

Australian Standard[®]

Test sieving procedures

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The following interests are represented on Committee CH/32:

Australian Mining Industry Council
National Association of Testing Authorities
National Ready Mixed Concrete Association
The Royal Australian Chemical Institute
The University of New South Wales
Vic Roads

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PREFACE

This Standard was prepared by the Standards Australia Committee on Particle Size Analysis under the direction of the Multitechnics Standards Policy Board, at the request of the National Association of Testing Authorities, Australia.

The Standard is technically equivalent to ISO 2591-1:1988 *Test sieving, Part 1: Methods using test sieves of woven wire cloth and perforated metal plate*. Some editorial changes have been made to comply with Standards Australia's procedures.

For the purpose of this Standard, it is assumed that the test sieves comply with the requirements of AS 1152, *Test sieves*; the results will therefore depend mainly on the properties and condition of the material under test and the procedure adopted.

CONTENTS

	<i>Page</i>
FOREWORD	3
1 SCOPE	4
2 REFERENCED DOCUMENTS	4
3 DEFINITIONS	4
4 PRINCIPLES OF SIEVING	5
5 MATERIALS TO BE TEST SIEVED	5
6 SAMPLING OF MATERIALS	6
7 APPARATUS	7
8 PREPARATION AND MAINTENANCE OF TEST SIEVES	7
9 TEST PROCEDURE	8
10 DRY SIEVING	11
11 WET SIEVING	13
12 COMBINED WET AND DRY SIEVING	14
13 EVALUATION OF RESULTS	16
14 PRESENTATION OF RESULTS	17

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FOREWORD

Sieving tests are used in many industries; they are performed on a wide variety of materials and for different purposes. No single method of sieve analysis can be specified to cover the various applications, and certain industries have already produced specifications for sieving procedures which are incorporated in the appropriate Australian Standard for a limited application. Where there is an established Standard, it should take precedence.

The use of test sieves for particle size analysis covers a wide variety of materials in size ranges extending from lumps passing through 125 mm apertures to fine powders with particle sizes down to about 32 μm . To conduct the sizing tests, the test sieves required may be used singly or they may be grouped together. The test sieve with the largest aperture required is placed at the top of the nest and the other test sieves are placed below it in descending order of aperture size.

The results obtained from a sieve analysis test will depend on several factors, including the condition of the test sieves used, the sieving medium (wire cloth or perforated plate), the particles of the shape and density of the material under test, the moisture content of the material and whether the material possesses electrostatic or other properties which would cause it to adhere to the sieving medium. The results may also depend on whether the sieving is by hand or by machine; the results will not necessarily be the same in each case.

The movement imparted to a test sieve by hand can be adapted by experience to meet the needs of the material and the sieving medium, which require different techniques for particles of different size. A machine, on the other hand, is usually designed to impart a particular combination of movements in a standardized manner, irrespective of the aperture size of the test sieve or the characteristics of the material, and may not be readily adaptable to be equally effective for dissimilar materials.

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