

Australian Standard™

**Collection and stabilization of urine
samples for quantitation of trace
and toxic elements**

This Australian Standard was prepared by Committee CH-036, Analysis of Body Fluids and Wastes. It was approved on behalf of the Council of Standards Australia on 30 September 2002 and published on 29 October 2002.

The following are represented on Committee CH-036:

A.C.T. Government Analytical Laboratory
Amcosh Occupational Health Services
Australasian Association of Clinical Biochemists
Australian Government Analytical Laboratories
Australian Institute of Medical Scientists
Hunter Area Pathology Service
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PREFACE

This Standard was prepared by the Standards Australia Committee CH-036, Analysis of Body Fluids and Wastes, as part of a series on the analysis of urine.

The objective of this Standard is to set out procedures for pathologists on the pre-treatment of the urine containers and procedures for the collection of urine for the determination of trace and toxic elements.

Adherence to correct protocols for the collection and storage of urine samples for trace element analysis is a pre-requisite to accurate quantitation. The reliability of quantitation is affected by the extent of contamination during collection and subsequent containment of the sample prior to analysis.

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.

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STANDARDS AUSTRALIA

Australian Standard
Collection and stabilization of urine
samples for quantitation of trace
and toxic elements

1 SCOPE

This Standard sets out the procedures for the pre-treatment of the urine containers and procedures for the collection of urine for the determination of antimony, arsenic, bismuth, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, mercury, nickel, selenium, thallium and zinc.

WARNING: THIS STANDARD MAY INVOLVE HAZARDOUS MATERIALS AND EQUIPMENT. IT IS THE RESPONSIBILITY OF THE USER OF THIS STANDARD TO ESTABLISH APPROPRIATE HEALTH AND SAFETY PRACTICES AND DETERMINE THE APPLICABILITY OF REGULATORY LIMITATIONS PRIOR TO USE.

2 REFERENCED DOCUMENTS

AS	
1199	Sampling procedures and tables for inspection by attributes
1399	Guide to AS 1199—Sampling procedures and table for inspection by attributes
AS/NZS	
2243	Safety in laboratories
2243.1	Part 1: General
2243.2	Part 2: Chemical aspects
2243.3	Part 3: Microbiological aspects and containment facilities
ISO	
3696	Water for analytical use—Specification and laboratory test methods

3 DEFINITIONS

For the purpose of this Standard, the definitions below apply

3.1 24 hour urine collection

A total volume of urine voided over a 24 hour period.

3.2 Laboratory sample

A sample prepared for sending to the laboratory for inspection and testing. This may be called specimen.

3.3 Single void urine collection

The collection of all or part of a single emptying of the bladder.

3.4 Test sample

A sample prepared under the analyst's direction from the laboratory sample on which the test or observation is actually carried out.