

Tungsten Carbide Tools

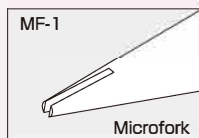
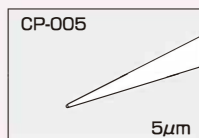
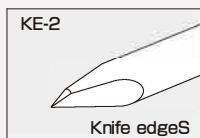
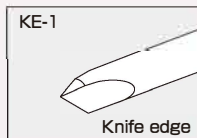
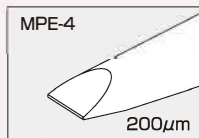
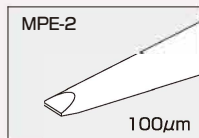
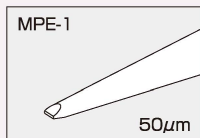
Super hard tools

Manual

AP

QP

SS



Lineup

- Flat-head screw driver shaped
- Probe shaped
- Knife edge shaped
- Fork shaped

Application

- Poking, rubbing, shaving, peeling, cutting, crashing, carrying
- Pickup fiber in adhesive

Plane cutting of surface of 10-micrometer cellulose



Manual handle
TPH-3



Handle for manipulator
TPH-10



Notes for choosing tools

- Most suitable for excision of exposed substances in hard materials.
- Probe is recommended for hard resin, crystal, soft material surface, etc.
- KE series recommended for excision from soft material.

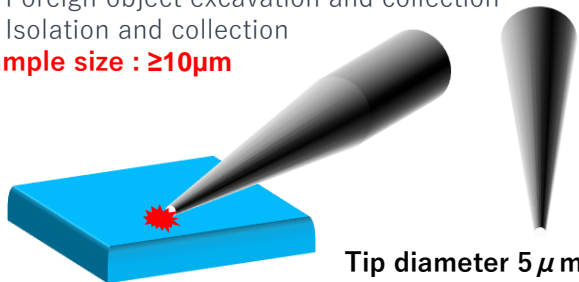
Size	Quantity	Part number
Peeler 50µm	3	MPE-1
Peeler 100µm	3	MPE-2
Peeler 200µm	3	MPE-4
Knife edge	3	KE-1
Knife edgeS	3	KE-2
Probe 5µm	5	CP-005
Fork 30µm	2	MF-1

Size	Quantity	Part number
Probe 5µm	1 each	HT-SET
Peeler 50µm		
Knife edge		
Peeler 50µm	1 each	MPE-SET
Peeler 100µm		
Peeler 200µm		

Micro tools (for picking up solid particles/materials) ※Please choose smaller size tips than sample size.

- Foreign object excavation and collection
- Isolation and collection

Sample size : $\geq 10\mu\text{m}$

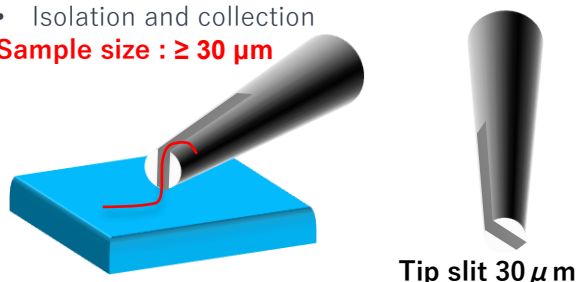


Tip diameter $5\mu\text{m}$

Item no./Name	CP-005 Probe
Shape	Probe (Tungsten carbide)
Utilization	Isolation, Engraving and picking up foreign substances *micromanipulator required
Quantity	5pcs/package

- Foreign object entanglement
- Isolation and collection

Sample size : $\geq 30\mu\text{m}$

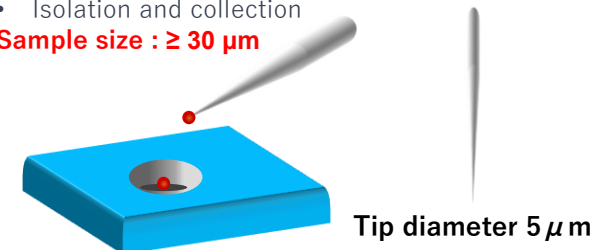


Tip slit $30\mu\text{m}$

Item no./Name	MF-1 Microfork
Shape	Fork (Tungsten carbide)
Utilization	Isolation of solids exposed or adhered to the surface *micromanipulator or handheld
Quantity	2pcs/package

- Microscopic debris removal from small holes
- Isolation and collection

Sample size : $\geq 30\mu\text{m}$



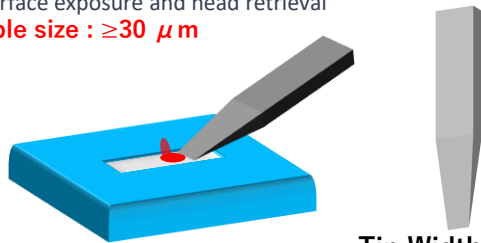
Tip diameter $5\mu\text{m}$

Item no./Name	FP-1 Flex probe (Soft material)
Shape	Probe (Resin)
Utilization	Utilizing flexibility to remove foreign objects inside tiny holes *micromanipulator required
Quantity	5pcs/package

Micro tools (for shaving/milling)

- Surface cutting of buried objects
- Surface exposure and head retrieval

Sample size : $\geq 30 \mu\text{m}$

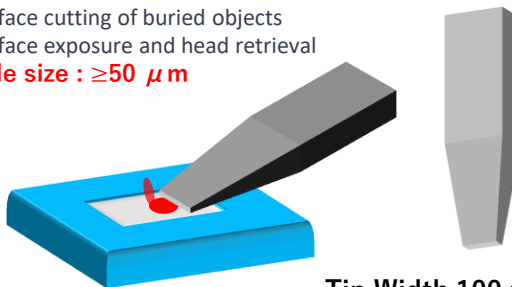


Tip Width $50 \mu\text{m}$

Item no./Name	MPE-1 Micro Peeler
Shape	Flat-head screwdriver (Tungsten carbide)
Utilization	Plane cutting, Cutting to exact part of a buried foreign substance near the surface (resin or other materials) *micromanipulator required
Quantity	3pcs/package

- Surface cutting of buried objects
- Surface exposure and head retrieval

Sample size : $\geq 50 \mu\text{m}$

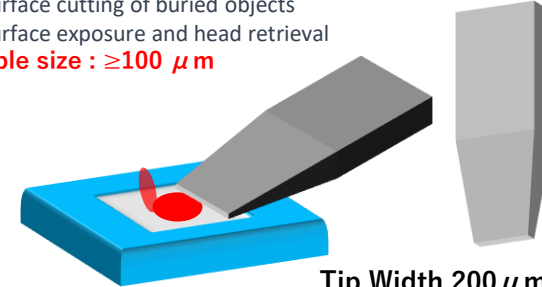


Tip Width $100 \mu\text{m}$

Item no./Name	MPE-2 Micro Peeler
Shape	Flat-head screwdriver (Tungsten carbide)
Utilization	Plane cutting, Cutting to exact part of a buried foreign substance near the surface (resin or other materials) *micromanipulator required
Quantity	3pcs/package

- Surface cutting of buried objects
- Surface exposure and head retrieval

Sample size : $\geq 100 \mu\text{m}$

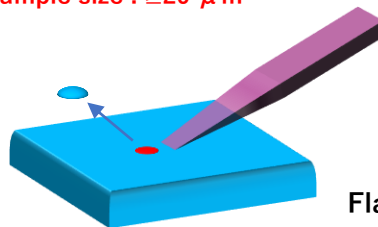


Tip Width $200 \mu\text{m}$

Item no./Name	MPE-4 Micro Peeler
Shape	Flat-head screwdriver (Tungsten carbide)
Utilization	Plane cutting, Cutting to exact part of a buried foreign substance near the surface (resin or other materials) *micromanipulator required
Quantity	3pcs/package

- Removal of micro-protrusions
- Surface exposure and head retrieval

Sample size : $\geq 20 \mu\text{m}$

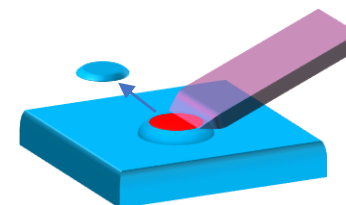


Flat-blade $50 \mu\text{m}$

Item no./Name	RK-50SC Ruby Knife
Shape	Flat-head screwdriver (Ruby)
Utilization	Shaving off surface material, Extracting a protruding resin *micromanipulator required
Quantity	1pc

- Protrusion Removal
- Surface exposure and head retrieval

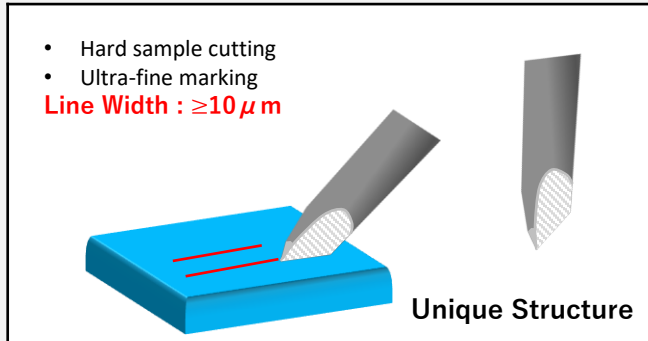
Sample size : $\geq 100 \mu\text{m}$



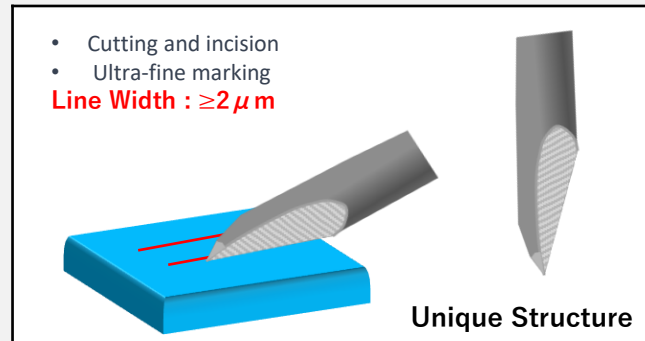
Flat-blade $500 \mu\text{m}$

Item no./Name	RK-C Ruby Knife
Shape	Flat-head screwdriver (Ruby)
Utilization	Shaving off surface material, exposing a fish-eye defect, Extracting a protruding target *micromanipulator or handheld
Quantity	1pc

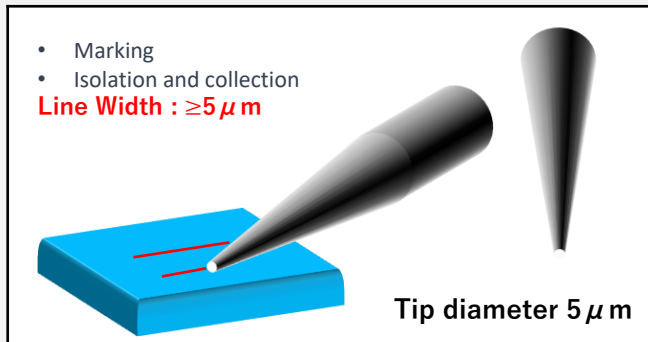
Micro tools (for marking)



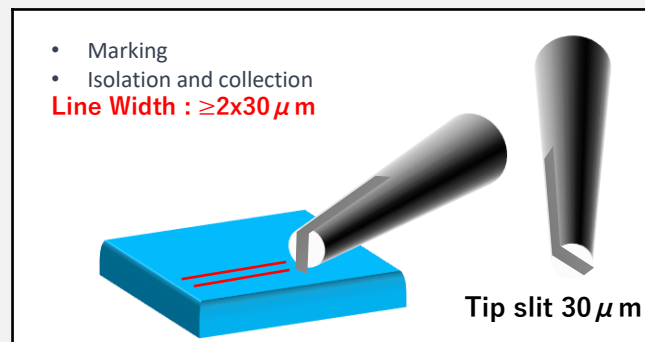
Item no./Name	KE-1 Knife Edges
Shape	Knife (Tungsten carbide)
Utilization	Cutting, Incising (resin), Pinpoint marking on hard material (soft metal/glass/wafer) *micromanipulator required
Quantity	3pcs/package



Item no./Name	KE-2 Knife Edges S
Shape	Knife (Tungsten carbide)
Utilization	Cutting, Incising(resin), Pinpoint marking on hard material (soft metal/glass/wafer) *micromanipulator required
Quantity	3pcs/package



Item no./Name	CP-005 probe
Shape	Probe (Tungsten carbide)
Utilization	Marking (soft metal/glass/resin), Isolation *micromanipulator required
Quantity	5pcs/package



Item no./Name	MF-1 Microfork
Shape	Fork (Tungsten carbide)
Utilization	Marking (soft metal/glass/resin), Isolation *micromanipulator required
Quantity	2pcs/package

Tool	Item no.
Tungsten probe	TP-0002
	TP-0005
	TP-001
	TP-005
	TP-010
	TP-030
Tungsten carbide tool	MPE-1
	MPE-2
	MPE-4
	CP-005
	KE-1
	KE-2
Flex probe	FP-1



Type	Item no.
Handle for manipulator	TPH-10
Handle for handheld operation	TPH-3



Tool	Item no.
Micro knife	MK-S15
	MK-S30
	MK-D



Type	Item no.
Handle for manipulator	MKH
Handle for handheld operation	MKH-2



Tool	Item no.
Ruby knife	RK-S30
	RK-D
	RK-50SC
	RK-C



Type	Item no.
Handle for manipulator	TPH-20



Tool	Item no.
Micro pipette	MP-001
	MP-005
	MP-010
	MP-020
Sampling probe	MST-002
	MST-005
	MST-007



Type	Item no.
Handle for manipulator	MPH



Micro Tools Selection Chart

Item	Material	Target Materials and Conditions	Purpose
Tungsten Probe	Tungsten	Solids which are exposed and adhered to sample surface	Picking up, Pinpoint cutting
Micro Knife SUS Double-edged Blade	SUS	Film, Soft Resin	Peeling off surfaces, Cutting of a film or a fiber
Micro Knife SUS Single-edged Blade	SUS	Film, Soft Resin	Cutting of a film or a fiber
Ruby Knife Single-edged Blade	Ruby	Film, Soft Resin	Cutting out cross-section of a sample
Ruby Knife Double-edged Blade	Ruby	Film, Soft Resin	Pinpoint cutting of an embedded substance, Cutting
Ruby Knife Flat-head Blade	Ruby	Film, Soft Resin	Shaving an embedded substances on or just below surface
Tungsten Carbide Probe 5 μ m	Tungsten Carbide	Resin (Hard), Wafer, Glass (Brittle), etc.	Marking
Knife Edge	Tungsten Carbide	Resin (Harder)	Cutting
Micro Peeler MPE-1 (Blade Width: 50 μ m) MPE-2 (Blade Width: 100 μ m) MPE-4 (Blade Width: 200 μ m)	Tungsten Carbide	Resin, Soft metal Solids which adhere to surfaces	Surface shaving
Micro tweezer Tool Set	SUS	Isolated micro substances (even in adhesive materials)	Holding, Gripping and Pressing down
Milling Pro (for Axis Pro)	Depends on tools	Resin (Including some rubber), Metal, Wafer, Glass (Brittle)	Milling surfaces (up to several hundreds μ m)
Micropipette	Silicate Glass	For Vacuum Absorption Tool Set and Microinjector	←
Vacuum Absorption Tool Set	—	Isolated micro substances which are dry.	Absorption pickup and discharging
Microinjector	—	Liquids	Extractive sample pickup, injection of solvent