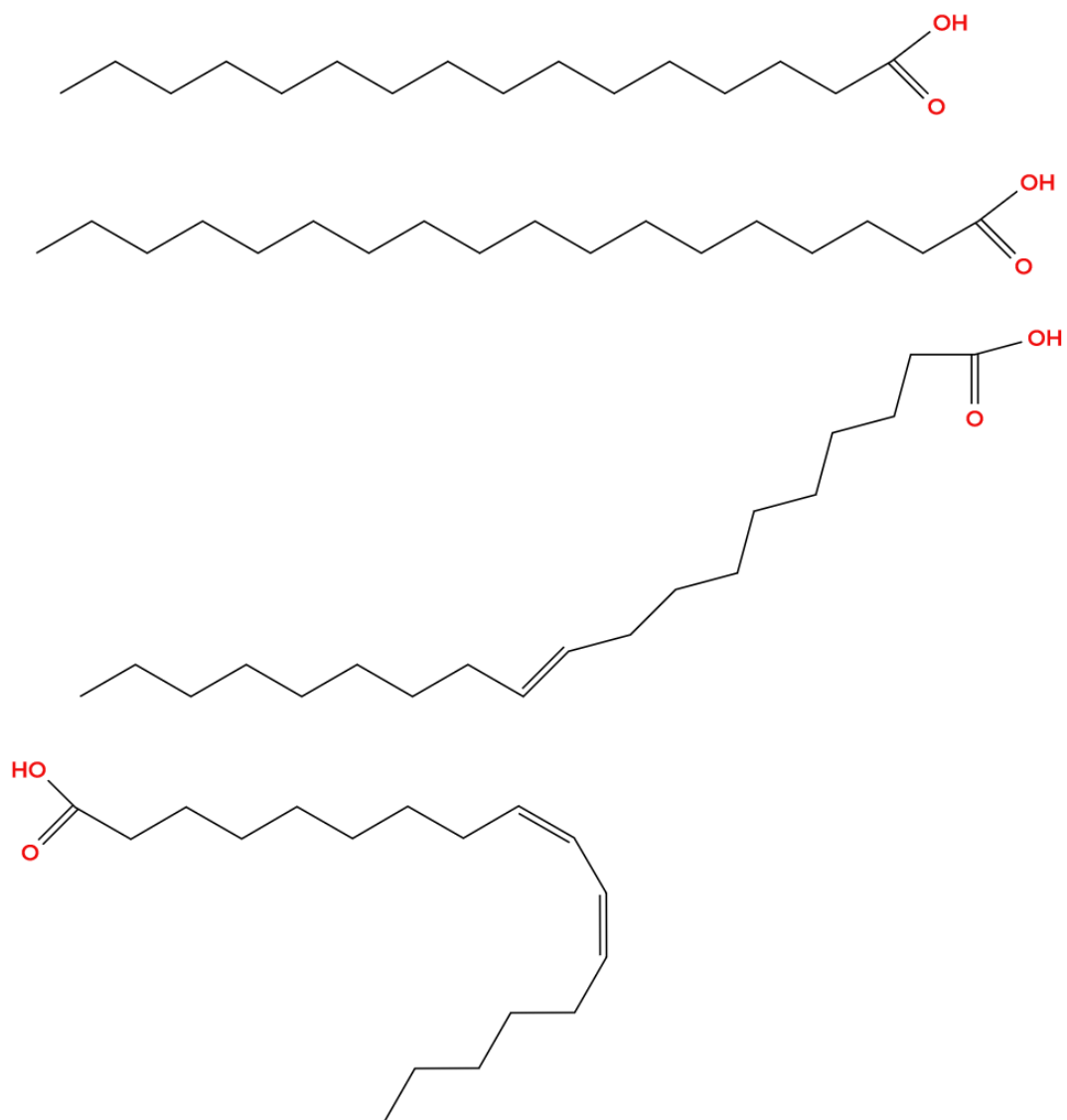
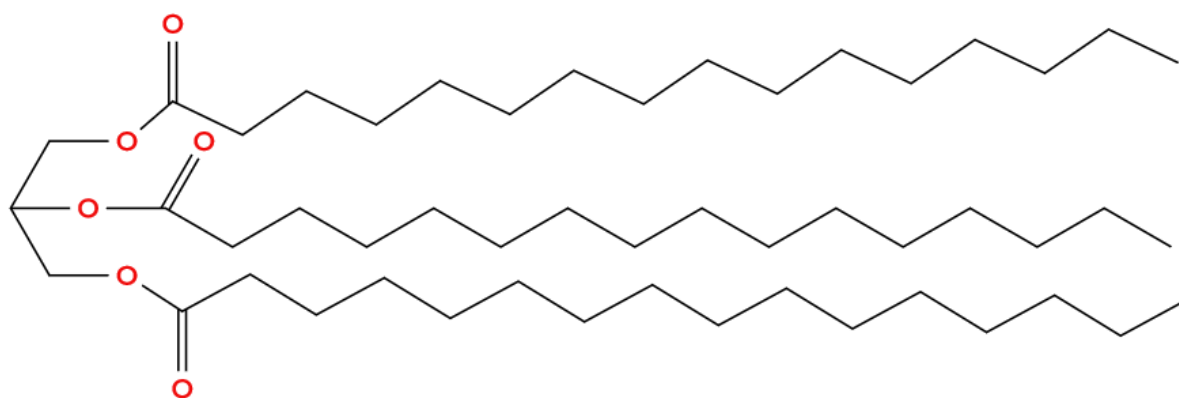


Web-drawing activity

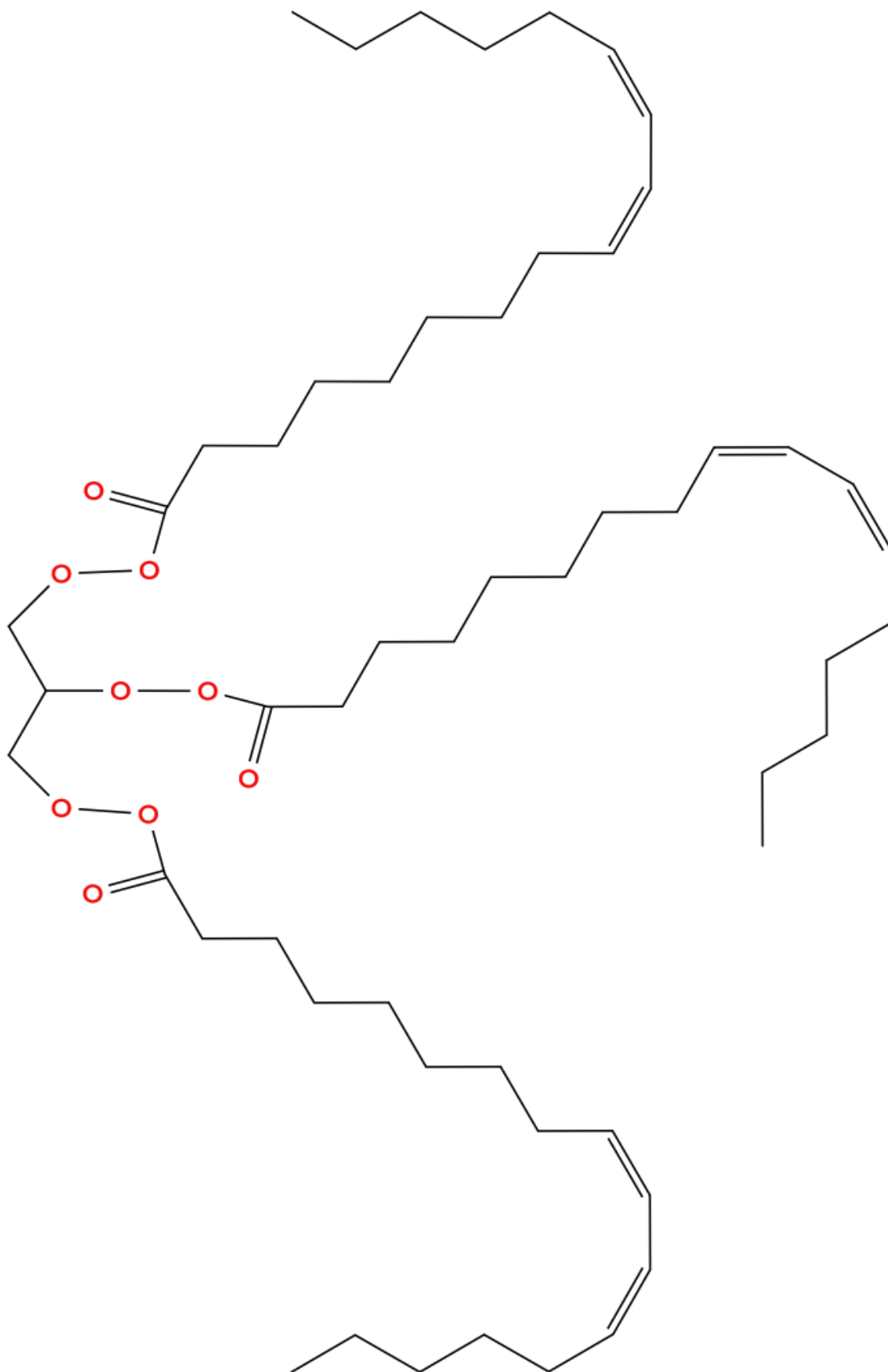
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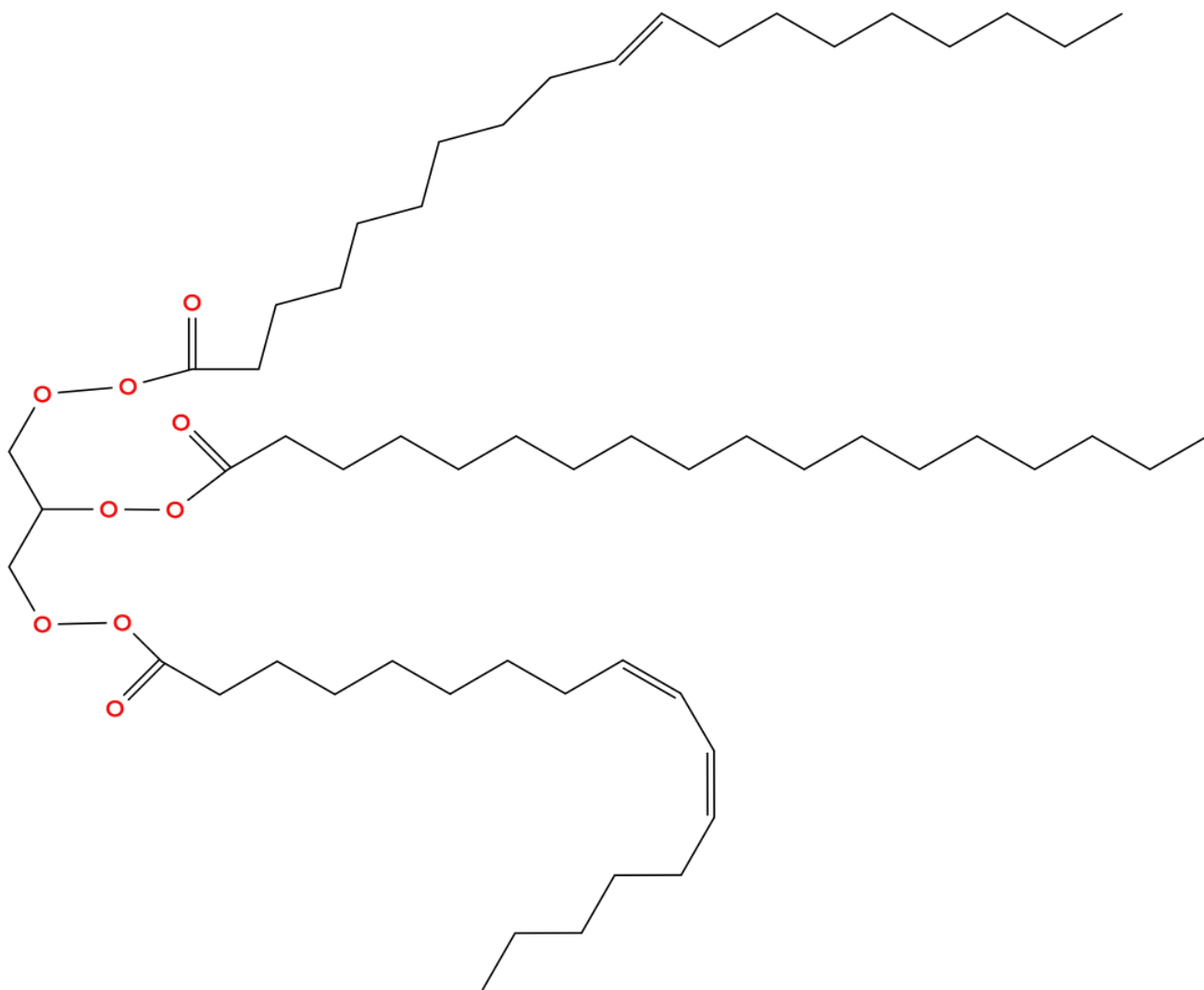
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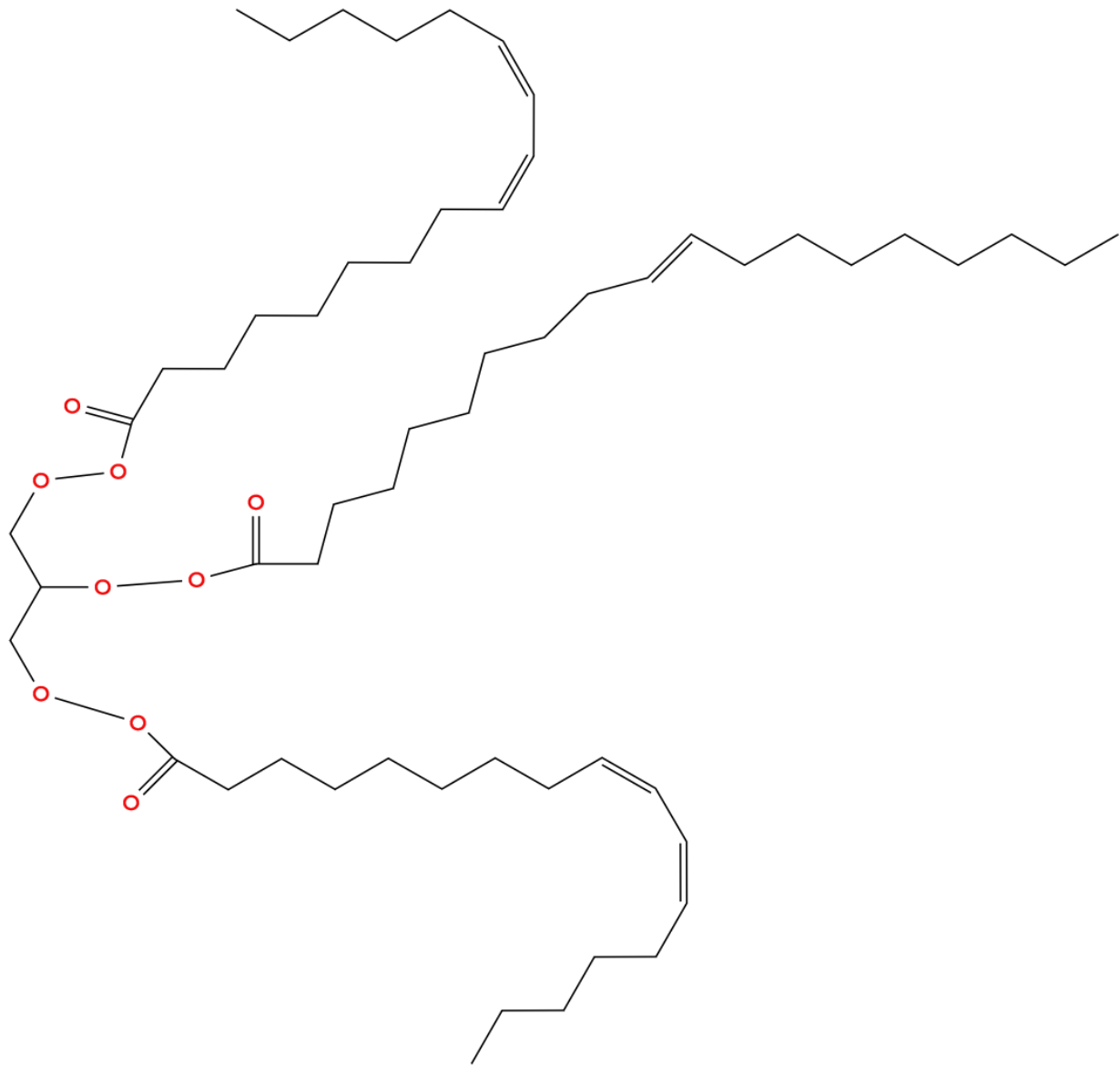
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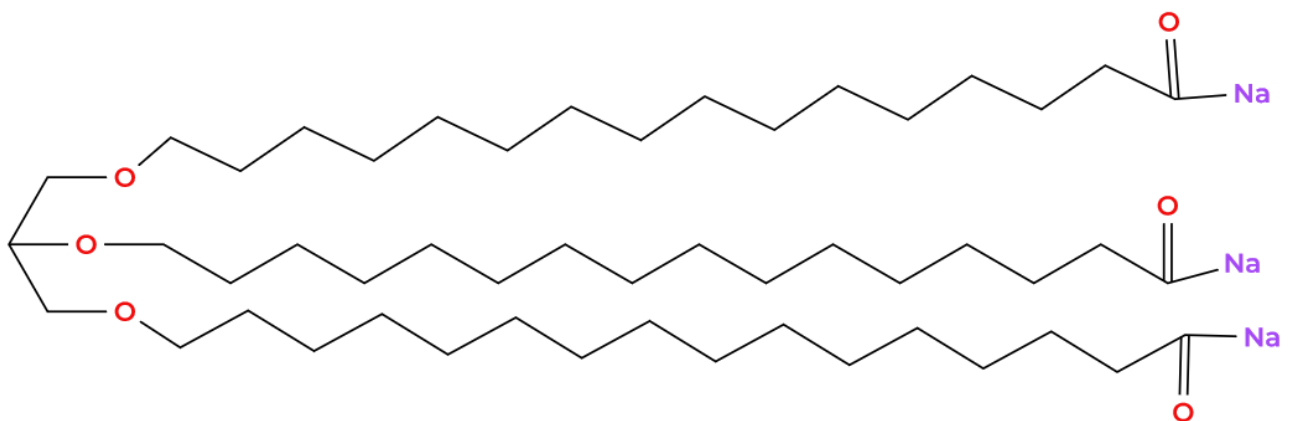
4.



5.



6.



Q1 - Comparison of palmitic and linoleic acids

The first triglyceride has three molecules of palmitic acid, this is a saturated fatty acid meaning that it is a fatty acid with no carbon-carbon double bonds. This results in it being a straight chain leading to a higher density fluid with a higher melting/boiling point as the molecules can be packed closer together. The second triglyceride has

three molecules of linoleic acid, this is an unsaturated fatty acid with two carbon-carbon double bonds that make the molecule bend over on itself. This results in the molecules not being able to pack very closely together reducing the density and the melting/boiling points.

Of these two triglycerides the first one made of palmitic acid will have the higher boiling point as the molecules will pack more tightly together than the linoleic acid would.

Q2

The first triglyceride has two unsaturated and one saturated fat while the second triglyceride has three unsaturated fats, this means that the first triglyceride is likely to have the higher boiling point of the two as the molecules will be able to pack closer together than the second as it has a straighter overall structure.

Q3

You would react the sodium salt with a strong nucleophile to remove the sodium, this reaction should also leave a hydrogen electrophile to bond to the exposed oxygen left by the sodium ion.