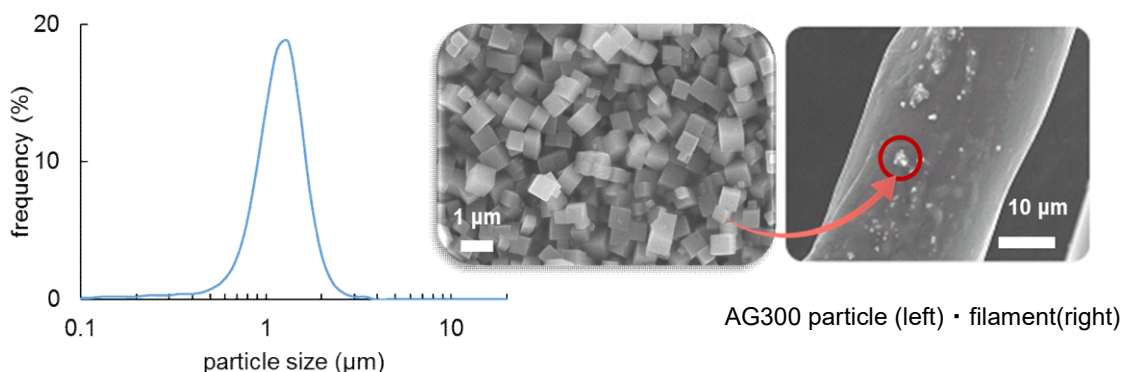


NOVARON[®] For fiber and film

Advantages

- NOVARON is a fine particle (1μm average particle diameter and narrow particle size distribution), therefore it is suitable for addition to textile products or thin film and coating.
- NOVARON has low water content and rarely creates foam on heating treatment.
- NOVARON is inorganic compound and has high heat resistance (over 800 degrees)
- NOVARON is a durable anti-bacterial agent.
- NOVARON is approved to FDA and EPA.
- NOVARON is approved to SIIA(Society of International sustaining growth for Antimicrobial Articles).

Addition to textile



1μm average particle diameter and narrow particle size distribution.
No foam was observed during spinning.

Anti-bacterial effect

Minimum inhibitory concentration(MIC)

The minimum concentration of antimicrobial agent to prevent growth of a bacterium (μg/mL).

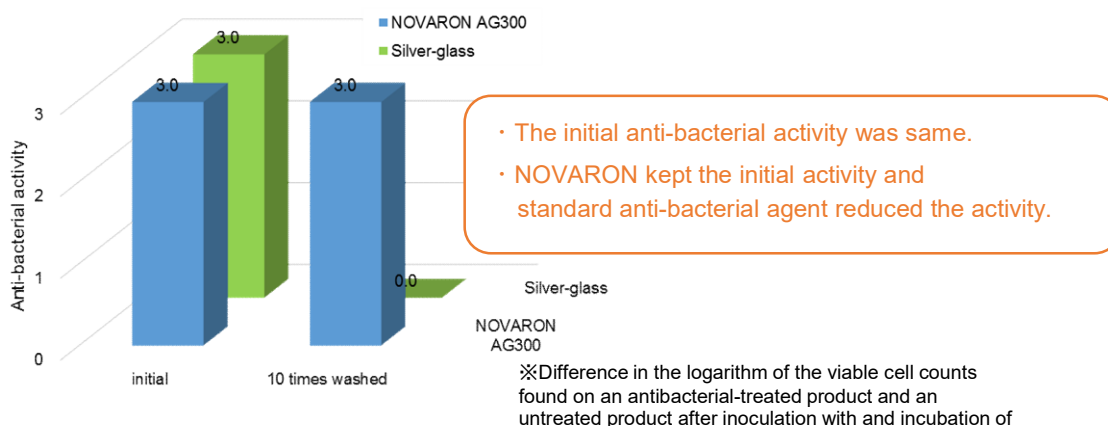
	Feture	AG300
<i>E. coli</i>	Indicator bacteria of contamination of food and drinking water	125
<i>E. coli</i> O157:H7	Vero toxin-producing types of <i>E. coli</i> and cause of food poisoning	200
<i>P.aeruginosa</i>	Pathogenic bacteria that can make seafood rotten	125
<i>Salmonella</i>	Pathogenic bacteria that can be cause of typhoid fever and food poisoning	250
<i>S. aureus</i>	Pathogenic bacteria that can be cause of suppuratation, sepsis, food poisoning	250
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	Pathogenic bacteria that can be cause of hospital-acquired infection	250
<i>Bacillus subtilis</i>	Pathogenic bacteria that can make milk and meat rotten	250
<i>Klebsiella pneumoniae</i>	Pathogenic bacteria that can be cause of pneumonia, urinary tract infection and septicemia	128

NOVARON showed high anti-bacterial effect against various bacteria.

Practical example

Polyester fiber (0.5% treated)

Wash Novaron treated polyester fiber 10times and compare the anti-bacterial activity ※ with standard anti-bacterial agent treated one.



Propertie

Type	Characteristic	Average particle size μm	Specific gravity	Water content wt. %
AG300	Standard	1	3.0	0.2
AG1100	High anti-bacterial effect	1	3.0	0.2

Application

<Textile>

clothes, beddings, mask, curtain, rug

<Sports equipment>

sport wear, shoes, swimming wear,
towel, glove

<Sundry>

garbage bag, vinyl grove, plastic wrap,
screen protective film
furniture, paint, wall paper, sealant

- This product absorbs moisture. Please take due care when using.
- Information about physical and chemical characteristics is based on materials and data available at the time of preparing this Technical Information, and does not represent a guarantee.
- TOAGOSEI assumes no liability for the evaluation or patents regarding any final products containing any



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