Australian Standard®

# Methods for sampling and testing aggregates

# Method 26: Secondary minerals content in basic igneous rocks

**1 SCOPE** This Standard sets out the method for determining the content of secondary or deuteric minerals of rock spalls, bore cores and aggregates using a petrological microscope.

The method is applicable to basic igneous rocks, e.g. basalt or dolerite, but not to rocks which have developed a clearly identifiable metamorphic texture or mineral assemblage.

As secondary minerals are not necessarily deleterious, the method should not be used alone to provide a measure of the quality of the source rock or product. The method should be used to supplement results from other rock quality tests only if deleterious minerals are suspected.

NOTE: The method does not attempt to outline the techniques of petrological work. The method can only be used by persons who are qualified by education and experience.

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

AS
1141 Methods for sampling and testing aggregates
1141.1 Method 1: Definitions
1141.3 Method 3: Sampling of aggregates and rock

**3 DEFINITIONS** For the purpose of this Standard, the definitions in AS 1141.1 and those below apply.

**3.1 Primary minerals**—minerals which existed in the rock at the time of its formation. They are further divided into the following:

(a) *Essential minerals*—minerals whose presence is implied in the definition or classification of the rock.

(b) *Accessory minerals*—minerals whose presence or absence does not affect the definition or classification of the rock.

NOTE: Volcanic glass is classified as a primary mineral for the purpose of this Standard.

**3.2 Secondary minerals**—minerals which have resulted from the alteration or reconstruction of the primary minerals by weathering or other agents, or which have been introduced and deposited within the rock mass by groundwater movements or other agents (e.g. infilled microcrack). For the purposes of this Standard, deuteric minerals are also classified as secondary minerals.

**4 APPARATUS** For examination of thin sections, the following apparatus is required:

(a) *Petrological (polarizing) microscope*—fitted with low, medium and high power objectives and with eyepieces of various powers.