

Phenomena at the interface of phases

Surface tension

Inside the liquid, all the molecules are surrounded by the same molecules, and they equally exert **cohesive forces on each other from all sides**. **At the interface of the phases (i.e. at the surface of the liquid), the liquid tries to occupy as little surface as possible** due to the result of inward forces. Surface tension is the tangential force to the surface of a liquid that decreases with increasing temperature. Its unit is **N/m**. It can also be defined as the energy required to increase the liquid surface by 1m^2 . Substances dissolved in a liquid that reduce the surface tension of liquids are called **surfactants**. Surface tension is important, for example, **during breathing** (moist alveolar walls).



Adsorption

At the phase interfaces, there is always a greater concentration of substances dissolved in the liquid, because its surface tension is thus reduced -> this process is called adsorption. Diffusion acts against this process and the result is the establishment of the so-called **adsorption equilibrium** expressed by the *Gibbs adsorption equation (isotherm)*.

Links

Source

- KUBATOVA, Senta. *Biofot* [online]. [cit. 2011-01-31]. <<https://uloz.to/!CM6zAi6z/biofot-doc>>.
- JIŘÍ, Beneš, - DANIEL, Jirák, - FRANTIŠEK, Vítek,. *Základy lékařské fyziky*. - edition. Charles University in Prague, Karolinum Press, 2015. pp. 322. ISBN 9788024626451.