Australian Standard®

Methods of testing soils for engineering purposes

Method 1.3.1: Sampling and preparation of soils—Undisturbed samples—Standard method

1 SCOPE

This Standard outlines considerations and specifies procedures for taking undisturbed samples of soils for routine investigation purposes, and specifies a procedure for packing and forwarding the samples for examination and testing.

Undisturbed samples taken in accordance with this Standard are generally suitable for strength, consolidation, reactivity and total suction tests. Classification, chemical, density and strength tests on remoulded specimens are normally performed on disturbed samples, sampled in accordance with AS 1289.1.2.1.

Sampling of specimens for California Bearing Ratio tests on undisturbed samples is covered in AS 1289.6.1.2.

The selection of the type of sampling device to be used, the technique to be applied and the location of sampling sites is not covered by this Standard. Random selection of sampling sites, when required, is covered by AS 1289.1.4.1 or AS 1289.1.4.2.

NOTE: The sampling technique may be chosen according to the conditions, for there is no universal sampler suitable for all conditions. The three main factors to be considered are sampler type, sampler size and operating technique.

A range of samplers is necessary to cope with varying soil types. Generally the type of sampler will be chosen according to soil conditions, but the purpose for which the sample is to be used will also influence the choice.

The choice of sampler size is generally a compromise between quality and cost. Larger sizes are preferred in that the disturbance is proportionately less and also the sample is likely to be more representative, particularly in structured soils. However, costs increase with size, particularly with rotary methods of drilling. It is preferable to standardize on one size sampler so that where more than one sampler type is necessary in an investigation, the test results can be more directly related.

The technique used for any particular sampler may need to be varied according to the soil conditions, and also to the purpose for which the samples are required.