Menicon

Meni-LAB

5000 ppm active chlorine solution

CE 0483

Professional use for
RIGID GAS PERMEABLE TRIAL LENSES

☐Cleaning

- 5000 ppm active chlorine
- Disinfection efficacy against bacteria, yeasts, moulds, viruses, and amoebae[1, 2, 3]
- UTA (unconventional transmissible agents) elimination efficacy[4]

☐Fast

- 5 min disinfecting time

☐Professional use

- Only for RGP trial lenses
- Use with MeniCare Pure or MeniCare Plus

MeniLAB and Active Chlorine

Chlorine (Cl_2) is a yellow green gas at room temperature under normal pressure. It dissolves into water and hydrolyzes into hypochlorous acid (HOCl). Hypochlorous acid disassociates into the hypochlorite ion (OCl^-). Both the hypochlorous acid form and hypochlorite ion form are so called active chlorine. They are strong oxidizing agents and applied for disinfection in several industries.

$$Cl_2 + H_2O \rightarrow HOCl + H^+ + Cl^-$$
$$HOCl \leftrightarrow H^+ + OCl^-$$

MeniLAB contains 5000 ppm active chlorine as disinfectant as well as sodium hydroxide and sodium carbonate as pH adjuster and stabilizer. According to our studies, it shows strong and fast disinfecting activity against bacteria, yeasts, moulds, viruses, and amoebae. The study results and usage are shown in the following pages.

Disinfection efficiency

Anti-microbial activity

MeniLAB possesses the same composition as Progent's A solution. Both products use active chlorine as disinfectant. According to the antimicrobial study for Progent's A solution, it was able to give total microorganism kill in 2 minutes. [1] As a result, it is believed that MeniLAB, which contains a higher concentration of active chlorine, is able to give total microorganism kill in a shorter time period.

Table 1.
Log reduction of Progent's A solution for anti-microbial efficacy in 2 min [1]

	Log reduction in 2 min
P. aeruginosa	> 4.20
S. aureus	> 4.08
S. marcescens	> 3.62
C. albicans	> 4.00
F. solani	> 3.65

Anti-virus activity

MeniLAB showed total virus kill in 5 min. [2]

Table 2.
Log reduction of MeniLAB and an MPS product for anti-virus efficacy in 5 min [2]

	Log reduction in 5 min	
	MeniLAB	Product A (MPS)
Poliovirus type 1	4.18	0.9
Poliovirus type 2	4.07	0
Adenovirus type 5	>3.96	0.16
Adenovirus type 8	>4.06	0.83
Herpes Simplex virus 1	>2.33	0.4

Anti-amoebae activity

MeniLAB gave total Acanthamoeba trophozoite and cyst kill in 5 minutes. [3]

Table 3.
Log reduction and minimum time required for total Acanthamoeba trophozoites kill [3]

	Log reduction/ minimum time			
	MeniLAB	Product A (MPS)	Product B (Peroxide sol.)	Saline
A. polyphaga (Ros)	4.2/ 5 min	3.5/ 30 min	4.2/ 60 min	<1/ 6 hr
A. castellanii ATCC 30868	3.9/ 5 min	3.8/ 30 min	3.9/ 60 min	<1/ 6 hr
Acanthamoeba sp. (AK-1)	3.8/ 5 min	4.1/ 30 min	4.0/ 60 min	<1/ 6 hr
Acanthamoeba sp. (AK-2)	4.0/ 5 min	3.5/ 30 min	3.5/ 60 min	<1/ 6 hr
A. hatchetti (BH2)	4.1/ 5 min	3.5/ 60 min	4.1/ 60 min	<1/ 6 hr
A. culbertsoni (ATCC 30171)	3.75/ 5 min	3.7/ 30 min	3.8/ 60 min	<1/ 6 hr
A. lenticulata (ATCC 30841)	4.0/ 5 min	3.7/ 30 min	4.1/ 60 min	<1/ 6 hr

Table 4.
Log reduction and minimum time required for total Acanthamoeba cysts kill [3]
*at next time point of 2 hours, total cyst kill of 3.9 log occurred

	Log reduction/ minimum time			
	MeniLAB	Product A (MPS)	Product B (Peroxide sol.)	Saline
A. polyphaga (Ros)	2.7/ 5 min	3.6/ 30 min	0.75/ 6 hr	<1/ 6 hr
A. castellanii ATCC 30868	4.1/ 5 min	3.5/ 30 min	0.55/ 6 hr	<1/ 6 hr
Acanthamoeba sp. (AK-1)	3.95/ 5 min	3.5/ 30 min	0.8/ 6 hr	<1/ 6 hr
Acanthamoeba sp. (AK-2)	3.8/ 5 min	3.5/ 30 min	0.6/ 6 hr	<1/ 6 hr
A. hatchetti (BH2)	3.75/ 5 min	3.4/ 60 min	1.25/ 6 hr	<1/ 6 hr
A. culbertsoni (ATCC 30171)	3.8/ 5 min	4.2/ 30 min	0.2/ 6 hr	<1/ 6 hr
A. lenticulata (ATCC 30841)	3.65/ 5 min	2.8/ 60 min*	3.6/ 6 hr	<1/ 6 hr

Product profile

Indication

- Specific care regimen for RIGID GAS PERMEABLE TRIAL LENSES.
- Disinfection solution with an application procedure which eliminates UTA (unconventional transmissible agents).
- This solution is intended for professional use.

Composition

Total 250ml

- Active chlorine solution……qs 0.5% or 5000 ppm of active chlorine
- Purified water……qs 100%

Instructions for use

①On removing the lens, place it in its storage bottle filled with MeniCare Pure or MeniCare Plus. Clean the lens with MeniCare Pure or MeniCare Plus, rubbing for at least 20 seconds, then rinse with MeniCare Pure or MeniCare Plus. Insert the lens into the lens holder, empty the storage bottle then clean the lens as detailed in the following instructions.

②Fill the original lens container with MeniLAB up to the neck.

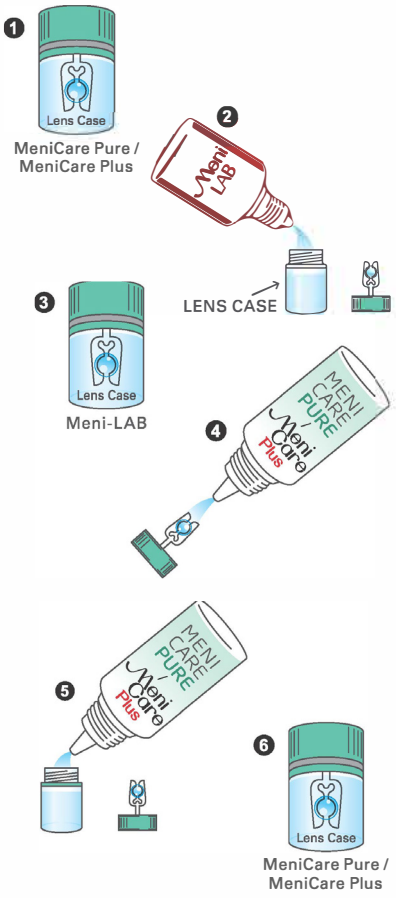
③Screw the lens holder onto the container. Leave the lens to soak in MeniLAB for 5 minutes for the disinfection stage.

④After 5 minutes, unscrew the lens holder and empty the contents of the container. Rinse the lens carefully for about 15 seconds with MeniCare Pure or MeniCare Plus. Rinse the lens holder and lens container too.

⑤Fill the container with MeniCare Pure or MeniCare Plus.

⑥Screw the lens holder onto the container and store the lens like this until the next test. In the event of extended soaking, renew the soaking solution every 4 weeks.

⑦Before fitting, rinse the lens with MeniCare Pure or MeniCare Plus.



Precaution

- Do not use for soft lenses.
- The soaking time for trial lenses in MeniLAB must not exceed 1 hour. Longer than that, the quality will not be affected but the lenses may be discoloured.
- Important: do not swallow. Do not leave within reach of children.
- It is essential to rinse the lenses thoroughly with MeniCare Pure or MeniCare Plus after soaking them in MeniLAB.
- Do not put the solution directly in your eye. In the event of accidental splashing, rinse thoroughly immediately. Avoid contact with the skin and do not splash onto clothing.
- Store at room temperature (15-25℃). Close the container properly after use. 

- Use within 3 months after opening.
- Respect the expiry date noted on the container.
- Never use tap water to rinse your lenses.

Reference

1. Antibactérial and antifungal activity (MENICON PHARMA référence: ISO/ CD 14729 stand alone test)
2. Antiviral efficacy (Université médicale de Nancy MDT, reference: CEN/ TC 216/ N 98 , AFNOR NFT 72 -180)
3. Anti-acanthamoeba activity (Institut de bactériology institute, Strasbourg medical University; Menicon co.,Ltd/ microbiology and immunology department from Leicester UK)
4. Anti-prion activity (N°277111 report june2002, C.E.A./ SPI BIO/ MENICON)

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