INTERNATIONAL STANDARD

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Water quality — Determination of aluminium — Spectrometric method using pyrocatechol violet

Qualité de l'eau — Dosage de l'aluminium — Méthode par spectrométrie à l'aide du violet de pyrocatéchol

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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Introduction

Aluminium occurs in a variety of types of compounds in nature, and can be found in acid, neutral and alkaline solutions. It can also form colloidal polymeric solutions and gels, as well as flocculant precipitates, all based on aquated positive ions or hydroxylated aluminates.

In addition, it can form complexes with organic acids and with ions such as fluoride, chloride and sulfate, most but not all of which are soluble.

Aluminium can also form lattice compounds with oxygen (and hydroxyl species), silicon, and some metals. Although insoluble, some of these compounds, notably the clays, micas and zeolites, can be found as fine suspended particles in rivers. Although they contain aluminium, these insoluble lattice compounds are not usually considered as aluminium compounds in the context of the water cycle.

The method described in this International Standard is restricted to the determination of the aquated cations and other forms of aluminium readily converted to that cationic form by acidification. The pretreatment with nitric acids is identical to that described in other International Standards using spectrometric methods with an electrothermal atomization or inductively coupled plasma procedure (methods of preparation).

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