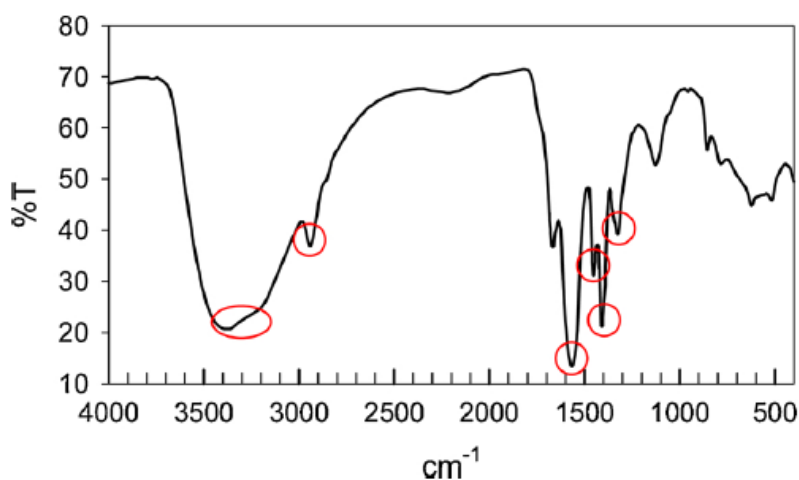


# Supplementary information: Understanding the behavior of sodium polyacrylate in suspensions of silica and monovalent salts

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## Spectrum of sodium polyacrylate

Figure S1 shows the spectrum of NaPA, highlighting the symmetric ( $1408\text{ cm}^{-1}$ ) and antisymmetric ( $1563\text{ cm}^{-1}$ ) stretching of the carboxylate functionality. The spectrum also shows displacement ( $1327\text{ cm}^{-1}$ ) and deformation ( $1454\text{ cm}^{-1}$ ) characteristic of  $\text{CH}_2$  and asymmetric stretching ( $2945\text{ cm}^{-1}$ ) characteristic of C-H. The broad band ( $3203\times 3386\text{ cm}^{-1}$ ) corresponds to stretching vibrations of the hydroxyl group.



**Figure S1.** Fourier-transform infrared spectroscopy (FTIR) of sodium polyacrylate.