

## H-BONDING NETWORKS IN SUGAR ALCOHOLS: IDENTIFYING GLUCOPHORES?

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The conformational behaviour of sorbitol and dulcitol has been investigated for the first time using a combination of chirped pulse Fourier transform microwave spectroscopy (CP-FTMW) coupled with a laser ablation (LA) source. The observed conformers have been found to be overstabilised by cooperative networks of intramolecular hydrogen bonds between vicinal hydroxyl groups stretching throughout the whole molecule. A common structural signature - involving hydroxyl groups in the H-bond - has been characterized and ascribed to the glucophore's AH and B sites in accordance with Shallenberger's old proposal.<sup>a,b</sup>

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<sup>a</sup>R. S. Shallenberger, T. E. Acree, *Nature*, **1967**, 216, 480-482

<sup>b</sup>R. S. Shallenberger, T. E. Acree, C. Y. Lee, *Nature*, **1969**, 221, 555-556