

Antibacterial Activity Test Methods

JIS Z 2801 vs ISO

Definitions



SIAA

SIAA - Society of Industrial Technology for Antimicrobial Article

This organization was established by antibacterial agent manufacturers, antibacterial product manufacturers and antibacterial trial and evaluation institutions with the aim of diffusing suitable and safe antibacterial products.

KOHKIN = Antibacterial (in Japanese)

JIS Z 2801

JIS - Japanese Industrial Standard

JIS Z2801 method is a quantitative test method for determining the antimicrobial efficacy and activity of hard surfaces of plastics, metals, glass, ceramic, rubber, silicone and other non absorbent materials.

The test has been used for other plain hard surfaces like glass, paint/lacquers/coating, polymeric materials etc.

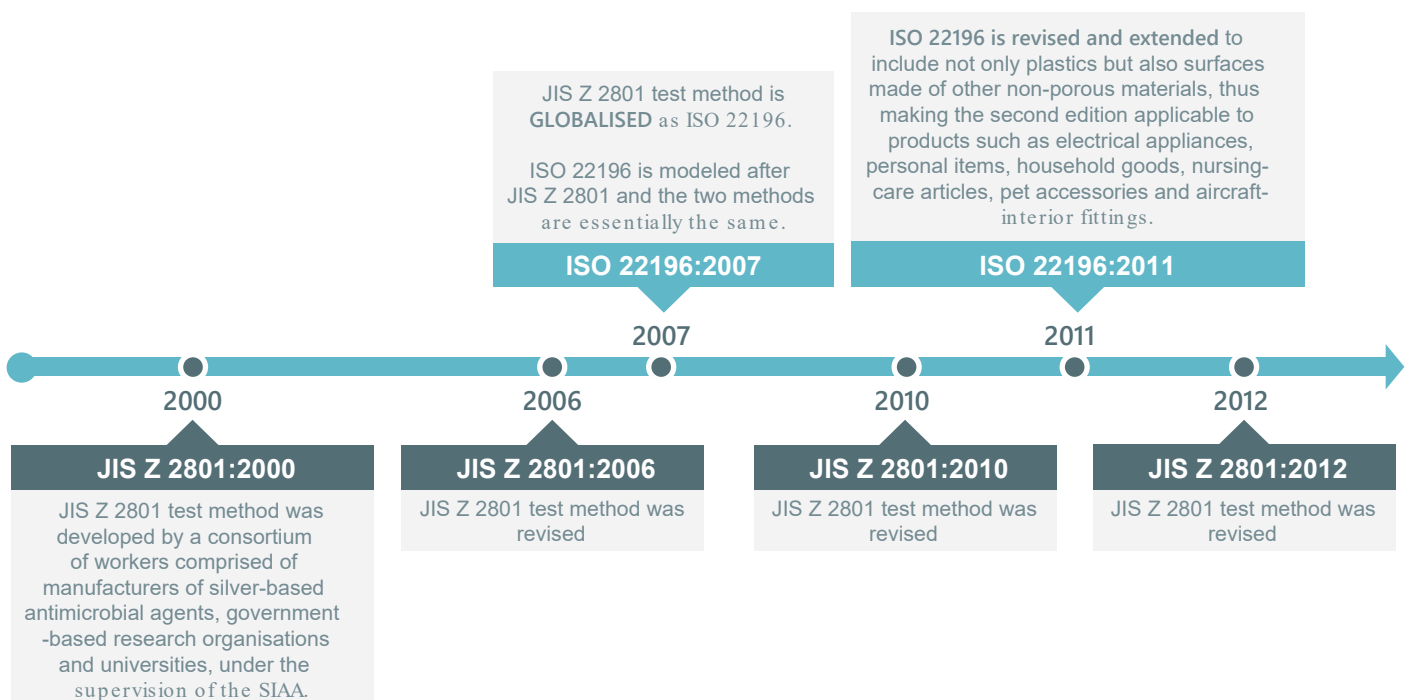
ISO 22196

ISO - International Organization for Standardization

ISO 22196:2011 is an internationally recognized test method for evaluating the antibacterial activity of antibacterial-treated plastics, and other non-porous, surfaces of products (including intermediate products).

The test is also applicable to products such as electrical appliances, personal items, household goods, nursing-care articles, pet accessories and aircraft-interior fittings.

Timeline



Method

ISO 22196 is modeled after JSZ 2801 and the two methods are essentially the same.

Antibacterial activity is measured by quantifying the survival of bacterial cells which have been held in intimate contact for 24 hours at 35°C - 37°C with a surface that contains an antibacterial agent.

The antibacterial effect is measured by comparing the survival of bacteria on a treated material with that achieved on an untreated material.

Common Factors (JSZ2801 and ISO 22196)

Temperature	35°C - 37°C
Incubation time (on surface)	24 hours
Incubation time (of washed bacteria on plates)	In standard - 40 to 48 hours
Sample size	5x5cm
Sample number	6 (3 per organism, 6 more for controls for immediate recovery)
Media and Agar	PCA, Nutrient broth, Nutrient Agar, PBS etc.
Organisms	<i>E.coli</i> , <i>S.aureus</i>
Pre-culture methods of bacteria	Inoculate media, grow overnight, dilute as appropriate
Numbers loaded	Range in standard, 6×10^5 ideal number of organisms
Calculation methods	As per standard

Method in detail

