



BioClean™ – 100% Inert When sterile is not clean enough

For successful experiments, pipette tips have to be completely inert and must not interfere with samples in any way. For this, being contamination-free is no longer enough. Pipette tips also need to be free of any bioactive components: they need to be BioClean™. From raw material selection to clean production, extensive testing and safe packaging, RAININ BioClean tips are the purest and safest on the market.

Many products on the market are labeled as 100% contamination-free or sterile, but recent publications^[1] show that even these tips can compromise the outcome of scientific work.

Results can be affected by additives in the virgin polypropylene, such as the detergent DiHEMDA and releasing agent oleamide, commonly used by manufacturers of pipette tips. These bioactive components can adversely affect the outcome of experiments. RAININ's BioClean Tips have been proven to be free of such components and therefore have zero interference on results.

RAININ BioClean – 100% clean, 100% pure

BioClean tips from RAININ show no traces of such additives or bioactive contaminants, in internal quality controls and external audits. The absence of bioactive components in the materials, in combination with the proven lack of external contaminants (DNA, DNase, RNase, ATP, Pyrogens, Endotoxins, or PCR Inhibitors) in the production and packaging process, ensures that high-quality RAININ BioClean tips are completely inert and do not influence experimental outcome in any way. A safe investment in your lab performance.



bioclean.

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Maximum Performance with Zero Interference

Not all tips are the same. To achieve optimal performance and experiment success, tips must be of highest quality, and need to be 100% inert to avoid influence on experiment outcome. At RAININ we take all conceivable measures to ensure highest tip quality.

The Purest Material

RAININ's pure virgin polypropylene tip resin is purchased as CFR 21 certified^[2] pellets, free of any kind of additives or dyes, and is extensively tested.

Clean Production and Packaging

RAININ's tip manufacturing facility is in a class 100,000 clean room and its fully automated material handling process feeds the virgin polypropylene material from silos directly into molding machines and packaging. During this process no additives or dyes are used, therefore the tip material remains 100% pure.

Next to guaranteeing absolute material purity, RAININ's ISO 9001 compliant manufacturing procedures ensure total elimination of external sources of contamination.

Best Tested for Maximum Safety

RAININ BioClean tips pass the most sophisticated testing procedures available today. With methods such as qPCR and sensitivity levels of up to 10^{-9} Kunitz, even the smallest amounts of traces are detected. As these most stringent test methods are applied to all possible contaminants (DNA, DNase, ATP, Endotoxins, PCR inhibitors, trace materials, trace organics), RAININ's inert BioClean tips are the safest on the market.

Contaminants Tested	Testing Detection Levels
RNase	$\leq 10^{-9}$ Kunitz units/ μ l
DNase	$\leq 10^{-7}$ Kunitz units/ μ l
DNA	< 1 copy human DNA
Pyrogens (LAL test)	0.001 EU/ml
ATP	< 10^{-12} mg/ μ l

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Internal tip inspection



Clean room manufacturing



Automated handling eliminates human contact.

[1] McDonald, G., Hudson, A., Dunn, S., You, H., Baker, G., Whittall, R., Martin, J., Jha, A., Edmondson, D., and A. Holt. 2008. Bioactive Contaminants Leach from Disposable Laboratory Plasticware. Science 332(5903): 917.

[2] CFR Title 21 (2003) 177.1520 (a), (b) and (c) 1.1 Olefin polymers, Montell Polyolefins Datasheet



Quality certificate ISO9001
Environment certificate ISO14001



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