AS 4969.1—2008
Reconfirmed 2018

Australian Standard®

Analysis of acid sulfate soil—Dried samples—Methods of test

Method 1: Pre-treatment of samples

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee EV-009, Sampling and Analysis of Soil and Biota, Working Group EV-009-02-01, Analysis of Acid Sulfate Soil.

Acid sulfate soil is a special group of soils that, because of the many complex chemical reactions associated with them, require specialized sampling, pre-treatment and analytical methods for their characterization so as to better understand appropriate management practices that will ensure they have minimal impacts on the environment.

The objective of this Standard is to provide a consistent laboratory procedure for the drying, pulverizing and storage of acid sulfate soil prior to chemical analysis.

METHOD

1 SCOPE

This Standard provides a procedure for pre-treating acid sulfate soil following sampling, prior to their analysis as dried sample using appropriate methods of test. The procedure includes the handling of samples before delivery to the laboratory, and the drying, grinding and storage of samples. The Standard also provides a procedure for archiving a sample after analysis.

NOTES:

1 It is recommended to collect a field sample that provides approximately 200 g of dried sample.

2 Field personnel may remove coarse fragments (e.g. shell, stones, rock fragments >2 mm) prior to sending the field sample to the laboratory. The presence of such fragments, their size, shape and abundance (and whether they have been removed) should be recorded in field sampling notes.

3 For the chemical analysis to most closely reflect the condition of the acid sulfate soil in its natural state at the time of sampling, the handling, preparation and storage of these soils should be such that potential for oxidation of pyrite is minimized.

4 This method is not appropriate for preservation of acid volatile sulfur (e.g. iron monosulfides) in acid sulfate soil as oxidation of these compounds is likely to occur. This method, however, is suitable for the purpose of acid base accounting.