êî ðäèàöèí î í J

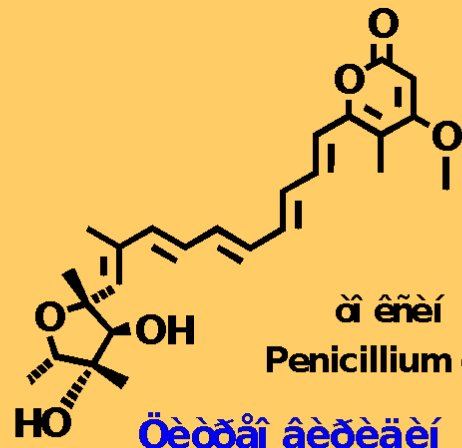
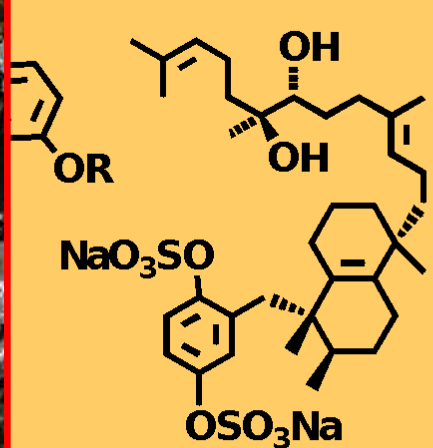


Êî ðäèàöèí î í K

В лечебных отварах при кашле, простуде, ангине, насморке. Обладают антигрибковой и противолучиночной активностью.



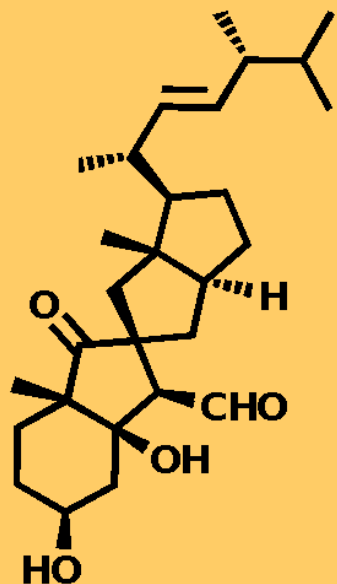
кордия
Cordia corimbosa



öèòðäí àèðèäèí
Penicillium citreoviride

...у, проявляют антигрибковую активность

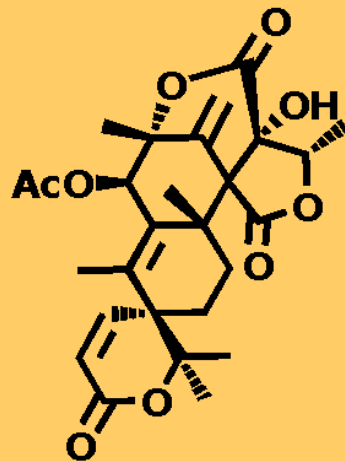
Меротерпеноиды.



Öèòäî ñî èõî ñòäî èä

õî êñèí äèèáèà

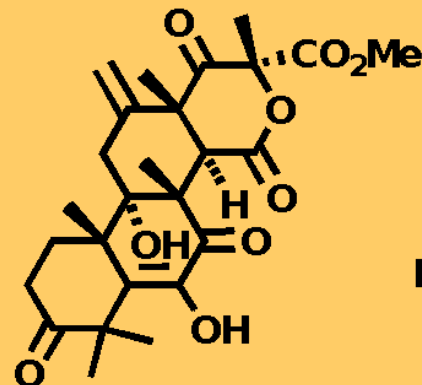
Penicillium citreoviride



Àóñèì

õî êñèí äèèáèà

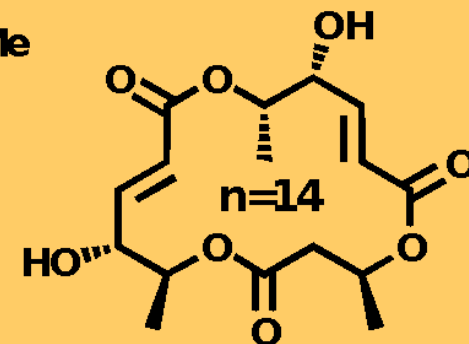
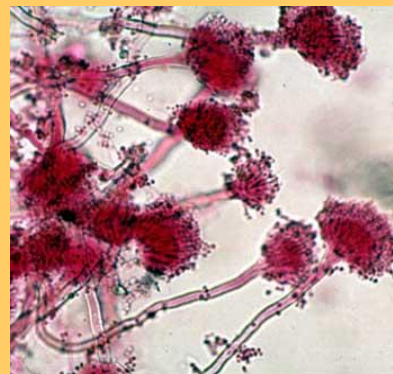
Aspergillus ustus



Òäðäü í èì

õî êñèí äèèáèà

Aspergillus terreus



Ì àèõî ñò äèèà À

èí äèèèõî ð àäãçèè

"èèàòèà-èèàòèà"