

### 论文摘要

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## 聚乙二醇对离子膜电解铝酸钠溶液制备 超细氢氧化铝的影响

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**摘 要:** 研究在铝酸钠溶液离子膜电解制备超细氢氧化铝过程中, 添加剂聚乙二醇对产品的影响。结果表明: 聚乙二醇能有效抑制氢氧化铝颗粒间的附聚, 相对分子质量较高的聚乙二醇(PEG 4 000)的作用效果更好, 最佳添加浓度为0.175 g/L。扫描电镜照片显示, 聚乙二醇对氢氧化铝的形貌有一定程度的影响。X射线衍射分析表明, 离子膜电解种分的产品为拜耳型氢氧化铝。

**关键字:** 离子膜电解; 超细氢氧化铝; 铝酸钠; 添加剂

## Influence of polyethylene glycol on superfine aluminum hydroxide prepared by ion-exchange membrane electrolysis method

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**Abstract:** The influence of polyethylene glycol on the aluminum hydroxide product in the process of ion-exchange membrane electrolysis was studied. The results show that the agglomeration among aluminum hydroxide particles could be effectively inhibited by polyethylene glycol. The higher the relative molecular mass of additives, the better the effectiveness. And the optimal concentration of the additive is 0.175 g/L. The SEM images of aluminum hydroxide show that polyethylene glycol could affect the morphology of aluminum hydroxide. The product of ion-exchange membrane electrolysis from Bayer liquor is Bayerite according to the pattern of X-ray diffraction.

**Key words:** ion-exchange membrane electrolysis; superfine aluminum hydroxide; sodium aluminate; additive

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