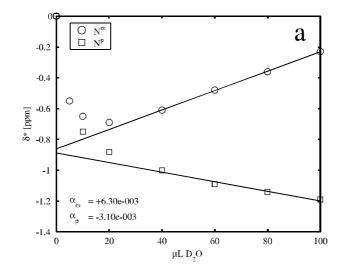
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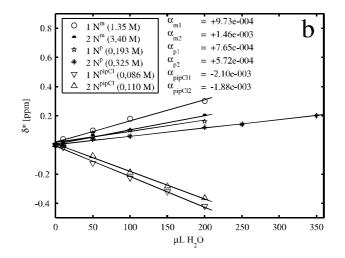


Fig. 2S¹⁵N chemical shifts as a function of water or heavy water addition

- a) ¹⁵N chemical shift of **2** (open circles) and **3** (open squares) as a function of D_2O addition. The straight line shows solvent effect. The chemical shifts for **2** is -349.1 ppm and for **3** -347.0 ppm. The one-bond isotope effects on ¹⁵N chemical shifts, ¹ Δ N(D), derived are for **2** 0.86 ppm and for **3** 0.89 ppm.
- b) Effects of water addition on ¹⁵N chemical shifts of morpholine and piperazine hydrochloride as a function of water addition. Positive slopes are from morpholine at different concentrations. Negative slopes are from piperazine hydrochloride.