Qualitative understanding of partition preferences

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🖲 FAQ

Case Ia

Rule 1(a):

An *apolar solute* will partition similarly (i.e., partition coefficients vary by less than a factor 3) to *all apolar and monopolar phases* because only vdW interactions are involved in the cavity formation as well as in the interactions between solute and solvent. Empirically one finds that such partition coefficients typically vary by less than a factor 3.

Solvent/air partitioning of octane:

solvent	K solvent / air	
decane CCI ₄	6688 11142	apolar molecules in apolar or monopolar phases:
cyclohexane toluene ethyl ether	11227 7387 8287	only van-der Waals Interactions

