Qualitative understanding of partition preferences

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- \downarrow **0** 3) Assign partition constants to substances
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- ↓ 6) Extraction with pentane or diethyl ether?
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- Intermolecular interactions in every day life

FAQ

1) Give a qualitative explanation

The table below lists measurement values for the partitioning between hexadecane and air at 25°C:

Substance	Log Khexadecane/air (L/L)	Log K humic acid/air (L/L)
Octane	3.67	2.31
Octane-2-on	4.26	4.86
Octane-1-ol	4.61	6.29

Which conclusions can you draw from the following statements on differences between hexadecane and humic acids?:

- Octane-2-on and octane-1-ol sorb more than octane to the hexadecane-phase.
- Octane is not sorbed as strongly to humic acids as to hexadecane. The opposite is true for octane-2-on and octane-1-ol.
- The increase of sorption coefficients in the order n-octane < octane-2-on < octane-1-ol is more pronounced in humic acids than in hexadecane.

You will have to check your answer to this question by yourself ...

