

# Iscaguard DMD

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

INCI declaration
DMDM hydantoin, Aqua

Iscaguard DMD is a water based preservative with the active ingredient 1,3-Bis(hydroxymethyl)-5,5-dimethylimidazolidine-2,4-dione (DMDMH). It is a versatile, effective preservative for personal care formulations that is highly soluble in water. Iscaguard DMD has a broad, balanced spectrum of activity against bacteria, yeasts, mould and fungi with good headspace protection.

In Use Concentrations	ISCA recommendation	EU Cosmetic Regulation (max)
Leave-on	0.15 – 0.4 %	1.08 %
Rinse-off	0.15 – 0.4 %	1.08 %

In use concentrations vary according to the formulation type and 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)	O/W emulsions	W/O emulsions	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.

Formulation guidelines	
pH (effective range)	4.0 – 8.0
Solubility (Water)	Miscible
Maximum Process Temperature	60 °C
General information	Heating to 60°C is only recommended for very brief periods of time. It is recommended that Iscaguard DMD be added during the cool down stage of emulsification processes. Not suitable for high pH formulations.

Minimum Inhibitory Concentrations	
Microorganism	MIC (%)
<b>Bacteria (gram-negative)</b>	
Pseudomonas aeruginosa	0.05
<b>Bacteria (gram-positive)</b>	
Staphylococcus aureus	0.025

Minimum Inhibitory Concentrations	
Microorganism	MIC (%)
<b>Yeasts</b>	
Candida albicans	0.10
<b>Moulds</b>	
Aspergillus niger	0.15


Physical Properties (approximate)	
Appearance	Clear, colourless liquid
Colour	< 20 Hazen
Odour	Low to mild odour
Density	1.16 gcm <sup>-3</sup>

Physical Properties (approximate)	
pH	6.5 - 7.5
Free formaldehyde	<1 %
Solubility in water	Miscible

Safety information

Cosmetic Regulation labelling requirements
No special labelling requirements.

Transport information	
	not regulated
UN number	-
UN proper shipping name	-
Transport hazard class	-
Packing group	-
Environmental hazards	-

Hazard classification/labelling	
Hazard pictograms	
Signal word	Warning
Hazard statements	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.