Further description of the Foil Applicator

The Foil applicator is made of polyamide 12 (nylon 12), making it resistant against a variety of organic solvents and heat. Thus, autoclavation at 121 °C as well as ethanol or Bacillol® AF-aided sterilization is possible and recommended. Partial discolorations of the surface might appear but are of no concern – functionality of the Foil Applicator is not impeded.

All of m2p-labs’ 48-well and 32-well microfluidic MTPs are suited for Foil Applicator-facilitated foil sealing, including both Round Well Plate and FlowerPlate® MTPs (independent of optode combinations). The use of the Foil Applicator is only necessary in case of microfluidic BioLector® experiments (in combination with BioLector® I, BioLector® II, BioLector® Pro) though – in these cases special silicone foils are required. The following foils are compatible with the Foil Applicator and replace the corresponding products for manual application (indicated in brackets):

- F-RS48-10 (F-GPR548) for robot-facilitated automated or manual sampling
- F-RSMF32-1 (F-GPRSMF32-1) for microfluidic BioLector® Pro experiments (and optionally additional robot-facilitated automated or manual sampling)

Additional information

In case of questions our support team looks forward to helping you. Please feel free to contact us about any questions you might have regarding the Foil Applicator, the according MTP foils or the microtiter plates. For more detailed information about the consumables (MTPs, foils) please refer to the Technical Datasheets on our website: www.m2p-labs.com.
Intent of this Quick Guide

The Foil Applicator is a simple yet powerful tool facilitating easy and reproducible application of microfluidic and robotic foils on microtiter plates (MTP). To ensure proper alignment of venting holes (for use with microfluidic experiments in BioLector® Pro) and/or pre-cut sampling slits in the silicone foils for automated sampling with the RoboLector® the use of the Foil Applicator is highly recommended. Manual application of microfluidic and robotic foils is possible but poses the risk of user-prone misplacing, which in turn could lead to impaired gas transfer and/or sampling. Using the Foil Applicator minimizes that danger and simplifies the foil handling.

Application of MTP foils with the help of the Foil Applicator

All work, including the unpacking of foils, is to be carried out in a sterile environment to prevent contamination. It is also highly recommended to have the Foil Applicator sterilized with ethanol/Bacillol® AF or by autoclavation prior to use.

Finish the preparation of the MTP used for cultivation as usual. Prior to applying the silicone foil the gas-permeable F-GP foil is required to be placed on the MTP first (see figure 1) – it also serves as the sterile barrier. This is done manually as perfect orientation is not crucial. The sterile barrier F-GP foil is provided together with the above-mentioned silicone foils. It is not required to order them separately.

![Figure 1: Manual application of sterile barrier F-GP foil](image)

After application of the F-GP sterile barrier place the silicon foil (F-RS48 or F-RSMF32) inside the Foil Applicator, with the brown protective film facing upwards. Crescent-shaped cutouts in both the protective film and the inside of the Foil Applicator serve as alignment for correct orientation. Press the silicone foil down so that the pins of the Foil Applicator fully push through the holes in the silicon foil. Remove the protective film (see figure 2).

![Figure 2: Placing the silicone foil inside the Foil Applicator](image)

Place the Foil Applicator on the MTP on top of the F-GP sterile barrier and firmly press it down. Beveled corners and an imprint (“AL”) on the topside of the Foil Applicator ensure correct orientation. Cautiously remove the Foil Applicator and use the MTP followingly as usual (see figure 3).

![Figure 3: Mounting the Foil Applicator on the microtiter plate](image)

Please note that the foil shown in figures 2 and 3 is a microfluidic foil of type F-RSMF32. The process for robotic foils of type F-RS48 is alike.