

[ 40] 房艳, 杨波, 雷亚川, 等. 用粉末大角射线衍射技术研究  
溶液结构的新方法ⅢLi<sub>2</sub>SO<sub>4</sub>溶液的径向分布函数与模型  
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[ 41] 房春晖, 马培华, 房艳, 等. Li<sub>2</sub>SO<sub>4</sub>·2H<sub>2</sub>O 溶液结构的 X  
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The polyborate Present in aqueous solutions containing boron and the affection factors

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**Abstract:** In this paper, the existence forms of boron in aqueous solutions containing boron and the relations of it with the factors such as concentration of total boron, pH, ionic strength, temperature, pressure and so on, were summarized based on the reported data. It is pointed out that the polymerization degree of boron increases with the elevation of concentration of total boron. The polyborates present in aqueous solutions containing boron are little when the pH is very high or low, with H<sub>3</sub>BO<sub>3</sub> and B(OH)<sub>4</sub><sup>-</sup> as the main species. It is stressed that the supersaturation is universal for aqueous solutions containing boron, The FT-IR, Raman and NMR spectra of some polyborates have been given. The form of borate existing in the brine containing boron can be expressed as the comprehensive statistic one of tetraborate.

**Key words:** Polyborate anions; Degree of polymerization; Supersaturation; Salt lake brine containing boron; Comprehensive statistic form

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