

Solvent Resistant Nichipet EX II

# Nichipet® EX Plus II

Chemical Resistant Model of Nichipet Series



[Parts List]



- Advanced durability against organic solvent dispensing.
  - ▷ PTFE ( Fluorine resin ) in the air tight chamber of the instrument.
  - ▷ A Perfluoro rubber O-ring with low cubical expansion in the air tight parts.
  - ▷ All models have plungers made in materials resistant to organic solvents.

- Since the volume indicator is made of glass, ultraviolet germicidal of the clean bench will not make it cloud.
- From prolonged irradiation, the surface layer of plastic may deteriorate or discolor, but its performance is not affected.

Specifications

Cat. No	Volume setting	Volume range(μL)	Increments (μL)	Usable tips
00-NPLO2-2	Digital setting	0.1 – 2	0.002	Any Nichiryo tips can be used as long as the volume matches. For product details, please see p.22–24.
00-NPLO2-10		0.5 – 10	0.01	
00-NPLO2-20		2 – 20	0.02	
00-NPLO2-100		10 – 100	0.1	
00-NPLO2-200		20 – 200	0.2	
00-NPLO2-1000		100 – 1000	1	
00-NPLO2-5000		1000 – 5000	10	
00-NPLO2-10000		1000 – 10000	10	
				00-BMT2-Z, 00-BMT2-ZR, 00-BMT2-ZRB

\*All products are tested before shipment using Premium Tips (P. 22) , which are the recommended tips to ensure accuracy.

Accuracy and Precision

Cat. No	Volume(μL)	Accuracy(%)	Precision(%)	Cat. No	Volume(μL)	Accuracy(%)	Precision(%)
00-NPLO2-2	0.2	± 12.0*	≤ 6.0*	00-NPLO2-200	20	± 1.0	≤ 0.5
	1	± 5.0	≤ 2.5		100	± 0.8	≤ 0.3
	2	± 3.0	≤ 1.0		200	± 0.8	≤ 0.2
00-NPLO2-10	1	± 4.0*	≤ 3.0*	00-NPLO2-1000	100	± 1.0	≤ 0.5
	5	± 1.0	≤ 1.0		500	± 0.8	≤ 0.3
	10	± 1.0	≤ 0.5		1000	± 0.7	≤ 0.2
00-NPLO2-20	2	± 5.0	≤ 3.0	00-NPLO2-5000	1000	± 1.0	≤ 0.3
	10	± 1.0	≤ 1.0		2500	± 0.8	≤ 0.3
	20	± 1.0	≤ 0.4		5000	± 0.6	≤ 0.2
00-NPLO2-100	10	± 2.0	≤ 1.0	00-NPLO2-10000	1000	± 2.0	≤ 0.4
	50	± 1.0	≤ 0.3		5000	± 0.8	≤ 0.3
	100	± 0.8	≤ 0.3		10000	± 0.4	≤ 0.2

\*Each accuracy and precision are the values which come from measuring with our compatible tip.

\*The AC and CV of NPLO2-2 below 0.2 μL and NPLO2-10 below 1 μL depend on the sampling skill and the sampling condition where pipettes are used.

\*The Nichipet EX Plus II is made of parts resistant to organic solvents which makes it more durable than previous pipettes in environments with organic solvents. However, it does not guarantee accuracy of dispensing organic solvents.  
\*As the body of the Nichipet EX Plus II is not resistant to organic solvents, make sure it does not come in contact with the organic solvents.

The chemical resistance of Perfluoro rubber O-ring

▷The volume growth of Perfluoro rubber against acid, alkalis, ammonia water, ester, furan and amine is small.

A : Volume expansion rate below 5% .....	No problem at all
B : Volume expansion rate 5% - 20% .....	No problem
C : Volume expansion rate 20% - 50% .....	Possible with some conditions
D : Volume expansion rate over 50% .....	Nonusable

Chemicals	Temperature	Test days	Perfluoro	Fluorine rubber normal O-ring	Chemicals	Temperature	Test days	Perfluoro	Fluorine rubber normal O-ring
Inorganic acid & Organic acid					Ketone, Ester, Ether				
Glacial acetic acid	40°C	21	A	C	Acetone	40°C	21	B	D
Acetic anhydride	40°C	21	A	C	Methyl ethyl ketone	40°C	21	A	D
Inorganic alkalis					Methyl isobutyl ketone	40°C	21	B	D
28% Ammonia water	40°C	21	A	D	Isophorone	40°C	21	A	D
Furan & Aldehyde					Diacetone alcohol	40°C	21	A	C
Tetrahydrofuran	40°C	21	C	D	gamma - Butyrolactone	40°C	21	A	C
2-Methyl Tetrahydrofuran	40°C	21	B	D	Diethylene carbonate	40°C	21	A	D
Acetaldehyde	25°C	21	B	D	Acetylacetone	40°C	21	A	D
Acetophenone	40°C	21	A	C	Methyl formate	25°C	21	B	D
Inclusive nitrogen compound					Methyl acetate	40°C	21	A	D
Acrylic nitrile	40°C	21	A	C	Acetic ether	40°C	21	B	D
Ethylene diamine	40°C	21	B	D	Isoamyl acetate	40°C	21	A	D
Pyridine	40°C	21	A	C	Methyl acetoacetate	40°C	21	A	C
N,N - dimethylformamide	40°C	21	A	D	Ethyl acetoacetate	40°C	21	A	C
N,N - dimethylacetamide	40°C	21	A	D	Acrylic acids	40°C	21	A	C
N-methyl-2-pyrrolidone	100°C	7	A	D	Ethyl acrylate	40°C	21	A	D
Carbon hydride, Carbon hydride halide					Diethyl oxalate	40°C	21	A	D
Toluene	40°C	21	A	B	Triethyl phosphate	40°C	21	A	D
Xylene	40°C	21	A	B	Tricresyl phosphate	100°C	7	A	C
Chloroform	40°C	21	B	B	Diethyl ether	25°C	21	B	C
Alcohols					1, 4 - dioxan	40°C	21	A	C
Methyl carbitol	40°C	21	A	B	Methyl - t - butyl ether	100°C	7	A	C
Ethyl carbitol	40°C	21	A	B	* For more information, please feel free to contact us.				
Others, Oil, Steam									
DN cut HS-1 cutting oil	130°C	11	A	A					
O-148LCT Air craft engine oil	175°C	20	A	B					

## Disposable Tips

**Premium Tip**

[Except X/Z/ZS]






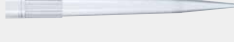



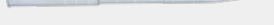


- The fine design and finishing of the top of the tips reduce the surface tension of liquid and ensure the tip to be residue free.
- The excellent sealing and discharge ability enable high accuracy of pipetting.
- Chemical and heat resistant, for which the advanced material "Highly purified polypropylene" is used.
- Fully autoclavable. ( 121°C for 20 minutes ) Racks can be autoclaved as well. (\*Exceeding the recommended standard for autoclaving may cause deformities )
- The tips being able to be attached directly from the racks avoids dirt and dust from getting in, thus rising the efficiency of the operations.
- DNase/RNase free ( excludes X/Z series )
- UV resistant

**Specifications**

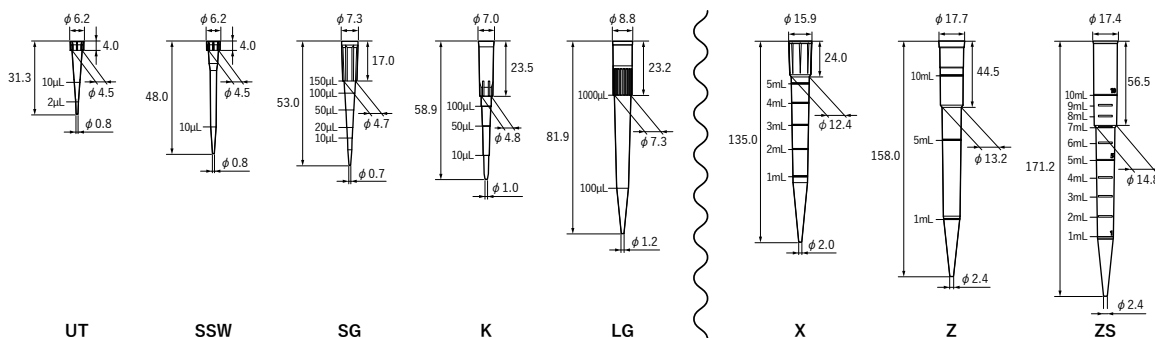
\*Usable models refer to the micropipettes calibrated by our company using this tips. For compatibility with micropipettes from other manufacturers, please contact us.

\*The tips are available for pipette models with in the volume range of the tip mentioned above.

Type		Cat. No.	Specification	Volume range(μL)	Color	Q'ty(box)	Usable models
UT		00-BMT2-UT	Bulk tip	0.1~10	Natural	1,000pcs	NAR-2, 10 / NAR-10M8, 10M12
		00-BMT2-UTWR	Racked tip			960pcs (96pcs×10 <sup>2</sup> /s)	NPX3-2, 10 / NPP-2 / NLT-2 NPX2-2 / NPLO-NPLO2-2 NPM-8V, 12V
		00-BMT2-UTWRB	Racked tip (sterilized)				
SSW		00-BMT2-SSW	Bulk tip	0.5~10		1,000pcs	NPX3-2, 10
		00-BMT2-SSWR	Racked tip			960pcs (96pcs×10 <sup>2</sup> /s)	NPP-10 / NLT-10 / NPX3-10 NPX2-10 / NPLO-NPLO2-10 NLE-10 / NPF2-10
		00-BMT2-SSWRB	Racked tip (sterilized)				
SG		00-BMT2-SG	Bulk tip	2~200		1,000pcs	NAR-20, 100, 200 / NAR-100M8, 100M12, 200M8, 200M12
		00-BMT2-SGR	Racked tip			960pcs (96pcs×10 <sup>2</sup> /s)	NPX3-20, 100, 200 / NPP-20, 100, 200 / NLT-20, 100, 200 NPX2-20, 100, 200 / NPLO2-20, 100, 200 NLE-20, 100, 200 / NPF2-20~200 NPV2-S, M / NPM-SS, L, 12S, 12L
		00-BMT2-SGRB	Racked tip (sterilized)				
SE		00-BMT2-SE	Bulk tip	2~200		1,000pcs	NPX-20, 100, 200 NPLO-20, 100, 200
		00-BMT2-SER	Racked tip			960pcs (96pcs×10 <sup>2</sup> /s)	
		00-BMT2-SERB	Racked tip (sterilized)				
K		00-BMT2-K	Bulk tip	30~300		1,000pcs	NAR-300M8, 300M12 NPM-8K, 12K
		00-BMT2-KR	Racked tip			960pcs (96pcs×10 <sup>2</sup> /s)	
		00-BMT2-KRB	Racked tip (sterilized)				
LG		00-BMT2-LG	Bulk tip	100~1000		1,000pcs	NAR-1000 / NPX3-1000 NPP-1000 / NLT-1000 NPX2-1000 / NPLO2-1000 NLE-1000 / NPF2-500, 1000 / NPV2-L
		00-BMT2-LGR	Racked tip			960pcs (96pcs×10 <sup>2</sup> /s)	
		00-BMT2-LGRB	Racked tip (sterilized)				
LE		00-BMT2-LE	Bulk tip	100~1000		1,000pcs	NPX-1000 NPLO-1000
		00-BMT2-LER	Racked tip			960pcs (96pcs×10 <sup>2</sup> /s)	
		00-BMT2-LERB	Racked tip (sterilized)				
X		00-BMT2-X	Bulk tip	1000~5000		200pcs	NAR-5000 / NPX3-5000 NPP-5000 NPX2-5000 NPLO-NPLO2-5000
		00-BMT2-XR	Racked tip			100pcs (50pcs×2 <sup>2</sup> /s)	
		00-BMT2-XRB	Racked tip (sterilized)				
Z		00-BMT2-Z	Bulk tip	1000~10000		200pcs	NPP-10000 NPX2-10000 NPLO-NPLO2-10000
		00-BMT2-ZR	Racked tip			80pcs (40pcs×2 <sup>2</sup> /s)	
		00-BMT2-ZRB	Racked tip (sterilized)				
ZS		00-BMT2-ZS	Bulk tip	1000~10000		200pcs	NAR-10000 / NPX3-10000
		00-BMT2-ZSR	Racked tip			80pcs (40pcs×2 <sup>2</sup> /s)	
		00-BMT2-ZSRB	Racked tip (sterilized)				

**TIP**

(measure:mm)



Standard Tip

# NichimateAQUATip

Bulk tip , Refill tip

■ The N10-RF and N200-RF are compatible with the following racks: N10RK, N10LRK, and N200RK.



Type	Length	Cat No.	Specification	Q'ty(box)
10 μL	31.3mm	00-AQA-N10	Bulk tip	1,000pcs
		00-AQA-N10-RF	Refill tip	960pcs (96pcs×10stacks)
10 μL (Long)	48.0mm	00-AQA-N10L	Bulk tip	1,000pcs
200 μL	53.0mm	00-AQA-N200	Bulk tip	1,000pcs
		00-AQA-N200-RF	Refill tip	960pcs (96pcs×5stacks×2)
1000 μL	81.9mm	00-AQA-N1000	Bulk tip	1,000pcs
		00-AQA-N1000-RF	Refill tip	960pcs (96pcs×5stacks×2)

Rack (Made of Transparent polycarbonate)

■ This rack is exclusively designed for Nichimate Aqua Tips and is made of polycarbonate. Tips are not included.



Type	Cat No.	Q'ty(box)
10μL	00-AQA-N10RK (Orange●)	5 pcs.
10μL (Long)	00-AQA-N10LRK (Red●)	
200μL	00-AQA-N200RK (Yellow●)	
1000μL	00-AQA-N1000RK (Blue●)	



Standard Tip (Sterilized Raked Tip)

# NichimateAqua Marine Tip



Type	Length	Cat No.	Specification	Q'ty(box)
10 μL	32mm	00-MRN-10RB	Racked tip	960pcs (96pcs×10 <sup>c</sup> /s)
10 μL (Long)	46mm	00-MRN-10LRB		
200 μL	51mm	00-MRN-200RB		
200 μL (Long)	90mm	00-MRN-200LRB		
1000 μL	88mm	00-MRN-1000RB		

● This product is not recommended for repeated use with autoclave sterilization.

Tips with Excellent Liquid Drainage

# Low Retention Tip



- Standard tips with high transparency and excellent liquid drainage.
- Especially effective for handling viscous liquids and surfactants that generate foam during dispensing.
- Ideal for preparing PCR reagents due to the above features.
- Bulk and Refill are non-sterile; Rack tips are provided sterile.
- DNase/RNase/Pyrogen Free.
- For research use only. Not for use in medical or clinical applications.

Specifications

Specification	Type	Length	Cat No.	Q'ty(box)
Bulk tip	10 μL	31.1mm	00-LRT-10	1,000pcs
	10 μL (Long)	45.8mm	00-LRT-10L	
	200 μL	50.8mm	00-LRT-200	
	300 μL	55.9mm	00-LRT-300	
	1250 μL	90.2mm	00-LRT-1250	
Refill tip	10 μL	31.1mm	00-LRT-10-RF	960pcs (96pcs×5stacks×2)
	10 μL (Long)	45.8mm	00-LRT-10L-RF	
	200 μL	50.8mm	00-LRT-200-RF	
	300 μL	55.9mm	00-LRT-300-RF	768pcs (96pcs×4stacks×2)
	1250 μL	90.2mm	00-LRT-1250-RF	
Racked tip	10 μL	31.1mm	00-LRT-10RB	960pcs (96pcs×10 <sup>c</sup> /s)
	10 μL (Long)	45.8mm	00-LRT-10LRB	
	200 μL	50.8mm	00-LRT-200RB	
	200 μL (Long)	91.1mm	00-LRT-200LRB	192pcs (96pcs×2 <sup>c</sup> /s)
	300 μL	55.9mm	00-LRT-300RB	960pcs (96pcs×10 <sup>c</sup> /s)
	1250 μL	90.2mm	00-LRT-1250RB	

● The racks can be autoclaved (121°C, 20 minutes); however, but should be replaced if deformation or discoloration occurs (Nichiryo does not guarantee that deformation or discoloration will not occur). ● Bulk and refill packages cannot be autoclaved as is. Please transfer the tips to a compatible rack, glass container, or similar ones before autoclaving. ● Autoclaving should be performed according to your laboratory manual or under the guidance of an experienced person.

Filtered Tips with Excellent Liquid Drainage

# Low Retention Filtered Tip

- Features a hydrophobic HDPE filter to minimize aerosol contamination inside the micropipette during aspiration.
- DNase/RNase/Pyrogen Free.
- For research use only. Not for use in medical or clinical applications.

Specifications

Type	Length	Cat No.	Specification	Q'ty(box)
10 μL	31.1mm	00-LRT-F10RB	Racked tip (sterilized)	960pcs (96pcs×10 <sup>c</sup> /s)
10 μL (Long)	45.8mm	00-LRT-F10LRB		
20 μL	50.8mm	00-LRT-F20RB		
100 μL		00-LRT-F100RB		192pcs (96pcs×2 <sup>c</sup> /s)
200 μL		00-LRT-F200RB		
200 μL (Long)	91.1mm	00-LRT-F200LRB		960pcs (96pcs×10 <sup>c</sup> /s)
300 μL	55.9mm	00-LRT-F300RB		
1250 μL	90.2mm	00-LRT-F1250RB		

● The racks can be autoclaved (121°C, 20 minutes), but should be replaced if warped or discolored.