



The Most Critical Point of Contact

BIOMEK PIPETTE TIPS

Biomek pipette tips from Beckman Coulter are the only pipette tips validated and approved for use with Biomek workstations. Our tips work seamlessly with Biomek hardware and are fully integrated into our exclusive Biomek software. Features such as tip definitions, pipetting techniques and templates, and color-coded tip racks are built into Biomek software to make setup, method writing, and operation efficient and convenient. As a crucial component to the most advanced liquid handling systems, Biomek tips ensure high performance and quality control for the most exacting applications, including: genetic analysis, protein research, cellular analysis, and drug discovery. Biomek tips are manufactured in a controlled manufacturing environment to minimize facility bio-burden. Our pipette tips, racks, and rack covers are molded of premium-grade, virgin polypropylene to provide chemical resistance during sample preparation and to ensure only the highest quality product. Statistical process control (SPC) product sampling is conducted and samples are tested for biological parameters.



Biomek pipette tips from Beckman Coulter are certified to be:

1 RNase- and DNase-free

Ensures high quality nucleic acid purification and reliable nucleic acid testing results.

2 DNA-free (human & mouse)/PCR inhibition

Confirms the absence of both human and mouse DNA contaminants that result in erroneous results and interfere with the PCR.

3 Endotoxin-free

Addresses endotoxin-sensitive applications, such as cell transformations and preparative protocols that use extracted biological material for *in vivo* experimentation.

4 Trace metal-free

Testing of the base, polypropylene tip resin reduces interferences due to chelation and denaturation.

For the best in system performance, use only Beckman Coulter validated tips on Biomek workstations.

BIOLOGICAL TEST METHODOLOGIES

RNase- and DNase-free certification

Tips are certified to be nuclease free. Tip extracts are incubated with the appropriate nucleic acid for 1 hour at 37°C, and then evaluated by agarose gel electrophoresis for integrity. The added RNA and DNA standards must be completely intact with no sign of degradation. This method tests to a sensitivity of 10^{-9} Kunitz Units/ μ L for RNase and 10^{-7} Kunitz Units/ μ L for DNase.

DNA-free (human & mouse) certification/PCR inhibition

A multiplex PCR reaction containing primers specific for both human and mouse genomic DNA is performed on the tip extracts. After amplification, no PCR product bands must be detectable, indicating no contaminating mouse or human DNA. Test sensitivity is 30 pg. To test for PCR inhibition, the tip extract is added to a reaction containing DNA template. After amplification, PCR products that represent a human DNA band and a mouse DNA band must be detectable; demonstrating that no inhibition effect is due to the tip extract.

Endotoxin-free certification

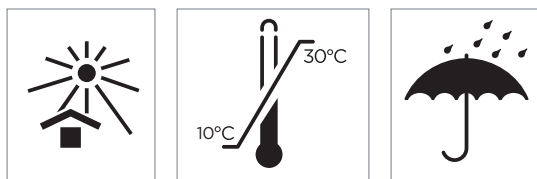
Products are extracted and tested for the presence of bacterial endotoxins using the Limulus amoebocyte lysate (LAL) gel clot method. The test is sensitive to 0.06 EU/mL.

Trace metal-free certification

Manufacturing procedures require all materials used in tip production to be trace metals free. Polypropylene raw material is subject to lot certification and tested according to U.S. Pharmacopoeia guidelines.

STORAGE CONDITIONS

Biomek Tips are high-precision polypropylene components intended for use on Biomek Automated Workstations. The pipette tips are verified and validated at the systems level on multiple Biomek instruments to ensure compatibility of design and performance. Validation and performance of the systems are dependent on proper storage of these precision components.



It is recommended that Biomek Tips be stored in a clean and dry laboratory environment at room temperature. Exposure to high temperatures, radiation or vaporous chemicals/solvents may result in the deterioration of the design of the tip, and therefore its performance.

STERILE (OR PRE-STERILE) PRODUCT



Due to the precise geometries and extreme tolerances required of Biomek Tips in automated systems, Beckman Coulter offers sterilized product, which is controlled under validated ethylene oxide or irradiation processes, for those applications requiring sterile liquid handling. Products designated as "sterile or pre-sterile" are sterilized in accordance with ANSI/AAMI/ISO 11135 or 11137 guidelines, as appropriate. The sterilization processes certify a sterility assurance level (SAL) of 10^{-6} . Autoclaving of Biomek Tips is not recommended, nor supported, due to the adverse affects it can have on the form and performance of the pipette tip.

Environmental Awareness & Sustainability



Biomek tips, racks, and rack covers are molded from polypropylene resin to provide chemical resistance during sample preparation. The Society of the Plastics Industry (SPI) identifies polypropylene with an internationally recognized resin identification code number of 5 for recycling purposes.



Biomek tip packaging is comprised of 100% recyclable corrugated fiberboard.