Usage

- Before handling contact lenses, be sure to wash hands thoroughly with soap.
- For safe use of contact lenses, rub and rinse lenses with commercially available storing/lensing solution for soft contact lenses or saline solution before dissection.

1. Put the disinfecting/neutralizing tablet and put the disinfecting/rinsing solution into the specified case.

2. Soft contact lenses in the specified case, close the lid, and shake vigorously at least 4 times. After that, change the solution.

3. Store contact lenses in the palm of the hand with fresh disinfecting/rinsing solution before wearing.

CleadeW automatically promotes disinfection, neutralization, and cleaning.

Outer layer/Polidone iodine

- Outer layer quickly dissolves.
- The outer layer forms and dissolves quickly, and the disassembled polidone iodine, disinfects both contact lenses and the case.

Inner core/Neutralizing agent, protamine soya

- Inner core eventually dissolves.
- Interacting inner core eventually dissolves and neutralizes the polidone iodine. All the same time, the protamine soya removes the deposits.

Achieved through tablet double-layer structure!

Summary of product characteristics

- Disinfectant: Disinfecting agent for soft contact lenses (Group A or Group B)
- Usage instructions:
  1. Pour the disinfecting/rinsing solution up to the line marked on the bottle cap (1 ml), and then put a disinfecting/neutralizing tablet into the case.
  2. Place contact lenses in the case, and close the lid.
  3. After wiping the lenses for about 5 minutes, take the lenses out of the case and rinse them thoroughly with the disinfecting/rinsing solution.
- Ingredients: 3% Polidone iodine, Sodium bicarbonate, Protamine soya, and Ethylene oxide (EtOH)
Seeking safer, more guaranteed disinfection.

Evolving disinfecting systems for soft contact lenses to minimize the risk of “eye infection”

1970s to 1980s

- Heat Disinfection

1991

- Hydrogen peroxide-based solution
- Disinfection solution: Neutralization solution

1996

- Hydrogen peroxide-based solution
  - Disinfecting liquid solution
  - Multi-purpose tablets

2001

- Hydrogen peroxide-based solution
  - Disinfecting tablets

Further progress!

2013

- Povidone-iodine based disinfectant

Features of cleadew:

- Highly safe and effective povidone iodine is used as disinfectant which enables complete disinfection of lenses.
- cleadew is the only disinfectant for soft contact lenses containing proteolytic enzyme which removes protein deposits in every application and keeps lenses clean.
- cleadew can be used for all soft contact lenses.

As of January 2015
**Disinfection efficacy**

Povidone iodine is a fast-acting disinfectant with a wide antibacterial spectrum.

Povidone iodine exhibits much stronger disinfection efficacy against bacteria, fungi, viruses, and amebas compared with other disinfectants.

Efficacy of each disinfectant against bacteria, fungi, viruses, and amebas were compared according to the standard test.*

![Efficiency of chemical disinfectants against microorganisms](image)

The povidone iodine agent exhibits immediate effect against various microorganisms.

The disinfection efficacy against various microorganisms were evaluated over time using the povidone iodine agent and hydrogen peroxide. The povidone iodine agent was proven to exhibit immediate effect even against ameba cysts, which are resistant to disinfection as well as against bacteria and fungi.

![Efficiency of chemical disinfectants against microorganisms](image)

**Cleaning efficacy**

The proteolytic enzyme completely removes daily deposits.

Cleadeow is a proteolytic enzyme-containing disinfectant for soft contact lenses.* It consistently removes protein on the lens at each application.*

![Efficiency of chemical disinfectants against microorganisms](image)

**Protein deposition on silicone hydrogel lenses and reduction of dryness**

![Efficiency of chemical disinfectants against microorganisms](image)
Povidone iodine is a disinfectant with low cytotoxicity and little eye irritation.

Povidone iodine at a concentration prescribed for cleardew not only has a high disinfecting effect but also low cytotoxicity.

Pathoxane hydrochloride, hydrogen peroxide, and povidone iodine were compared at their concentrations prescribed as disinfectants for soft contact lenses with respect to the disinfecting effects against Staphylococcus aureus and Candida albicans and the damage to human corneal epithelial cells. The results confirmed that 0.05% povidone iodine, a concentration prescribed for cleardew, has not only low cytotoxicity but also a high disinfecting effect.

Povidone iodine agent proved to be very safe and useful as a disinfectant without severe side effects for contact lenses of Group I and Group IV.

An open test was conducted using contact lenses of Group I and Group IV for 6 months (Group I) and for 12 weeks (Group IV) to evaluate the safety, effectiveness, and usefulness of povidone iodine.

The povidone iodine agent was evaluated as good in terms of use by 80% subjects in the clinical research on silicone hydrogel lenses, and 70% of subjects expressed intent to continue use.

65 subjects were divided into 4 groups, and each group used povidone iodine agent and different silicone hydrogel lenses for 3 months.

### Clinical Data

**Povidone iodine agent evaluated as being useful as a disinfectant.**

![Graphs showing disinfecting effects and cytotoxicity of povidone iodine, hydrogen peroxide, and pathoxane hydrochloride.](image)

- **Disinfecting effect:**
  - **Staphylococcus aureus:**
  - **Candida albicans:**
  - **Toxicity to human corneal epithelial cells:**

### Safety

- **Safety:**
  - Very safe: 90% or more
  - Safe: 80% or more

### Effectiveness

- **Effectiveness:**
  - Very effective: 90% or more
  - Effective: 80% or more

### Usefulness

- **Usefulness:**
  - Very useful: 90% or more
  - Useful: 80% or more

### Results

- **Number of cases (%):**
  - **Safety:**
    - Very safe: 90% or more
    - Safe: 80% or more
  - **Effectiveness:**
    - Very effective: 90% or more
    - Effective: 80% or more
  - **Usefulness:**
    - Very useful: 90% or more
    - Useful: 80% or more

### Evaluation method:

**Clinical evaluation and judgment criteria**

- **Effectiveness:**
  - To be judged based on the effectiveness of each application.
  - Very effective: 90% or more
  - Effective: 80% or more
  - Not effective: 70% or less

- **Safety:**
  - To be evaluated based on the safety of each application.
  - Very safe: 90% or more
  - Safe: 80% or more
  - Not safe: 70% or less

- **Usefulness:**
  - To be evaluated based on the usefulness of each application.
  - Very useful: 90% or more
  - Useful: 80% or more
  - Not useful: 70% or less

### Notes

- 0.05% povidone iodine has minimal adverse effects on the cornea.
- Treat basgel lenses with PVH-1 system and MPS respectively. 16 hours later, wear the lenses and observe 2 hours later.

![Image of corneal staining after wearing basgel for 2 hours.](image)

**Comfort evaluation**

- **Comfort evaluation:**
  - Ordinary: 20%
  - Very good: 80%

- **Intention for further use of povidone iodine agent:**
  - Yes: 88%
  - No: 12%