

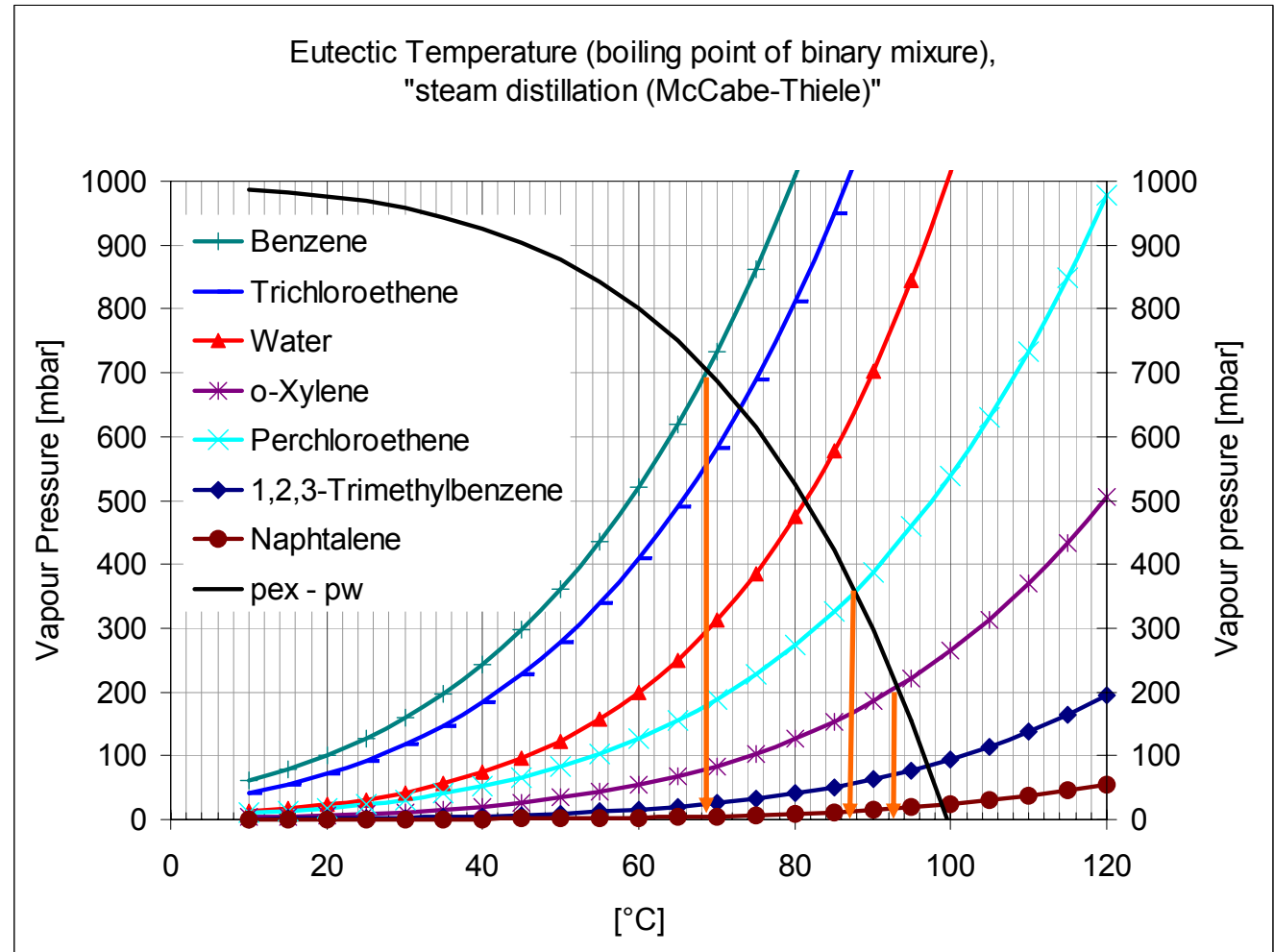
Vapour Pressure and Steam Distillation

Effect on vapour pressure: Increasing the temperature 20°C → 80°C

- water: factor 20
- PCE: factor 15
- xylene: factor 19

Boiling point reduction by steam distillation (azeotropic point):

- PCE: ~ 87°C
- xylene: ~ 93°C
- benzene: ~ 69°C



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The physical process, the so-called steam-distillation, helps to evaporate the organic contaminants.

The boiling point of a binary mixture, in our case the mixture of water and contaminant causes a reduction of the boiling point of the mixture. The contaminants are evaporated at temperatures below 100°C, although the boiling point of the organic substance will be far above 100°C. E.G. that of xylene is at about 140°C. Due to steam distillation it is reduced to 93°C.