INSTRUCTIONS FOR USE

Cleaning and disinfection
Tonometer measuring prisms, contact glasses and Desinset

5. Edition / 2015 – 02
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Purpose of use
This document describes the correct cleaning and disinfection procedures for the tonometer measuring prisms, contact glasses and Desinset from HAAG-STREIT. Correct cleaning and disinfection not only prevents the transmission of diseases to patients and users, but also mechanical damage. To protect both the materials and patients alike, this procedure has been validated by an accredited testing laboratory. The validation report is available from HAAG-STREIT on request.

WARNING!
Read the instruction manual carefully before commissioning this product. It contains important information regarding the safety of the user and patient.

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1.2 Important general notes

**WARNING!**
The products listed in this instruction manual are not sterilized when shipped. They must be cleaned and disinfected prior to their first use.

**NOTE!**
- All the warnings and notes in the instruction manuals of the measuring prisms, contact glasses and Desinset must be followed without exception.
- Examinations should only be performed with undamaged, cleaned and disinfected measuring prisms and contact glasses.
- The measuring prisms and contact glasses used must not be damaged as they might otherwise damage the patient's cornea.
- Improper preparation can result in the transmission of diseases to the patient and user as well as damage to the measuring prisms and contact glasses.
- Residue from cleaning agents and disinfectants can irritate and burn the patient's eye.
- As a rule, the measuring prisms and contact glasses may be prepared together but should not be prepared with any other products.

1.3 Operation, environment

**NOTES!**
- The operation and preparation must only be performed by qualified, trained personnel, whose training corresponds to the task of the operator.
- Appropriate professional assessment and caution are necessary.
- The safety instructions in the instruction manuals for the measuring prisms, contact glasses and Desinset also apply.

1.4 Warranty and product liability

- The products must be handled as described in the “Safety” section.
- Improper handling can damage the product. This voids all guarantee claims.
- Continuing to use a product damaged by incorrect handling can lead to personal injury. In this case, the manufacturer accepts no liability.

1.5 Validated cleaning and disinfection agents

The following cleaning and disinfection agents were used in several validations. The validation reports can be obtained from HAAG-STREIT.

**WARNING!**
Check in the "List of Disinfectants" for material compatibility of the different agents with the HAAG-STREIT products. The list as well as the validation reports can be found at www.haag-streit.com

**Cleaning Agents:**
- Sekusept
- Palmolive 0.08%
- Tristel Pre-Clean Wipes

**Disinfection agents:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Concentration</th>
<th>Residence time</th>
<th>Rinse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide $\text{H}_2\text{O}_2$</td>
<td>3%</td>
<td>10 minutes</td>
<td>Rinse with cold running water for 5 minutes</td>
</tr>
<tr>
<td>Sodium Hypochlorite $\text{NaOCl}$</td>
<td>10%</td>
<td>10 minutes</td>
<td>Rinse with cold running water for 10 minutes</td>
</tr>
<tr>
<td>Sekusept forte S</td>
<td>3%</td>
<td>15 minutes</td>
<td>Rinse with cold running water for 5 minutes</td>
</tr>
<tr>
<td>Tristel DUO</td>
<td>100%</td>
<td>30 seconds</td>
<td>Remove foam and dry with Tristel Wipe for 15 seconds</td>
</tr>
</tbody>
</table>

2 Cleaning and disinfection of measuring prisms

2.1 Manual cleaning steps

**NOTE!**
- For simple and safe disinfection, we recommend the use of the Desinset from HAAG-STREIT (see chapter 4).
- If using Tristel Pre-Clean Wipes, refer to the manufacturers instructions for use.
- For personal safety reasons, personnel should wear disposable gloves during the preparation.

1. Remove the measuring prisms from the tonometer holder (a) and clean under running, cold drinking water (b) until no soiling is visible (60 seconds).
2. In cases of heavy soiling, a pH-neutral cleaning agent (skin-friendly, no irritants) and a lint-free disposable cloth (c) should be used.

**WARNING!**
The cleaning agent must then be rinsed off well under running, cold drinking water! (60 seconds)
NOTE!
• We recommend the use of a cleaning agent used in one of our validations (see chapter 1.5).
• The operator accepts all liability for the use of other cleaning agents.

3. If soiling is still visible, the cleaning procedure must be repeated as of point 2.
4. Dry the measuring prisms with a new lint-free disposable cloth (c).
5. Perform visual checks for cleanliness and perfect working condition.
6. Place the cleaned measuring prisms in the Desinset plastic tray (d).

### 2.2 Disinfection steps
7. Take the measuring prisms to be disinfected out of the plastic tray and place them on the lower tray (e) of a clean, disinfected Desinset plastic insert.

**NOTE!**
• The measuring prisms must not overlap.
• If using ‘Tristel DUO’ or ‘Tristel Sporicidal Wipes’, refer to the manufacturers instructions for use.

8. Add at least 600 ml of disinfectant solution (f), so that the lower tray is completely immersed.

**IMPORTANT NOTE FOR THE USA ONLY!**
Use only Hydrogen Peroxyde at a 3% aqueous solution or Sodium Hypochlorite (Household Bleach) at a 10% aqueous solution. These two solutions have been validated with mild soap (e.g. Palmolive 0.08%) as the cleaning agent. The next topics don't apply, proceed with point 9.

**WARNING!** All measuring prisms must be completely immersed in the disinfectant solution. As the measuring prisms tend to float in the solution, they must always be placed in the lower tray of the Desinset insert.

**USA**
**IMPORTANT NOTE FOR THE USA ONLY!**
Allow the disinfectant solution to work with an exposure time of 10 minutes. (g). The maximum, material-compatible exposure time for the disinfectant is 60 minutes. **Point 11 doesn't apply.**

9. Place the disinfectant in one of the two Desinset measuring beakers.
10. Immerse the Desinset plastic insert with the measuring prisms (e) in the disinfectant solution in the Desinset measuring beaker (f).

**WARNING!** The disinfectant used must satisfy two criteria:
• For material compatibility reasons, only agents approved by HAAG-STREIT may be used. The current material compatibility list can be found on the HAAG-STREIT homepage and is included with the tonometer and measuring prism. Should the operator decide to employ other disinfectants or procedures of his own accord, it must be ensured that the disinfection is not performed with agents containing alcohol or acetone and is never performed with UV radiation, steam or ethylene oxide.
• In terms of efficacy, all disinfectants that are approved for instrument disinfection and that have been tested for their efficacy against all nosocomially relevant infectious agents, can generally be used as long as they also satisfy the material compatibility requirements outlined above. The user is responsible for selecting the correct disinfectant and employing the correct concentration.

**NOTE!**
• We recommend the use of a disinfection agent used in one of our validations (see chapter 1.5).
• The operator accepts all liability for the use of other disinfection agents.

11. Allow the disinfectant sufficient time to work as specified in the disinfectant manufacturer's instructions (g). The maximum, material-compatible exposure time for the disinfectant is 60 minutes.
12. Once the exposure time is reached, remove the plastic insert with the measuring prisms, allow it to drip dry (h) and then place it in the other clean and disinfected measuring beaker.

**NOTE!**
The disinfectant must be replaced as follows:
• When visibly soiled
• Once a day or as specified by the manufacturer.

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2.3 Rinsing and storage

**NOTE!**
• If using 'Tristel Rinse Wipes', refer to the manufacturers instructions for use.

13. Place the clean and disinfected funnel on the plastic insert (i).
14. Rinse the measuring beaker and its contents with running, cold drinking water for at least 10 and at most 15 minutes (j).
15. Remove the plastic insert with the measuring prisms (k) and dry the measuring prisms individually with a clean and sterile, soft, disposable cloth (l).
16. Store the cleaned and disinfected measuring prisms in the sealed and disinfected Desinset glass container (m) until their next use.

**WARNING!**
Only use clean, residue-free and undamaged measuring prisms. Prior to every use, the contact surface of the measuring prism must be inspected for contaminants and damage (scratches, cracks and sharp edges). This must be performed with a slit lamp microscope at 10x to 16x magnification.

3 Cleaning and disinfection of contact glasses
3.1 Manual cleaning steps

**NOTE!**
For simple and safe disinfection, we recommend the use of the Desinset from HAAG-STREIT (see chapter 4). If using Tristel Pre-Clean Wipes, refer to the manufacturers instructions for use.
For personal safety reasons, personnel should wear disposable gloves during the preparation.

1. Clean the contact glasses under running, cold drinking water (n) until no soiling is visible (60 seconds).
2. In cases of heavy soiling, a pH-neutral cleaning agent (skin-friendly, no irritants) and a lint-free disposable cloth (o) should be used.

**WARNING!**
The cleaning agent must be rinsed off well under running, cold drinking water! (60 seconds).
3. If soiling is still visible, cleaning must be repeated as of Point 2.
4. Dry the contact glasses with a new lint-free disposable cloth (o).
5. Perform visual checks for cleanliness and perfect working condition.
6. Place the cleaned contact glasses in the Desinset plastic tray (p).

### 3.2 Disinfection steps

7. Take the contact glasses to be disinfected out of the plastic tray and place them in a clean, disinfected Desinset plastic insert.

**NOTE!**
- The contact glasses must not overlap.
- Both levels should be filled equally.
- If using ‘Tristel DUO‘ or ‘Sporicidal Wipes‘, refer to the manufacturers instructions for use.

8. Add at least **900 ml of disinfectant solution (r)**, so that both trays are completely immersed.

**IMPORTANT NOTE FOR THE USA ONLY!**
Use only Hydrogen Peroxyde at a 3% aqueous solution This solution has been validated with mild soap (e.g. Palmolive 0.08%) as the cleaning agent. **The next two topics don’t apply, proceed with point 9.**

**WARNING!**
The disinfectant used must satisfy two criteria:
- For material compatibility reasons, only agents approved by HAAG-STREIT may be used. The current material compatibility list can be found on the HAAG-STREIT homepage and is included with the tonometer and contact glasses. Should the operator decide to employ other disinfectants or procedures of his own accord, it must be ensured that the disinfection is not performed with agents containing alcohol or acetone and is never performed with UV radiation, steam or ethylene oxide.

9. Place the disinfectant in one of the two Desinset measuring beakers.
10. Immerse the Desinset plastic insert with the contact glasses (q) in the disinfectant solution in the Desinset measuring beaker (r).

**WARNING!**
All contact glasses must be completely immersed in the disinfectant solution.

**IMPORTANT NOTE FOR THE USA ONLY!**
Allow the disinfectant solution to work with an exposure time of 10 minutes. (s). The maximum, material-compatible exposure time for the disinfectant is 60 minutes. **Point 11 doesn’t apply.**

11. Allow the disinfectant sufficient time as specified by the disinfectant manufacturer’s instructions (s). The maximum, material-compatible exposure time for the disinfectant is 60 minutes.
12. Once the exposure time is reached, remove the plastic insert with the contact glasses, allow it to drip dry (t) and then place it in the other clean and disinfected measuring beaker.

**NOTE!**
The disinfectant must be replaced as follows:
- When visibly soiled
- Once a day or as specified by the manufacturer.

### 3.3 Rinsing and storage

13. Place the clean and disinfected funnel on the plastic insert (u).
14. Rinse the measuring beaker and its contents with running, cold drinking water for at least 10 and at most 15 minutes (u).
15. Remove the plastic insert with the contact glasses (v) and dry the contact glasses individually with a clean and sterile, soft, disposable cloth (w).
16. Store the cleaned and disinfected contact glasses in the sealed and disinfected Desinset glass container (x) until their next use.

**WARNING!**
Only use clean, residue-free and undamaged contact glasses. Prior to every use, the contact surface of the contact glass must be inspected for contaminants and damage (scratches, cracks and sharp edges). This must be performed with a slit lamp microscope at 10x to 16x magnification.

### 4. Preparing the Desinset

**WARNING!**
The Desinset is not sterilized when shipped and must be cleaned and disinfected prior to its first use.

#### 4.1 Cleaning steps
**Manual cleaning of the Desinset:**
* Moisten a cloth with a cleaning agent.
* Remove all visible soiling.
* Rinse cleaning agents off under running, cold drinking water (30 – 60 seconds).

#### 4.2 Disinfection steps
* The following disinfection procedure is performed with an alcohol-based disinfectant approved for instrument disinfection. The user is responsible for selecting the disinfectant.
* All containers are immersed in this agent. Once the exposure time has expired as specified by the manufacturer, the disinfectant should be shaken out of the containers and everything should be rinsed off under running, cold drinking water.
* Dry the components of the Desinset with a clean and sterile, soft, disposable cloth.
4.3 Accessories
The Desinset V 7220127 from HAAG-STREIT comprises:
* Two measuring beakers, two-part plastic insert, funnel, plastic tray with transparent V plastic insert and sealable glass tray with transparent V plastic insert.

The Desinset AT 7220128 from HAAG-STREIT comprises:
* As Desinset V, with transparent AT plastic inserts.

The Desinset AT 7220131 from HAAG-STREIT comprises:
* As Desinset V, with transparent CG plastic inserts.
Should you have any further questions, please contact your HAAG-STREIT dealer at:

http://www.haag-streit.com/contact/contact-your-distributor.html