

## **Certificate of Quality**

The Polyethersulfone Membrane Capsule filters have been manufactured in a **mdi** facility in compliance with **ISO 9001** regulations using **validated production processes**.

## **BioPro KSO-** PES Membrane Capsule Filters

Catalog No. : LBKO5601EEXT301

Type : LBKSO-S Pore Size : 0.2 µm

Lot Number : LK9793E Sl.No. 014

Ster. No. : R4523
Date of Sterilization : 2023 - 05
Expiry Date : 2025 - 05

## **SPECIFICATION**

Length	30"
Filter Media	Polyethersulfone Membrane
Drainage Layers	Polypropylene
Housing	Polypropylene
Differential Pressure	< 4Kg/cm² at 30 °C
Maximum Operating Temperature	80 °C @ < 2Kg/cm²
Sterilization	Pre sterilized by Gamma Irradiation dose between 25 kGy to 40 kGy

**LOT RELEASE CRITERIA** 

**Typical Water Flow Rate** 

**100% Integrity Tested** : The Capsule filters have been tested for integrity by Air Diffusion test and Bubble

point test using DI water.

Diffusion flows were: ≤ 100 ml/min @ 1.54 kg/cm<sup>2</sup>

Bubble point was: ≥ 30 psi (2.07 Bar) **:** 105 lpm @ 0.70 Kg/cm² @ 27 °C

VALIDATED FOR

Sterility : The sterilization process has been validated to assure Sterility Assurance Level

(SAL) of 10<sup>-6</sup> in accordance with ISO 11137.

**Microbial Challenge Test** : Retains ≥ 10<sup>5</sup> organisms/cm² of *B. diminuta* ATCC 19146 challenge.

Bacterial Endotoxin : Aqueous extracts exhibit < 0.25 EU/mL as established by Limulus Amebocyte

Lysate (LAL) test as per USP <85>.

**Extractable**: Within limits as specified in USP.

Oxidizable matter : Passes test as per USP.

Biosafety : Passes Biological Reactivity Tests, In Vivo for Class VI plastic as described in USP

<88>.

Cytotoxicity: Passes Biological Reactivity Tests, In Vitro as described in USP <87>.

indirect Food Additives : Passes as per FDA 21CFR 177.1520(a)1(i).

Particle Release : Passes test as per USP <788>, "Particulate matter in Injections".

Fiber Release : Complies with FDA 21CFR 210.3(b)(6).

Total Organic Carbon : Meets USP <643> limit of 500 ppb for total organic carbon after flushing specified

volume of water for injection.

**Conductivity** : Meets USP <645> limit of 1.3  $\mu$ S/cm at 25 °C for water conductivity after flushing

specified volume of water for injection.

## **CUSTOMER SUPPORT**

**mdi** offers its unique interdisciplinary skills to provide solutions to specific problems. Please contact our factory or the local application specialist.

T. No.: COQ/CAP/004-02

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Head of Quality Assurance

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**An ISO 9001 Company**