Australian/New Zealand Standard™

AS/NZS 3580.10.2:2013

Methods for sampling and analysis of ambient air

Method 10.2: Determination of particulate matter—Impinged matter—Gravimetric method

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EV-007, Methods for Examination of Air, to supersede AS 2724.5—1987, *Ambient air—Particulate matter*, Part 5: *Determination of impinged matter expressed as directional dirtiness, background dirtiness and/or area dirtiness (directional dust gauge method)*.

This Standard deals with the measurement of particles that impinge upon vertical surfaces as a result of surface winds.

Impinged matter consists of particles which are airborne under the influence of surface winds and which may collide with projections from the earth's surface. Common sources of such particles are minerals processing, bulk materials handling, mining operations, industrial processes, incineration, agricultural soil cultivation and natural sources of windblown dust.

The material sampled by this method can represent a wide range of particle sizes depending on wind speed. Small particles can cause a nuisance by soiling property. Larger particles can cause weathering of property through abrasive action. Other factors such as colour, shape and size of the particulate matter can influence the perception of nuisance.

METHOD

1 SCOPE

This Standard sets out a method for the sampling of particulate matter in air which impinges on vertical surfaces and procedures for the gravimetric determination of the insoluble solids, ash, combustible matter, soluble solids and total solids content of the collected material.

It should be noted that, despite the equivalence of the units used to report the impinged matter mass flux results of this Standard (g/m^2/month) and AS/NZS 3580.10.1 (dust deposit gauge), there is no relationship between the results obtained.

NOTES:

1 The samples obtained by the specified sampling procedure may subsequently be subject to physical or chemical analysis.

2 The method provides an estimate of the mean impinged matter flux over a sampling period, typically one month. Particulate matter impingement rates of 0.1 g/m^2/month and above may be determined using a monthly sampling period.