

BS ISO 13125:2013



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Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for antifungal activity of semiconducting photocatalytic materials

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee RPI/13, Advanced technical ceramics.

A list of organizations represented on this committee can be obtained on request to its secretary.

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**Fine ceramics (advanced ceramics,
advanced technical ceramics) —
Test method for antifungal activity
of semiconducting photocatalytic
materials**

*Céramiques techniques — Méthode d'essai pour l'activité
antifongique des matériaux photocatalytiques semiconducteurs*





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13125 was prepared by Technical Committee ISO/TC 206, *Fine ceramics*.

Introduction

Under the illumination of ultraviolet (UV) light, photocatalysts show diverse functions, such as the decomposition of air and water contaminants, as well as deodorization, self-cleaning, antifogging, antibacterial and antifungal actions. These functions of photocatalysts are generally based on the action of active oxygen species such as hydroxyl (OH) radicals formed on the surface of photocatalysts. The energy- and labour-saving nature of photocatalysis has attracted keen interest when the photocatalyst is activated by sunlight (or artificial lighting).

Practical applications of photocatalysts for both indoor and outdoor use have rapidly expanded in recent years. Many kinds of photocatalytic materials have been proposed or are already commercialized, based on ceramics, glass, concrete, plastics, paper, etc. Such materials have been proposed by either coating or mixing of a photocatalyst; in most cases, titanium dioxide (TiO₂).

However, the effect of photocatalysis is not easily inspected visually, and no appropriate and standardized evaluation methods have been available to date. Some confusion has thus arisen as photocatalytic materials have been introduced. Furthermore, the above-mentioned diverse functions of photocatalysts cannot be evaluated with a single method: thus it is required to provide different evaluation methods for air purification, water decontamination, and self-cleaning.

This International Standard applies to testing the antifungal activity of photocatalytic ceramics and other materials.