



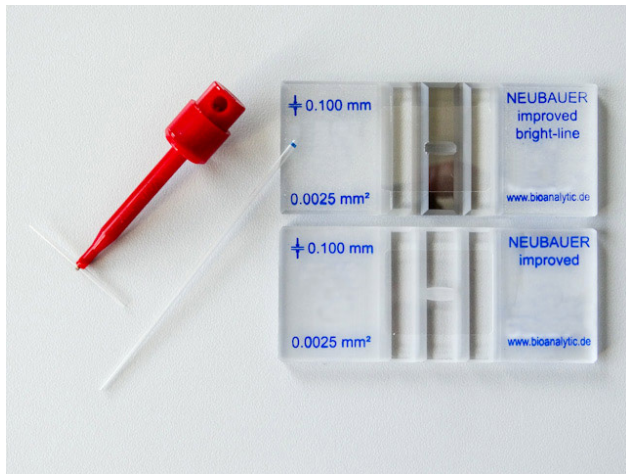
Hemocytometer

Cleaning and Disinfection of Counting Chambers

Risk of Infection

Counting chambers are loaded in most applications with a mixture of reaction solution and specimen samples to detect cellular components (from blood, urine, cerebrospinal fluid, synovial fluids a.s.o.).

Samples from patients and animals must be considered as potentially infectious. Inactivation of infectious pathogens by the reagents is not guaranteed. Therefore it is recommended to disinfect counting chambers after use or sterilize if necessary.



Neubauer counting chamber "improved" bright line (upper) and standard (lower) with Bioanalytic capillary holder and capillaries (left; for use with Bioanalytic tests Ery-TIC, Leuko-TIC and Thrombo-TIC).

Chemical disinfection and cleaning

The chemical disinfection is the simplest and most recommended way, because it combines disinfection and cleaning.

Alcohol-Solution 70%

As disinfection solution a 70% alcohol solution ^{*1)} can be used. For disinfection and minimum exposure time, please refer to the current literature.

- Rinse counting chamber and cover glass well under running tap water (avoid splashing). If necessary, use an absolutely neutral cleaning agent ^{*2)}.
- Place the counting chamber with cover glass in the 70% alcohol solution. Use a glass or stainless steel dish with cover ^{*3)}.
- Leave this for the duration of a safe disinfectant in the alcohol solution. Longer exposure time will not hurt.
- Take the counting chamber and cover glass and dry both gently with a fresh cotton dish towel (freshly laundered dish towel) or a lint free paper towel.

Disinfectant Agent

Use a cleaning disinfectant ^{*4)}, which is designated for the disinfection of laboratory equipment and for the inactivation of potential pathogens. Don't mix different disinfectants.

Attention: The disinfectant may not corrode the glass or the coating (e.g. Neubauer bright-line), should therefore have a neutral pH value (pH = 6...8). For effective disinfection, please observe the instructions of the disinfectant manufacturer.

- Place the used counting chamber with cover glass in the disinfectant, prepared according to the disinfectant instruction.
- Leave this for the duration of a safe disinfectant in the solution.

- Remove the counting chamber and cover glass of the disinfection solution and rinse under well hand warm tap water until all residual disinfectant is rinsed off (Attention: Residues of cleaning/disinfectant agent can destroy or modify cells and give incorrect results).

- Rinse with distilled water.

- Dry the counting chamber and cover glass gently with a fresh cotton dish towel (freshly laundered towel) or a lint free paper towel.

Physical disinfection / sterilization

Counting chamber and cover glass may be autoclaved or dry heat sterilized.

Autoclaving (only for disinfection)

Autoclaving of the counting chamber is parallel to the cleaning possible:

- Prepare a suitable container ^{*3)} with water and some neutral cleaning agent ^{*2)}.
- Insert counting chamber and cover glass in the solution.
- Close the cover.
- Perform autoclaving process (Refer to the instructions of the autoclave manufacturer).
- Remove the counting chamber and cover glass after cooling down and rinse well under running, warm tap water, until all detergent residues are rinsed off (Attention: Residues of cleaning/disinfectant agents can destroy or modify cells and give incorrect results).
- Rinse with distilled water.
- Dry the counting chamber and cover glass gently with a fresh cotton dish towel (freshly laundered towel) or a lint free paper towel.

Autoclaving (sterilization)

- Perform a chemical disinfection/cleaning as described.
- Prepare a stainless steel dish with cover ^{*3)} before sterilization or pack the counting chamber in an autoclavable blister.
- Perform autoclaving procedure (Refer to the instructions of the autoclave manufacturer).

Heat sterilization

First perform a chemical disinfection/cleaning as described then the heat sterilization. As the cleaning itself already poses a risk of infection, heat sterilization is not recommended alone.

The heat sterilization should be done only after chemical disinfection, e.g. if this is insufficient and a sterile counting chamber must be used for the investigation.

- Perform a chemical disinfectant/cleaning as described by.
- Prepare a stainless steel dish before sterilization ^{*3)}.
- Place the properly cleaned counting chamber with cover glass into the sterilization dish ^{*3)}.
- Close the cover and perform the heat sterilization procedure. (Refer to the instructions of the manufacturer of the sterilizer).
- Let cool down sterilizer to room temperature before using the counting chamber.

Notes

The methods described are recommendations. Each user performs the cleaning, disinfection or sterilization on their own responsibility.

Refer also to the instructions of the disinfectant or device manufacturer.

Support / Information service

For methodological and technical support, please contact us by E-Mail at support@bioanalytic.de.

Periodically check for updates of this product information on our website.

Feedback

Information from users can be reported to support@bioanalytic.de.

Suggestions for further developments will be considered.

Footnotes

*1) 70 % Propanol-2 or 70 % Ethanol available from www.bioanalytic.de.

*2) Biorex M/N, neutral cleaning agent from www.bioanalytic.de.

*3) Instrument dish #2915/3 from Hecht-Assistent www.hecht-assistent.com.

*4) Available from hospital or laboratory suppliers.