

离子色谱法(IC)测定高放废液中若干阴离子浓度

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摘要 采用离子色谱法(IC)测定大量NO₃离子存在下的微量或少量F⁻、Cl⁻、NO₂和PO₄³⁻离子浓度。使用Y₂X₈阳离子交换树脂预处理柱除去试样中可能存在的阳离子,特别是大量的过渡金属和重金属离子。以Na₂CO₃-NaHCO₃淋洗液稀释试样,有效地抑制水负峰对F⁻、Cl⁻离子测定的影响。选择合适的样品稀释倍数,将大量存在的NO₃离子对其它阴离子测定的干扰排除,以使方法在用于高放废液中的F⁻、Cl⁻、NO₂和PO₄³⁻离子的测定中具有较高灵敏度。

关键词 [离子色谱法\(IC\)](#) [高放废液](#) [阴离子浓度](#)

分类号

DETERMINATION OF THE SEVERAL ANIONS IN THE HIGH-LEVEL LIQUID WASTE BY ION CHROMATOGRAPHY

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Abstract The determination of F⁻, Cl⁻, NO₂⁻ and PO₄³⁻ ions in the presence of a large quantities of NO₃ ion is investigated in detail. In order to remove harmful and a great amount of cations that are contained in the liquid waste, especially the transition metal and other heavy metal ions. The pretreatment column with cation exchange resin is used; The sample is diluted with the eluent to suppress the negative peak of water; The effect of a large amount of NO₃⁻ on the measurement of other anions are eliminated by choosing proper dilution times of sample. Because the method possesses higher sensitivity and allows much more dilution times of sample to decrease radiation, it is very fit for the analysis of high level waste. F⁻, Cl⁻, NO₂⁻ and PO₄³⁻ are recovered quantitatively in the method. The precision of the method is better than 6% for the determination of F⁻, Cl⁻, NO₂⁻ and PO₄³⁻.

Key words [Ion chromatography](#) [High-level liquid waste](#) [Anions.](#)

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