

cleadew MPS

ADVANCED CARE SYSTEM

FOR ALL SOFT CONTACT LENSES
INCLUDING SILICONE HYDROGEL LENSES

Multi-Purpose Solution for disinfecting, cleaning,
rinsing and storing for all soft contact lenses



FEATURE 1
Disinfect

Superior Disinfecting Efficacy through Dual Disinfectants: Polyhexamethylene Biguanide Hydrochloride + Alexidine Dihydrochloride

cleadow MPS is the world's first MPDS containing the two ingredients polyhexamethylene biguanide hydrochloride and alexidine dihydrochloride. These two disinfectants act on the cell membrane of microorganisms, resulting in a high disinfecting effect that the conventional MPDS did not have. **cleadow MPS** meets the primary criteria of the ISO 14729 stand-alone test. It also exerts a high efficacy against Acanthamoeba and clinically-isolated bacteria in only 4 hours.

Stand-alone test bacteria (Standard strain)^A

	<i>P.aeruginosa</i>	<i>S.aureus</i>	<i>S.marcescens</i>	<i>C.albicans</i>	<i>F.solani</i>
Log reduction value (log/mL)	>4.6	>4.6	>4.7	>4.6	>4.3

(Ophtecs data)

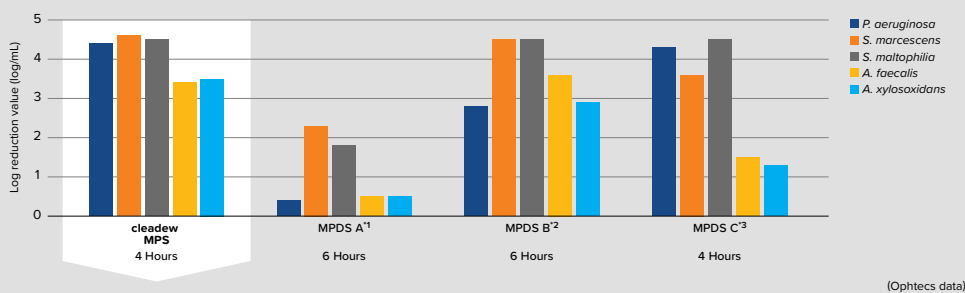
Acanthamoeba^B

	<i>Acanthamoeba castellanii</i> (ATCC 50370)	
	Trophozoite	Cyst
Log reduction value (log/mL)	>3.2	>2.2

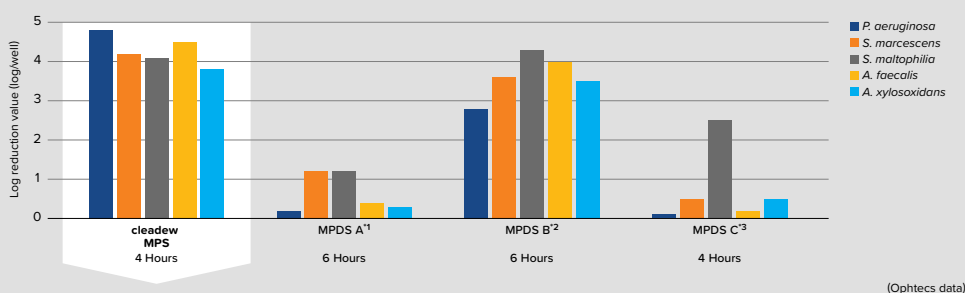
(Ophtecs data)

Clinically-isolated bacteria

Planktonic^C



Biofilm^D



¹ MPDS A: contains polydronium chloride+myristamidepropyl dimethylamine

² MPDS B: contains alexidine dihydrochloride+polydronium chloride

³ MPDS C: contains polyhexamethylene biguanide hydrochloride (PHMB)

^A Test method: In accordance with the stand-alone test, $1.0 \times 10^5 - 10^6$ cfu/mL of the test strains are inoculated in the disinfectant and allowed to stand for the period as directed. The viable count is measured after that period.

^B Test method: $1.0 \times 10^4 - 10^5$ cells/mL of trophozoites and $1.0 \times 10^3 - 10^4$ cells/mL of cysts are inoculated in the disinfectant and allowed to stand for the period as directed. The viable count is measured after that period.

^C Test method: $1.0 \times 10^5 - 10^6$ cfu/mL of the test strains are inoculated in each disinfectant and allowed to stand for the prescribed period of each disinfectant. The viable count is measured after that period.

^D Test method: 1.0×10^7 cfu/mL of the test strains are inoculated in a plate and allowed to stand for 24 hours to form a biofilm. Then, each disinfectant is added to the plate and allowed to stand for the prescribed period of each disinfectant. The viable count is measured after that period.

FEATURE 2

Comfort

Super Moist Dew Technology Improves Lens Wettability

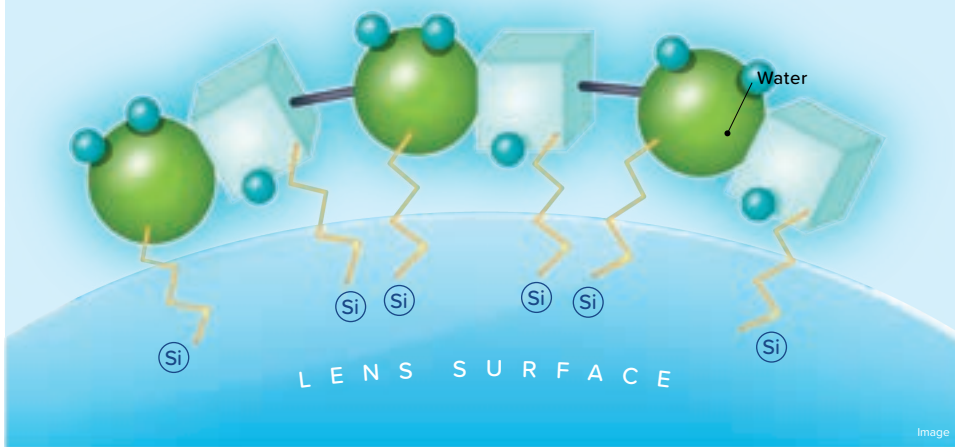
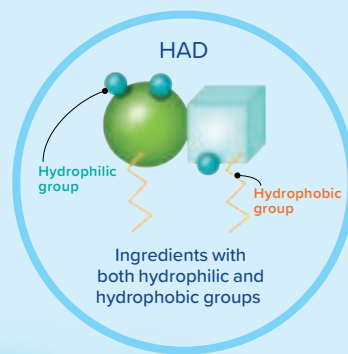
cleadew MPS introduces a new technology, Super-Moist Dew Technology, to keep the lens surface moisturised for a long time. SMD improves lens wettability not achieved with existing moisturising ingredients such as sodium hyaluronate. SMD increases tear stability, leading to comfortable lens wear and quality of vision until the day of lens replacement.

What is Super Moist Dew (SMD) Technology?

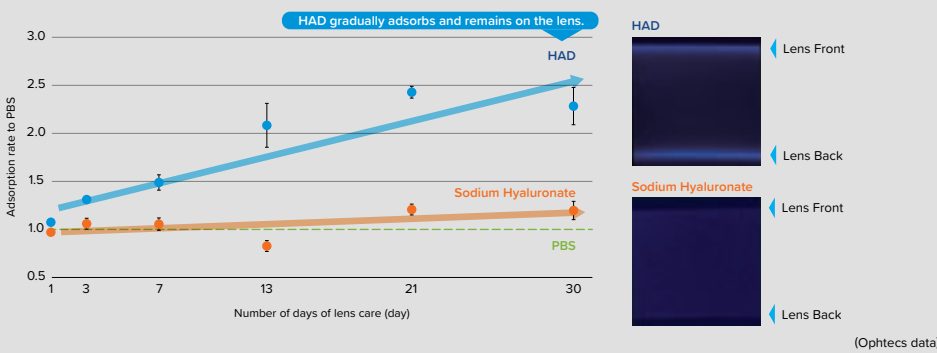
The SMD Technology is a new development that introduces the hyaluronic acid derivative “HAD”, which coats the contact lens surface.

The hydrophobic group of HAD has an affinity for silicon (Si) on silicone hydrogel lenses, thereby making the lens surface hydrophilic and keeping it moisturised for a long time.

Accordingly, the lens sustains its improved wettability until the day of lens replacement.



Evaluation of HAD adsorption^E



Difference from sodium hyaluronate

Moisturising components such as sodium hyaluronate are washed away due to tear exchange during wear, disappearing from the lens surface.

In contrast, HAD, which has a high affinity with the lens surface, can stay on it for a long time.

^E Test method: Silicone hydrogel lenses are immersed in fluorescent-labeled sodium hyaluronate or hyaluronate derivatives for 8 hours, and in ISO-PBS overnight. The volume of each adsorbed ingredient is measured after repeating this procedure 30 times, and the adsorption is observed under a confocal laser scanning microscope.

FEATURE 3
Safety

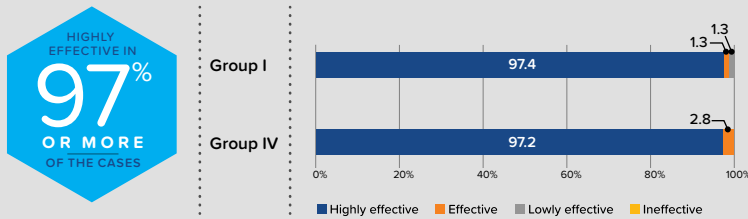
Coexistence of disinfecting efficacy and safety

The well-balanced efficacy and safety of **cleadew MPS** has been verified in clinical trials. Our findings have demonstrated that **cleadew MPS** has excellent safety based on the decreased absorption of polyhexanide hydrochloride (PHMB), a disinfectant ingredient, into the contact lens. Therefore, it reduces the risk of corneal staining.

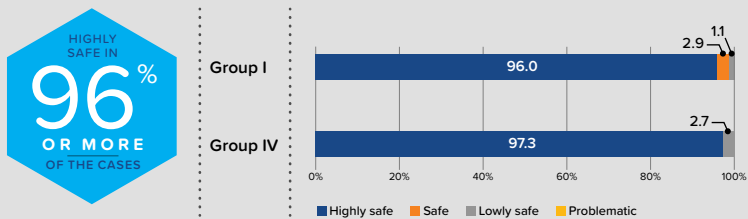
Thanks to its coexistence of disinfecting effect and safety, **cleadew MPS** is well-suited for all soft contact lenses.

Clinical studies^{††}

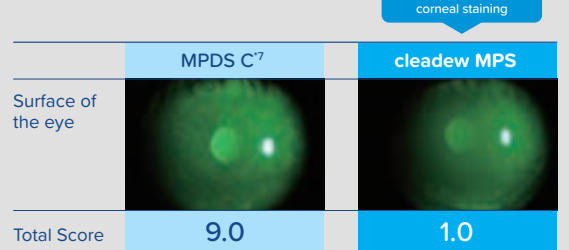
Efficacy against microbial contamination



Safety for eyes and lenses



Corneal staining test[†]



Compatibility of cleadew MPS with contact lenses

According to the notification^{††}, physical, chemical, and biological evaluation were conducted on the lenses after treating Group I and IV lenses 30 times.

The findings showed that **cleadew MPS** can be used for all types of soft contact lenses.

(Ophtec data)

^{†7} MPDS C: contains polyhexamethylene biguanide hydrochloride

^{†8} ISO 11981, FDA 510 (k)

^{†H} Test method: With **cleadew MPS**, the subjects wear Group I or IV soft contact lenses for 6 months and 3 months, respectively. The efficacy (findings of ocular infection and microbiological test) and safety (changes in lens properties and presence of adverse reactions) are assessed.

[†](Number of cases)

Group I: 172 eyes of 86 patients (safety evaluation), 152 eyes of 76 patients (efficacy evaluation)

Group IV: 80 eyes of 40 patients (safety evaluation), 72 eyes of 36 patients (efficacy evaluation)

^{†1} Test method: After immersion of the silicone hydrogel lenses in MPDS C or **cleadew MPS**, the subjects wear them. Two hours later, the condition of the eye surface and total score* are evaluated. *Area x Density Score

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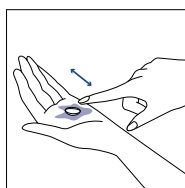


- 1 cleadew MPS: 360mL x 1**
Polyhexamethylene biguanide hydrochloride (0.00011%),
Alexidine dihydrochloride (0.0004%),
Poloxamer
- 2 Lens case: 1**

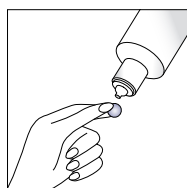
CAUTION

Rinse the lens case with **cleadew MPS** after lens care and allow it to air dry.

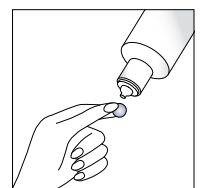
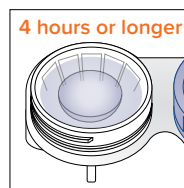
HOW TO USE



- 1** Remove each contact lens from your eye and place it on your palm. Place a few drops of **cleadew MPS** on each lens surface and rub 20–30 times with your finger. Rinse each lens thoroughly for 5 seconds with fresh **cleadew MPS**.



- 2** Fill the lens case with **cleadew MPS** and place the lenses into the lens case. Close the lens case tightly. Soak the contact lenses for at least 4 hours (or overnight) until ready to wear.



- 3** Rinse the contact lenses for 5 seconds with **cleadew MPS** before wearing.