

色谱法研究杂多酸VI. 12-钨硼酸根离子溶液中降解反应的研究

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**摘要** 本文将胶束液相色谱用于 $\alpha$ -BW~12O~40<sup>5</sup>-溶液中降解反应的研究。首次发现 $\alpha$ -BW~12O~40<sup>5</sup>-降解存在两个过程。第一步为 $\alpha$ -BW~12O~40<sup>5</sup>-向其异构体转化的快速平衡反应, 第二步为该异构体的缓慢降解。实验测定了杂多酸离子浓度、pH值、无机盐浓度、温度对降解反应的影响, 得到第一步反应的平衡表达式和第二步反应的速率方程式, 推断了 $\alpha$ -BW~12O~40<sup>5</sup>-降解反应的机理。

**关键词** [反应机理](#) [杂多酸](#) [反应动力学](#) [液体色谱](#) [降解反应](#) [钨硼酸](#)

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## Research on heteropoly anions with chromatography. VI. the study of decomposition reaction of 12-tungstoborate in solution

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**Abstract** The decomposition reaction of heteropoly anion a-BW12O405- in solution was studied with micellar liquid chromatog. It was found for the first time that the decomposition reaction of a-BW12O405- possesses two steps, the first is the fast interconversion equilibrium between a-BW12O405- and its isomer and the second is that the isomer disassociates slowly. By experiment, the influence of the concentration of heteropoly anion, the pH value, the concentration of inorganic salt and the temperature on the decomposition reaction were investigated and the equilibrium equation of the first step of the reaction and the equation of the reaction kinetics of the second were obtained. Finally, the possible mechanism of the decomposition of a-BW12O405- was discussed.

**Key words** [REACTION MECHANISM](#) [HETEROPOLYACID](#) [REACTION KINETICS](#) [LIQUID CHROMATOGRAPHY](#) [DEGRADATION REACTION](#)

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