

Based on the discussion with the handling editor R. Volkamer, I have made the following changes to the manuscript:

- It is mentioned now that Henry’s law constants not only depend on the ionic strength of a solution but also on dissolved organics.
- It is briefly explained now why molality is preferred for defining Sechenov coefficients.
- In the text, I prefer the scientific transliteration ([https://en.wikipedia.org/wiki/Scientific\\_transliteration\\_of\\_Cyrillic](https://en.wikipedia.org/wiki/Scientific_transliteration_of_Cyrillic)) “Sechenov” for the Sechenov equation. This spelling is also used by JPL (Sander et al., 2011) and IUPAC (Gamsjäger et al., 2008). In a note I mention that “Setschenow” is the German transliteration of the Cyrillic name.
- It is mentioned now that even though IUPAC (Cohen et al., 2007) recommends the name Henry’s law “constant”, its value still depends on some parameters, e.g., temperature and ionic strength of the solution.
- It is mentioned now that only data above 0 °C was used to calculate the temperature dependence of the data from Sieg et al. (2009).
- Henry’s law data from the missing papers Sieg et al. (2008) and Volkamer et al. (2009) were added.

## References

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