

ISO 18061:2014-06 (E)

Fine Ceramics (Advanced Ceramics, Advanced Technical Ceramics) - Determination of antiviral activity of semiconducting photocatalytic materials - Test method using bacteriophage Q-beta

| Contents | | Page |
|--------------------|--|-------------|
| Foreword | | iv |
| Introduction | | v |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Symbols | 2 |
| 5 | Principle | 3 |
| 6 | Materials | 3 |
| 6.1 | Strains and preparation for tests | 3 |
| 6.2 | Media | 5 |
| 7 | Apparatus and equipment | 6 |
| 7.1 | Test equipment | 6 |
| 7.2 | Cover film | 7 |
| 7.3 | Moisture preservation glass plate | 7 |
| 7.4 | Glass tube or glass rod | 7 |
| 7.5 | Paper filter | 7 |
| 7.6 | Fluorescent ultraviolet lamp | 8 |
| 7.7 | UV radiometer | 8 |
| 7.8 | Punched metal sheet | 8 |
| 7.9 | Centrifuge | 9 |
| 7.10 | Sterilized syringe filter unit | 9 |
| 8 | Test piece | 9 |
| 9 | Procedure | 10 |
| 9.1 | General | 10 |
| 9.2 | Procedure for preparation of bacteria suspension | 10 |
| 9.3 | Procedure of preparation of test bacteriophage solution | 10 |
| 9.4 | Procedure of test for photocatalytic antiviral activity | 11 |
| 9.5 | UV irradiation condition | 11 |
| 9.6 | Measurement of titre of bacteriophage | 12 |
| 10 | Calculation | 13 |
| 10.1 | General | 13 |
| 10.2 | Calculate titre of bacteriophage | 13 |
| 10.3 | Test requirement fulfilment validation | 13 |
| 10.4 | Photocatalyst antiviral activity value calculation | 14 |
| 10.5 | Antiviral activity value calculation without photocatalyst | 15 |
| 11 | Test report | 15 |

| | |
|--|-----------|
| Annex A (informative) Referenced data of comparison between influenza virus and bacteriophage Q-beta | 16 |
| Annex B (informative) Comparison of photocatalytic activities determined using ATCC23631-B1 and NBRC20012 | 18 |