

Pacifichem Selected Abstracts

Sunday, Dec. 18 PM - Poster Presentations				
Presentation Time/ Session Start Time	Location	Prog. #/Type	Authors Institutions	Abstract Title Session #/Title
Sunday, Dec. 18, 8:00 PM - 10:00 PM/ 8:00 PM	Renaissance Ilikai - Ballroom A/B/C/D/E	712 Poster	<u>Y.Takada</u> ¹ ; S.Kaneco ¹ ; H.Katsumata ¹ ; T.Suzuki ² ; .Ohta ¹ 1. Department of Chemistry for Materials, Faculty of Engineering, Mie University, Tsu, Japan; 2. Environmental Preservation Center, Mie University, Tsu, Japan	Determination of zinc in aluminium metal by sequential metal vapor elution analysis with radio - frequency induction heating method 687 New Paradigms in Analytical Spectrochemistry (#60) [PS]

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Determination of zinc in aluminium metal by sequential metal vapor elution analysis with radio - frequency induction heating method

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Program Number: 712

Presentation Time: Sunday, Dec. 18, 8:00 PM - 10:00 PM

Location: Renaissance Ilikai - Ballroom A/B/C/D/E

In recent years, a separation system with a high temperature column (> 990 K), sequential metal vapor elution analysis (SMVEA) has been reported for the separation and analysis of trace metal elements. The advantages of SMVEA are (a) direct separation of metal vapors, (b) rapid analysis without a prior chemical treatment, (c) simplicity, (d) elimination of spectral and chemical interferences occurring in conventional atomic spectrometry such as atomic absorption spectrometry (AAS) and inductively coupled plasma optical emission spectrometry (ICP-OES) and (e) possibility as a powerful accessory of analytical instruments containing mass spectrometry. However, in spite of these attractions, little information on the SMVEA has been reported owing to the technical difficulty of instrumentation. Aluminium in metal contains some trace impurity metals, including zinc, which can affect its quality and numerous papers concerning the determination of zinc in aluminium metal by atomic absorption spectrometry or inductively coupled plasma optical emission spectrometry have been reported. In these methods, however, there are some problems such as poor sensitivity and optical and chemical interferences. In order to eliminate the interferences from aluminum matrix, liquid-liquid extraction, coprecipitation or an ion-exchange method to separate zinc from the matrix has been used. In the present work, the determination of zinc in aluminium metal by sequential metal vapor elution analysis with radio-frequency induction heating method was investigated. The results were in good agreement with the certified value.

Citation: Y.Takada, S.Kaneco, H.Katsumata, T.Suzuki, .Ohta. Determination of zinc in aluminium metal by sequential metal vapor elution analysis with radio - frequency induction heating method Program No. 712. *2005 Abstract Viewer*. The International Chemical Congress of Pacific Basin Societies

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