Neutrons describe ectoine effects on water H-bonding and hydration around a soluble protein and a cell membrane

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Supplementary Information

In order to explore the effect of molar concentrations of ectoine on water structure, aqueous solutions of 1.5M ectoine were examined on the D4 liquids diffractometer. The experimental structure factors S(Q), obtained after subtraction of the incoherent background, of the following samples are displayed in Figure S1.

Figure S1. Structure factors S(Q) of 1.5M aqueous solutions of ectoine. H-ectoine/D_2O: Natural abundance ectoine in D_2O; D-ectoine/D_2O: D-labeled ectoine in D_2O; H-ectoine/H_2O: Natural abundance ectoine in H_2O.

The oscillatory scatter, beyond about Q = 7 $Å^{-1}$, in the H-ectoine/H_2O sample data reflects errors due to the small coherent signal / incoherent background ratio.