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Nanotechnologies — Determination of silver nanoparticles potency by release of muramic acid from *Staphylococcus aureus*

*Nanotechnologies — Détermination de l'efficacité des nanoparticules
d'argent par la libération de l'acide muramique du Staphylococcus
aureus*



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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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The committee responsible for this document is ISO/TC 229, *Nanotechnologies*.

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Introduction

The antimicrobial properties of silver nanoparticles (AgNPs) are being increasingly utilized in consumer products. It has been widely used for development of many biological and pharmaceutical processes, products, and applications such as coating material for medical devices, orthopaedic or dental graft materials, topical aids for wound repair, clothing, underwear and socks, textile products, and even washing machines.^[1] Industries are producing wide varieties of AgNPs as an antibacterial agents with different physical properties and with little low concern to their side effects. Moreover, there is a risk of enhanced bioavailability of the nanoparticles in the different media^{[2][3]} which might have impact on the beneficial soil flora, plants, animals, and humans. From this point of view, the potency of AgNPs should be evaluated and classified according to its final biological activities.

This Technical Specification does not describe use of this Technical Specification to evaluate what properties of silver nanomaterial are to be assessed.