Australian Standard®

Analysis of serum and plasma for trace elements

Method 1: Determination of aluminium content—Graphite furnace atomic absorption spectrometric method

PREFACE

This Standard was prepared by the Standards Australia Committee CH/6 on the Analysis of Body Fluids for Metals Content to provide a furnace atomic absorption spectrometric method for the determination of aluminium in human serum or plasma.

The sampling of blood for the determination of aluminium presents a number of problems, the major one being the possibility of contamination of the sample. This Standard has been prepared to provide recommended procedures for obtaining samples of venous blood, free from contamination and suitable for use in the determination of aluminium concentration.

This Standard should be read in conjunction with AS 2134.2, *Recommended practice for chemical analysis by atomic absorption spectrometry—Graphite furnace spectrometry*.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

METHOD

1 SCOPE This Standard sets out a graphite furnace atomic absorption spectrometric method for the determination of aluminium in plasma or serum. This method is applicable to the determination of aluminium in the range 0.4 μmol/L to 6 μmol/L.

NOTES

1 This assay is an intricate procedure and therefore should be carried out by an analyst who has experience with the performance characteristics of both the chemistry of the method and the analytical instrument used.

2 The precision and accuracy of this determination is particularly sensitive to the presence of aluminium within the work space and on personnel within the workplace.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1199 Sampling procedures and tables for inspection by attributes

2134 Recommended practice for chemical analysis by atomic absorption spectrometry

2134.2 Part 2: Graphite furnace spectrometry