

# Aquaguard NK12

Paraben Free	Thiazolinone Free	Formaldehyde Free	Preservative Free	Natural
✓	✓	✓		

INCI declaration
aqua, sodium benzoate, potassium sorbate

Aquaguard NK12 is an aqueous preservative suitable for use with both rinse-off and leave-on products. It has a broad spectrum of activity and is effective against bacteria, yeast, and moulds. The preservative is very cost effective, and is supplied as an easy to use, readily dispersible liquid, which does not contain any volatile organic compounds. Aquaguard NK12 is the perfect choice for Eco friendly formulations with pH values up to 5.5.

In Use Concentrations	ISCA recommendation	EU Cosmetic Regulation (max)
Leave-on	1.0 – 1.5 %	1.96 %
Rinse-off	0.8 – 1.3 %	5.35 %

In use concentrations vary according to the formulation type and the other ingredients present. The correct use dosage should be determined by microbial challenge testing of the finished formulation (ISCA UK offers discounted challenge testing to our customers).

## Recommended Applications

Shampoo, Shower gel (Rinse-off)	Creams, lotions (Leave-on)	Hair care	Deodorants	Wet wipes	Eye care	Lip care	Oral care	Children under 3
●	●	●	●	●	●	●	●	●

Use scenarios derived from evaluation of Cosmetic Regulation guidelines and preservative performance for typical formulations.



# Aquaguard NK12

Formulation guidelines	
pH (effective range)	2.0 – 5.5
Solubility (Water)	Fully soluble
Solubility (Glycols)	Fully soluble
Maximum Process Temperature	80 °C
General information	Aquaguard NK12 is compatible with most personal care ingredients. It is suitable for use in low pH formulations, and its efficacy increases as the pH level decreases. Aquaguard NK12 will lose most of its antimicrobial properties if the pH rises above 5.5. The product as supplied may change in appearance from yellow to brown on storage, but no further discolouration occurs when it is used in the end product as long as the formulation remains acidic.

Minimum Inhibitory Concentrations	
Microorganism	MIC (%)
Bacteria (gram-negative)	
Pseudomonas aeruginosa	0.60
Escherichia coli	0.20
Bacteria (gram-positive)	
Staphylococcus aureus	0.30
Enterococcus hirae	0.30
Bacillus subtilis	0.05
MRSA	0.02

Minimum Inhibitory Concentrations	
Microorganism	MIC (%)
Yeasts	
Candida albicans	0.50
Saccharomyce cerevisiae	0.05
Saccharomyces rouxii	0.15
Rhodotolura sp	0.05
Moulds	
Aspergillus brasiliensis	0.05

Disclaimer: The information contained in this document is intended to be of assistance to users. We believe the information set forth above to be true and accurate, but such information is provided without any warranty, and shall establish no legal duty or responsibility on the part of Isca UK Ltd.

