

## 8 Cleaning and disinfection

### 8.1 Safety during cleaning and disinfection

#### Contamination of the device

Dust can penetrate into the internal optics of the device or its individual components.

*Action*

- ▶ Always close all openings that are not in use with the covers provided (e.g. openings for eyepieces, tube outlets or the lateral co-observation outlets).
- ▶ Always store tubes, eyepieces and accessories in dust-free cases when they are not being used.
- ▶ After use, cover the system with the supplied dust cover to protect it from dust.
- ▶ Clean used accessories directly after use.

### 8.2 Cleaning

Clean the device before the first use and after every use.

#### 8.2.1 Cleaning optical surfaces

The multi-layer T\* coating of the optical components (e.g. eyepieces, objective lenses) ensures optimal image quality. Image quality is impaired by even slight contamination of the optics or by a fingerprint. Clean the exterior surfaces of the optical components (eyepieces, objective lenses) only when necessary:

*Action*

- ▶ Do not use any chemical cleaning agents.
- ▶ Use a clean and grease-free brush to remove dust.

TIP: For the regular cleaning of surgical microscope's objective lenses and eyepieces, we recommend the optics cleaning set and Cleaning agents available from ZEISS.

#### 8.2.2 Cleaning the touchscreen

Ensure that no moisture or cleaning agent penetrates inside the touchscreen and the second monitor in order to prevent damage to them.

*Prerequisite*

- ☑ Switch the device off.

*Action*

- ▶ Clean the display with a soft, clean cloth (e.g. a microfiber cloth) or with damp optical cleaning cloths (available from specialist trade outlets or under the ZEISS order number 000000-0537-331).
- ▶ If necessary, moisten the cloth slightly with water or pure glass cleaner (Do NOT use: all-purpose cleaners or other cleaning agents). (Do not spray or wipe it directly onto the display!)
- ▶ Wipe off the touchscreen with a moist cloth.

### 8.2.3 Cleaning mechanical surfaces

All mechanical surfaces of the system can be cleaned by wiping them with a damp cloth.

*Action*

- ▶ Do not use any aggressive or abrasive cleaning agents.
- ▶ Remove any possible residue using a mixture of 50% ethyl alcohol and 50% distilled water plus a dash of household dishwashing liquid.

### 8.2.4 Fogging of optical surfaces

We recommend using an anti-fogging agent to prevent fogging of optical surfaces. Anti-fogging agents like the ones offered by opticians for applications with eyeglasses are also suitable for optical surfaces from ZEISS.

*Action*

- ▶ Observe the Instructions for Use pertaining to the anti-fogging agent concerned.

An anti-fogging agent does not ensure fog-free eyepiece optics. It cleans eyepiece optics and protects them against dirt, grease, dust, lint and fingerprints.

## 8.3 Disinfection

### 8.3.1 Disinfecting the mechanical surfaces

The maximum application concentrations are:

- For alcohol (tested with isopropyl alcohol): 60%
- For aldehyde (tested with glutaraldehyde): 2%
- For quaternary compounds (tested with DDAC): 0.2%

## NOTE

### Surface damage caused by wrong disinfectants!

Performing disinfection with the wrong disinfectants may result in damage to the surfaces of the device.

- ▶ Use an aldehyde and/or alcohol-based disinfectant. The addition of quaternary compounds is acceptable.
- ▶ In order to prevent surface tensions, you may use only the disinfecting components specified above.

### Action

- ▶ Disinfect all of the required surfaces.