

Article 11- Kelly et al. 2007

1) Use the following web site to define the octanol-water partition coefficient (K_{ow}).

<http://toxics.usgs.gov/definitions/kow.html>

By analogy, how would you define the octanol-air partition coefficient (K_{oA})?

2) Define the term biomagnify?

3) According to this study, if a compound has a K_{ow} between a value of 10^5 and 10^8 and a K_{oA} with a value $> 10^6$, then we would expect it to biomagnify in which of the following food webs?

- a) Aquatic food webs containing only water respiring organisms
- b) Terrestrial food webs containing only air respiring organisms
- c) Both types described above (a & b).

4) According to this study, if a compound has a K_{ow} between a value of 10^2 and 10^5 and a K_{oA} with a value $> 10^6$, then we would expect it to biomagnify in which of the following food webs?

- a) Aquatic food webs containing only water respiring organisms
- b) Terrestrial food webs containing only air respiring organisms
- c) Both types described above (a & b).

5) For the aquatic piscivorous food web shown in Fig. 3, why is there little biomagnifications for less hydrophobic chemicals or for superhydrophobic organic substances?

6) What change do the results of this study suggest that we should make in the way we currently assess the potential for bioaccumulation?