

**Opticap® XL 5 Capsule Filter
with Aervent® Membrane**

0.2 µm Rated
Catalogue Number: KTGRA05TT1
Lot Number: C9D95232

Good Manufacturing Practices
This product was manufactured in a Millipore facility which adheres to Good Manufacturing Practices.
ISO® 9001 Quality Standard
This product was manufactured in a Millipore facility whose Quality Management System is approved by an accredited registering body to the appropriate ISO® 9001 Quality Systems Standard.

Non-Fiber Releasing
This product was manufactured with a PTFE membrane which meets the criteria for a "non-fiber releasing" filter as defined in 21 CFR 210.3 (b) (6).

Component Materials Toxicity
Component materials were tested and meet the criteria for the USP Class VI Biological Test for Plastics.

100% Integrity Testing in Manufacturing
Each unit must pass the Millipore Integrity Test correlated to the *Brevundimonas diminuta* ASTM® F838 bacterial challenge test.

Validated Production Process
This product was fabricated using a validated manufacturing process. Principles of statistical process control and determinations of process capability have been applied to critical variables in the cartridge fabrication process. In-process controls are used to assure stability of the process.

European Pressure Equipment Directive
Millipore Corporation certifies that this product complies with the European Pressure Equipment Directive, 97/23/EC of 29 May 1997. This product has been classified under Article 3 § 3 of the Pressure Vessel Directive. It has been designed and manufactured in accordance with sound engineering practice to ensure safe use. In compliance with Article 3 § 3 of this Pressure Equipment Directive, this product does not bear the CE mark.

Millipore, Aervent and Opticap are registered trademarks of Millipore Corporation. HydroCorr is a trademark of Millipore Corporation. ISO is a registered trademark of The International Organization for Standardization. ASTM is a registered trademark of the American Society for Testing and Materials. P75410 Rev F 03/09

**Quality Assurance Lot Release
Criteria**

This manufacturing lot was sampled, tested and released by Quality Assurance to the following specifications:

Bacterial Retention
Samples were quantitatively retentive of a minimum *Brevundimonas diminuta* challenge concentration of 1×10^7 CFU/cm² using ASTM® F838 methodology.

USP Bacterial Endotoxins
A sample aqueous extraction sample contains less than 0.5 EU/mL as determined using the Limulus Amebocyte Lysate (LAL) test.

Integrity
Samples exhibited a bubble point equal to or greater than 16 psig (1100 mbar) in a 70/30% IPA/water mixture using nitrogen as the test gas at 23° C.

Samples exhibited a nitrogen diffusional flow rate of less than or equal to 12.0 cc/min at 14 psig (966 mbar) in 70/30% IPA/water mixture at 23° C.

Samples exhibited a HydroCorr™ test value less than or equal to 0.38 mL/min at 38 psig (2620 mbar).

Thermal and Hydraulic Stress
Samples were autoclaved at 135° C and maintained integrity after a forward stress to 80 psid (5.5 bar) and a reverse stress to 60 psid (4.1 bar).

Air Flow Rate and Pressure Drop
Samples met a maximum pressure drop of 0.39 psid (27.0 mbar) at an air flow rate of 10 SCFM (0.283 m³/min) and 0 psig (0 mbar) outlet air pressure at 23° C per 5-inch capsule.

Quality Performance Criteria

This product was designed and manufactured to meet the following specifications:

Gravimetric Extractables
The extractables level was equal to or less than 28 mg per sample after 24 hours in a 70/30% IPA/water mixture at controlled room temperature.

Toxicity
This product is non-toxic per the current USP General (Mouse) Safety Test.

Multiple Sterilization Cycles
Sample integrity was maintained after 30 autoclave cycles of 30 minutes at 135° C.

Peter Eichert
Quality Manager


