

TEST for CHAPTER 2

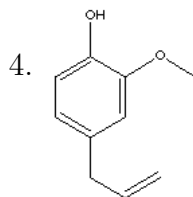
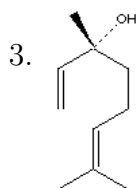
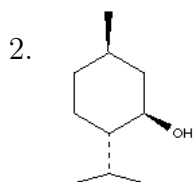
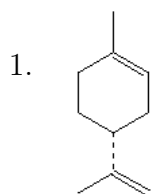
Question 1. What of the following plant oil extraction methods use animal oil?

1. maceration
2. solvent extraction
3. enfleurage
4. distillation

Question 2. What of the following sentences does NOT describe plant essential oils?

1. They are extracted only from seeds.
2. They are self-defense or attractant substances.
3. They are used in perfumery, food flavoring and cosmetics industries.
4. Terpenes are major components of them.

Question 3. Choose the correct structure of *l*-menthol.



Question 4. What of the following plants is the most appropriate source of oil, if production of γ -linolenic acid is intended?

1. olive
2. soybean
3. evening primrose
4. palm

Question 5. What of the following plants is NOT suitable for plant oil extraction?

1. sunflower
2. cauliflower
3. safflower
4. canola

Question 6. Which compound is NOT monoterpene?

1. hexanol
2. eugenol
3. linalool
4. citronellal

Question 7. Which fruit does not give oil?

1. coconut
2. brazil nut
3. betle nut
4. pecan nut

Question 8. What type of plant oil has similar property to animal oil?

1. coconut and peanut
2. peanut and macadamia nut
3. coconut and palm kernel
4. peanut and palm kernel

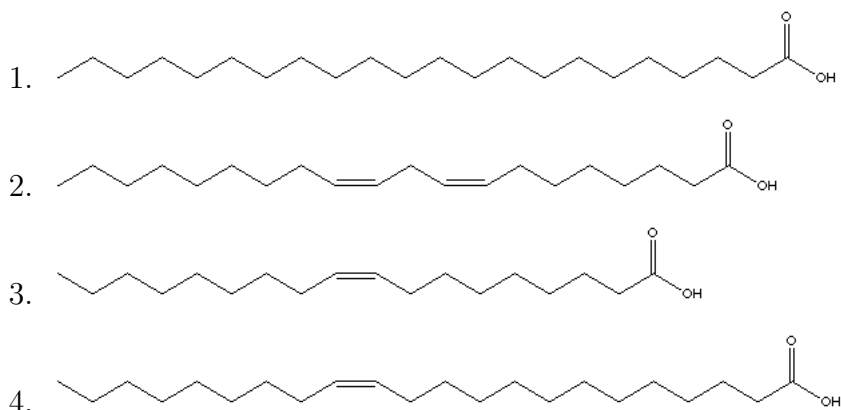
Question 9. What are the main differences of animal oils from plant oils?

1. high contents of saturated fatty acids, high melting point.
2. high contents of saturated fatty acids, low melting point.
3. low contents of saturated fatty acids, low melting point.
4. low contents of saturated fatty acids, high melting point.

Question 10. Why natural rapeseed oil is not used for food?

1. Because it contains a large amount of linolenic acid that is very sensitive to oxidation.
2. Because it contains a large amount of erucic acid that is not safe for human consumption.
3. Because it contains a large amount of lauric acid that is better to use for making soap.
4. Because it contains a large amount of ricinoleic acid that is not safe for human consumption.

Question 11. Choose the correct structure of a fatty acid that is rich in original rapeseed oil but not in canola oil.



Question 12. What is canola oil?

1. safflower oil with high content of linoleic acid
2. soybean oil with high content of oleic acid
3. rapeseed oil with low content of erucic acid
4. castor oil with low content of ricinoleic acid

Question 13. What of the following sentences is NOT correct for high laurate canola?

1. A gene encoding 12:0 acylcarrier protein thioesterase (12:0 TE) of Carifornia bay plant was transferred to canola.
2. The 12:0 TE of Carifornia bay plant promotes elongation of acyl chains until they get to be 16 or 18 carbons in length.
3. The transferred 12:0 TE gene was expressed only in the seeds of canola.

Question 14. Choose the sentence that is NOT an appropriate explanation why high oleic soybean was required.

1. Soybean oil contains polyunsaturated fatty acid, which is sensitive to rancidity.
2. Hydrogenation of polyunsaturated fatty acids can stabilize polyunsaturated fatty acid, but increases the level of trans-fatty acid.
3. Linoleic acid in soybean oil is thought to increase the risk of heart diseases.

Question 15. Choose the name of the gene in the right that was involved in the development of the genetically modified crop in the left.

- | | |
|----------------------------|---|
| 1. high erucic acid canola | A. Δ -12 desaturase gene |
| 2. high laurate canola | B. lysophosphatidic acid acyltransferase gene |
| 3. high oleic soybean | C. 12:0 acylcarrier protein thioesterase gene |

Question 16. What kind of fatty acids is rich in fish oil?

1. ω -3 family polyunsaturated fatty acid
2. ω -6 family polyunsaturated fatty acid
3. ω -9 family polyunsaturated fatty acid

Question 17. What of the followings is used as a medicine for cardiovascular diseases?

1. highly purified methylester of eicosapentaenoic acid
2. highly purified ethylester of docosahexaenoic acid
3. highly purified methylester of docosahexaenoic acid
4. highly purified ethylester of eicosapentaenoic acid

Question 18. Choose the best explanation why polyunsaturated fatty acids are converted into methyl or ethylesters before purification into each fatty acid species.

1. To reduce the number of double bonds which are sensitive to oxidation
2. To remove unpleasant smell of fish oil
3. To facilitate molecular distillation by reducing the boiling point.

Question 19. What is single cell oil?

1. oil designed for single use
2. oil made by fermentation
3. oil used for cell cultivation
4. oil extracted from cloned animals

Question 20. What of the following fatty acids is produced industrially as a single cell oil?

1. 18:0
2. 18:1 ω -9
3. 18:2 ω -6
4. 18:3 ω -3
5. 18:3 ω -6