



Freezing and thawing of aqueous solutions in emulsions

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The freezing behaviour of aqueous solutions in different emulsions is investigated by analytical methods such as differential scanning calorimetry and optical cryomicroscopy. We show that freezing temperature, freeze concentration and correspondingly cold-crystallization and melting change depending on the properties of the surrounding oil and emulsifier, size distribution of emulsified droplets and the parameters of emulsification. Relevance to freezing of cloud droplets is discussed.