



SELECTING THE RIGHT TIP



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Fitting a Pipette Tip



Press down with a rotating motion



Avoid hammering the tip into the pipette

To Fit a Pipette Tip on a Single Channel Pipette

Hold the micropipette in one hand, lower the pipette into the tip, and use a slight twisting movement to seat the tip firmly on the tip holder of the micropipette to ensure an air-tight seal.

To protect your pipette, avoid tapping the tip onto the pipette like a hammer. Tips are available in TIPACK racks for easy mounting with no hand contact.

Exert a light vertical force followed by a slight lateral rocking movement to secure the tip fitting



To Fit a Pipette Tip on a Multichannel Pipette

To avoid damage to your pipette, Gilson does not recommend hammering or pounding on the tips.

The ROCKY RACK technique, invented by Gilson, available only in our TIPACK, TOWERPACK, BLISTER REFILL and RELOAD PACK makes it easy to fit tips on a multichannel pipette. Tips will not fall off nor will they have to be positioned manually.

Figure 7

Fit disposable pipette tips on single and multichannel pipettes



To Fit a Capillary Piston (CP) on a MICROMAN E

Pipetting with a MICROMAN E is as easy as using an air-displacement pipette. The CP can be fit onto the pipette in only two steps thanks to the patented QuickSnap system (which reduces and secures the number of steps required to fit a CP). The process is summarized in Figure 8:

1. Press the MICROMAN E into the CP until it is firmly secured and pick up the CP from the rack **1**.
2. Slowly press the push button until there is a slight click and continue to press to the first stop **2**.
3. Press the push button until the second stop **3** to eject the CP, and avoid any contact with the disposable CP.

For maximum protection against contamination, CPs for MICROMAN E pipettes are available in bulk no assembled, assembled rack, sterile, and non sterile.

Ejecting the Used Tip

To avoid touching contaminated tips, hold the pipette over the waste container and press the tip ejector push button.

To eject the tip from MICROMAN E, depress the push button completely to the second stop. Discarded tips contain liquid residues, particularly when a pipette is used in reverse mode. Take suitable precautions when discarding disposables.

When to Change a Tip

When transferring single samples of different liquids, select a new pipette tip for each new liquid.

It is strongly recommended to:

- Pre-wet every new pipette tip at the beginning of the test series to maintain reproducibility.
- Dispose the tip after each utilisation for accuracy and precision, as well as preventing cross contamination, when applying sensitive methods like PCR. For repetitive dispensing of the same liquid (diluent, buffer, or reagent), use the same pipette tip. This method is economical and efficient.



Figure 8
CP fitting on MICROMAN® E

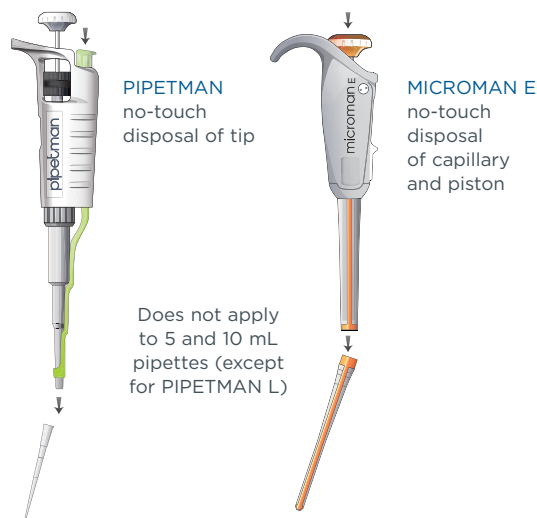


Figure 9
Ejecting the tips

Gilson Pipette Tips

Gilson pipette tips are available in a variety of packaging options to suit virtually all needs and applications.



Refer to the Gilson tips selection guide to get a clear view of our entire pipette tips offering on www.gilson.com.

Autoclavable Pipette Tips

Bulk

- An economical solution for routine applications. May be hand loaded in empty tip racks for convenience or for autoclaving in the laboratory.

Racked for easy mounting with no hand contact

- TIPACKs have a hinged lid to protect against dust.
- Convenient 96-well format for filling microplates with multichannel pipettes and color-coded for easy identification.
- Ready for autoclaving in the laboratory.
- Tip racks may be reused.

Racked and sterilized for working in sterile conditions

- Factory sterilized and delivered in a sealed tip rack.

Racked refill

- TOWERPACK is a one hand system operation.
- High quality tips in an economic, easy-to-use, and eco-friendly rack refill system.
- The reload box is reusable and can be repeatedly autoclaved.
- Also available in sterilized packaging.

Sterile Pipette Tips

Sterile pipette tips are available in racked and individually wrapped versions.

They are available with filter and without filter.

Racked pipette filter tips are sterile and present the following advantages:

- Tips with a filter prevent contaminants such as aerosols from entering the pipette.
- Gilson filter tips are factory sterilized and delivered in a sealed rack.
- Sterile pipette tips are used for special application to avoid contamination.

STERILPACKs are individually wrapped and sterilized pipette tips.

- Opened just before use so the benefit of sterilization is assured right up to the last minute.
- A good solution when you only need a few tips.

Pipette Tips Material*		
Models	Tips	Filter
PIPETMAN DIAMOND Tips 0,1-1200 µL	Polypropylene (PP)	Polyethylene (PE)
AmpliPur Expert Tips 0,1-1200 µL	Polypropylene (PP)	Polyethylene (PE)
PIPETMAN Expert Tips	Polypropylene (PP)	Polyethylene (PE)

*For a complete list, please refer to the Gilson Consumable Data in www.gilson.com.





Capillary Pistons

- Combined with its disposable capillary piston tips (CP), the MICROMAN E positive displacement pipette works like a syringe. The CP eliminates the air cushion between the sample and the piston so volume accuracy is not affected by temperature or pressure changes or samples properties.
- Superior choice over air-displacement pipetting when using liquid types such as viscous (ex: oil, honey, cream, etc.), volatile, hot or cold, foaming, toxic (ex: blood, infectious bacteria, etc.), and corrosive (ex: hydrochloric acid).
- Capillary pistons protect pipette and samples against contamination.

Capillary Piston Material**		
Models	Capillary	Piston
1-10 µL	Polypropylene (PP)	Liquid Crystal Polymer (LCP)
3-25 µL	Polypropylene (PP)	Liquid Crystal Polymer (LCP)
20-50 µL	Polypropylene (PP)	Liquid Crystal Polymer (LCP)
10-100 µL	Polypropylene (PP)	Polyethylene (PE)
50-250 µL	Polypropylene (PP)	Polyethylene (PE)
100-1000 µL	Polypropylene (PP)	Polyoxymethylene (POM)

** The table is provided to verify chemical compatibility of the material. Refer to [Appendix E: Chemical Resistance of Plastics](#) on page 50 for more information. For a complete list, please refer to the Gilson Consumable Data in www.gilson.com.

Sterilization of Consumables by Beta, Gamma, or X-Ray Radiation

1. Beta, gamma radiation of consumables

Sterilization of pipette tips is conducted according to ISO 11137-1:2006 requirements for development, validation, and routine control of a sterilization process for medical devices. The sterilization can take place by exposure to gamma, beta, or X-ray radiation. The appropriate method is selected according to the material used to manufacture the product and does not leave any contaminant. Gilson consumables are pre-sterilized or sterilized by radiation. For more detail, please refer to the certificate provided with the product. Certificate of sterilization can be downloaded on www.gilson.com.

2. Ethylene oxide gas (EtO)

If the type of plastic to be sterilized cannot withstand beta or gamma radiation, ethylene oxide (EtO) is used instead. EtO is notably used to sterilize CPs.

Gilson Pipette Tips Packaging

Gilson offers a wide range of tips packaging to suit all your needs.

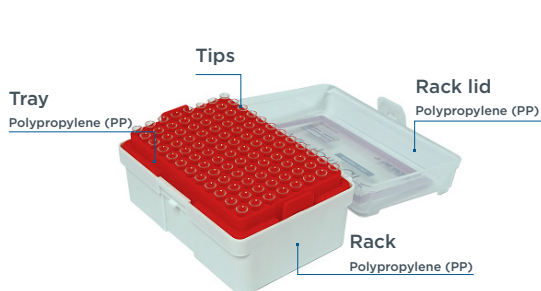


Figure 10
TIPACK description



Figure 11
Gilson pipette tips packaging options



Evaluating Tip Quality

Although they may look alike, all tips are not equal. The choice of a poor quality tip may jeopardize your results. Choose the pipette tip recommended by the pipette manufacturer for the best accuracy, precision, and tip fit, and always check the following points:

Quality of the Tip's Raw Material

There are many different brands of tips made of different quality plastics. Gilson selects a specific polypropylene because it is naturally hydrophobic and a low retention material.

Absence of Potential Contaminants

Cleanness of tips is very important as production residues, such as dust or biological contaminants coming from the production site, may contaminate your samples. Additionally, tips should be chemically resistant and free of additives, such as silicone, dyes, biocides, antistatic agents, as well as traces of metal, such as aluminum, nickel, or zinc.

A trace metal certificate can be obtained from the manufacturer upon request.

Tip Manufacturer's Guarantees

GUARANTEEING TRACEABILITY

With the batch number on each box and bag, the history of the tips can be traced from packaging to delivery to the laboratory.

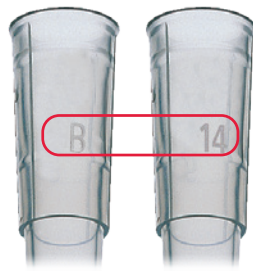


Figure 12
Gilson pipette tips guaranteed traceability

GUARANTEEING PRODUCTION QUALITY

Every Gilson pipette tips is individually marked with an identification number. With this number, the mold can be identified, and even the exact cavity that produced the tip can be located.

D200ST
DIAMOND® TOWER-PACK™
 200µL Tip Volume Range: 2 - 200µL

Download Certificates at www.gilson.com

FREE of Nucleic acid, Nuclease, ATP, pyrogen & toxin

STERILE 2024-12

REF F167203 **LOT** UCDE9/01970

F167203D1UCDE9/0197001

GILSON® **AmpliPur Expert Tips**
 Volume Range: 0.5 - 10 µL
 P/N: F174101
 Exp. Date: 2024-04-17 **LOT: 210418-1141**

Figure 13
PIPETMAN® DIAMOND Tips and AmpliPur® Expert Tips identification label

Appendix E: Chemical Resistance of Plastics



Product		Steel	PET	Nitril	EPDM	LCP	PA	PBT	PC	PE	PVDF	TPX	POM	PP
Acetamide		++	N/A	++	++	N/A	++	N/A	N/A	++	N/A	N/A	++	++
Ethyl acetate		++	+	-	++	++	++	++	++	++	++	+	N/A	++
Acetone		++	+	-	++	++	++	++	-	++	++	+	+	++
Acetonitrile		++	N/A	+	++	+	N/A	N/A	-	++	+	N/A	N/A	++
Acetic acid	20 %	++	++	+	++	++	++	N/A	++	++	++	++	++	++
	50 %	++	++	+	++	++	-	N/A	+	++	++	++	++	++
	100 %	++	++	-	++	+	-	N/A	-	++	++	+	+	++
Hydrochloric acid	10 %	-	++	++	++	++	-	++	++	++	++	++	++	++
	20 %	-	+	+	++	++	-	+	++	++	++	++	+	++
	37 %	-	-	-	++	++	-	-	+	++	++	++	-	++
Hydrofluoric acid	20 %	+	+	-	++	+	-	+	++	++	++	++	+	++
	40 %	-	+	-	++	-	-	-	+	++	++	++	+	++
Formic acid	100 %	++	N/A	-	++	++	-	+	-	++	++	N/A	+	++
Nitric acid	10 %	++	++	+	++	++	-	++	++	++	++	++	+	++
	30 %	++	+	-	+	++	-	+	++	++	++	++	-	+
	65 %	++	-	-	-	+	-	-	+	+	+	++	-	-
Phosphoric acid	20 %	++	N/A	+	++	N/A	-	++	++	++	++	++	+	++
	85 %	++	N/A	-	++	N/A	-	++	++	++	++	++	-	++
Propionic acid	50 %	++	-	+	N/A	N/A	++	++	+	++	++	N/A	-	++
	100 %	++	-	-	N/A	N/A	+	++	-	++	++	N/A	-	++
Sulfuric acid	20 %	++	++	+	+	++	+	++	++	++	++	++	+	++
	50 %	++	++	-	+	++	-	+	++	++	++	++	-	++
	95 %	++	+	-	-	-	-	-	+	+	+	++	-	+
Trifluoroacetic acid	20 %	++	N/A	-	N/A	N/A	+	N/A	++	++	++	N/A	++	++
	80 %	++	N/A	-	N/A	N/A	-	N/A	+	++	++	N/A	+	++
	100 %	++	N/A	-	N/A	N/A	-	N/A	-	++	++	N/A	-	++
Benzyl alcohol		++	++	-	N/A	N/A	+	N/A	-	++	++	++	-	++
Aniline		++	-	+	++	N/A	++	N/A	-	+	++	N/A	+	++
Butanol / Butyl alcohol		++	++	++	++	N/A	++	++	++	++	++	N/A	++	++
Chloroform		++	-	-	-	N/A	+	-	-	+	++	+	+	-
Cyclohexane		++	++	++	-	N/A	++	N/A	++	++	-	+	++	+
Diacetone alcohol		++	++	+	N/A	N/A	N/A	N/A	N/A	N/A	+	N/A	N/A	++
Methylene chloride		++	+	-	-	N/A	-	-	-	+	++	++	++	+
Diethylene glycol		++	N/A	++	++	++	++	N/A	N/A	++	++	++	++	++
Dimethylformamide (DMF)		++	++	-	+	++	++	++	-	++	-	++	++	++
Dimethylsulfoxide (DMSO)		++	N/A	-	N/A	N/A	+	N/A	-	++	N/A	N/A	N/A	N/A
Dioxane (1,4)		++	++	-	+	N/A	++	++	-	++	+	N/A	++	+
Ethanol		++	++	++	++	++	++	++	++	++	++	++	++	++
Ether		++	++	++	+	N/A	++	++	++	+	++	+	++	++
Formaldehyde		++	++	++	++	N/A	++	N/A	++	++	++	++	++	++
Hexane		++	N/A	++	-	+	++	++	++	+	++	+	++	++
Hydrogen peroxide	50 %	++	N/A	+	++	N/A	++	++	++	++	++	++	++	++
Ammonium hydroxide	20 %	++	++	++	++	N/A	N/A	+	-	++	N/A	++	++	++
Sodium hydroxide	10 %	++	+	++	++	++	++	+	-	++	++	++	++	++
	40 %	++	-	+	++	++	++	+	-	++	++	++	++	++
Sodium hypochlorite	15 % Cl	+	N/A	+	++	++	++	++	++	++	++	++	-	+
Methanol		++	++	++	++	+	++	++	+	++	++	++	++	++
Methyl ethyl ketone		++	++	-	+	++	++	++	-	++	-	+	+	++
Pentane		++	N/A	++	-	N/A	N/A	N/A	++	++	++	+	++	N/A
Tetrahydrofuran (TH-)		++	++	+	+	+	++	+	-	-	+	+	N/A	+
Urea		++	++	N/A	N/A	-	++	++	N/A	++	++	N/A	++	++

PET = Polyethylene Terephthalate

Nitril = Nitrile

EPDM = Ethylene Propylene

LCP = Liquid Cristal Polymer

PA = Polyamide

PBT = Polybutylene Terephthalate

PC = Polycarbonate

PE = Polyethylene

PVDF = Polyvinylidene fluoride

TPX = Polymethylpentene

POM = Polyoxymethylene

PP = Polypropylene

++ No chemical degradation

+ Medium resistance to chemical agents

- Low resistance to chemical agents

N/A No data available