

# Tweezers Reference Page

## Material

The high quality microdissecting tweezers on the following pages are available in a number of different steel alloys. Which alloy to choose is very important and depends on how you intend to use the tweezers. The information below is provided to help compare the various alloys and their respective properties. Please note that not all tweezers patterns are available in all alloys.

- CARBON STEEL:** At Rockwell 60, carbon steel is one of the hardest tweezers steels. Carbon steel tips are very durable but because of this hardness, carbon steel tips are more brittle than some of the other steels. Carbon steel is also highly magnetic and stains easily.
- TITANIUM:** While not as hard as some of the other alloys (Rockwell 37 at tips), titanium tips are very flexible. Another unique property of titanium is that it is 33% lighter than other stainless alloys. Titanium is extremely corrosion and stain resistant, making it the preferred choice for salt water uses. Titanium also has a high heat resistance in excess of 400°C and is completely non-magnetic.
- INOX:** Inox is a specific stainless alloy composed of carbon steel and chromium. Inox tips are more flexible than pure carbon steel but not as hard (Rockwell 55). Inox has good stain resistance and is magnetic.
- DUMOXEL:** One of the most popular tweezers alloys, Dumoxel is even more stain resistant than Inox and is highly corrosion resistant. With a Rockwell 36 at the tips, tweezers made from this alloy have very soft, flexible tips. Dumoxel is non-magnetic and exhibits high temperature resistance.
- DUMOSTAR:** This new alloy is a blend of steel, chromium, nickel, cobalt and has many of the best features of the other alloys. Dumostar is heat resistant to over 500°C and is completely non-magnetic. Dumostar is extremely corrosion resistant and is one of the harder alloys at Rockwell 62. However, because of its unique composition, Dumostar tips are very flexible, are resistant to fatigue, and are capable of flexing far beyond other alloys without permanently deforming. This alloy is far superior in overall performance than any other material available today!

## Tip Dimensions

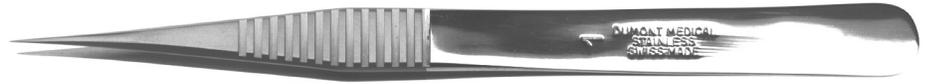
Most tweezers patterns are available in two tip styles, namely "standard" and "biologie". The dimensions of each vary by pattern. In general, the "biologie" tips are about twice as fine as the "standard" tips. Below is a chart showing the tip dimensions of both standard and biologie tips by pattern of some of the more popular patterns:

	Tip Dimensions (mm)			
	Standard		Biologie	
	Width	Thickness	Width	Thickness
Pattern 1	0.20	x 0.12	0.10	x 0.06
Pattern 2	0.34	x 0.14	0.17	x 0.07
Pattern 3	0.17	x 0.10	0.08	x 0.04
Pattern 4	0.13	x 0.08	0.06	x 0.02
Pattern 5	0.10	x 0.06	0.05	x 0.01
Pattern 7	0.17	x 0.10	0.07	x 0.03

Please consult the following pages for dimensions of patterns not listed above.

**Pattern #1**  
length 120mm  
Tip Profile ▲

RS-4900 tip .10 x .06mm  
Material: INOX  
Biologie Tips



RS-4900 Shown

RS-4960 tip .20 x .12mm  
Material: Dumostar

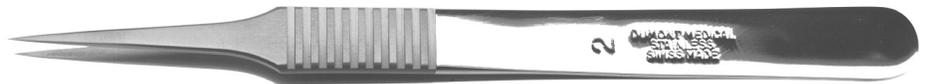


RS-4960 Shown

RS-5040 tip .20 x .12mm  
Material: INOX

**Pattern #2**  
length 120mm  
Tip Profile ■

RS-4902 tip .17 x .07mm  
Material: INOX  
Biologie Tips



RS-4902 Shown

RS-4962 tip .34 x .14mm  
Material: Dumostar



RS-4962 Shown

RS-5041 tip .34 x .14mm  
Material: INOX

**Pattern #3**  
length 120mm  
Tip Profile ▲

RS-4903 tip .08 x .04mm  
Material: INOX  
Biologie Tips



RS-4903 Shown

RS-4964 tip .17 x .10mm  
Material: Dumostar



RS-4966 Shown

RS-4966 tip .08 x .04mm  
Material: Dumostar  
Biologie Tips

RS-5042 tip .17 x .10mm  
Material: INOX





RS-4970 Shown

**Pattern #3C**  
length 110mm  
Tip Profile 

**RS-4968** tip .17 x .10mm  
Material: Dumostar

**RS-4970** tip .08 x .04mm  
Material: Dumostar  
Biologie Tips

**RS-5043** tip .17 x .10mm  
Material: INOX



**Pattern #Mini 3**  
length 70mm  
Tip Profile 

**RS-4913** tip .08 x .04mm  
Material: INOX  
Biologie Tips



**Pattern #4**  
length 110mm  
Tip Profile

**RS-4904** tip .06 x .02mm  
Material: INOX  
Biologie Tips



RS-4904 Shown

**RS-4972** tip .13 x .08mm  
Material: Dumostar



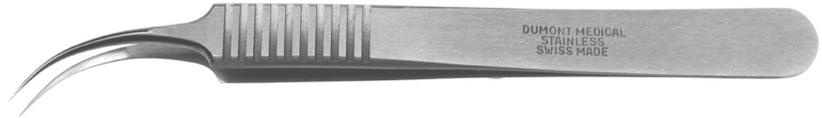
RS-4972 Shown

**RS-4974** tip .06 x .02mm  
Material: Dumostar

**RS-5044** tip .13 x .08mm  
Material: INOX

**Pattern #5 modified**  
tips closing flat on 4mm  
length 110mm

**RS-5001** tip .06 x .02mm  
half curve  
Material: INOX  
Biologie Tips



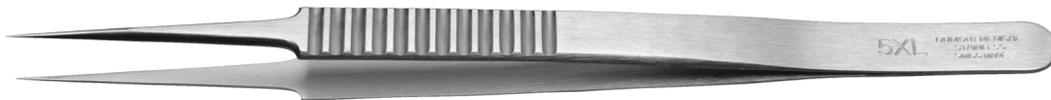
**Pattern #5 SF**  
length 110mm  
Tip Profile

**RS-4955** tip .025 x .005mm  
Material: INOX  
Superfine Tips



Pattern #5 XL  
length 150mm  
Tip Profile 

RS-4915 tip .06 x .0024mm  
Material: INOX



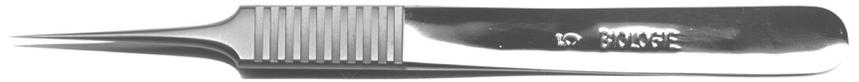
Pattern #5 Ceramic  
length 110mm  
Tip Profile 

RS-4925 tip 0.05 x 0.01mm  
Material: Black Ceramic  
Coated INOX  
Biologie Tips



**Pattern #5**  
length 110mm  
Tip Profile

- RS-4905 tip .05 x .01mm  
Material: INOX  
Biologie Tips  
Mirrored Finish
- RS-4976 tip .10 x .06mm  
Material: Dumostar
- RS-4978 tip .05 x .01mm  
Material: Dumostar  
Biologie Tips
- RS-5015 tip .05 x .01mm  
Material: INOX  
Biologie Tips
- RS-5035 tip .08 x .04mm  
Material: Carbon Steel
- RS-5045 tip .10 x .06mm  
Material: INOX
- RS-5050 tip .05 x .01mm  
Material: Titanium  
Biologie Tips
- RS-5055 tip .10 x .06mm  
Material: Titanium
- RS-5060 tip .05 x .01mm  
Material: Dumoxel  
Biologie Tips
- RS-5065 tip .10 x .06mm  
Material: Dumoxel



RS-4905 Shown



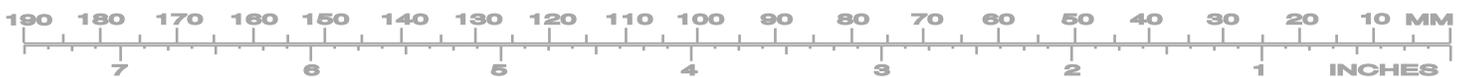
RS-4976 Shown

**Pattern #5, 45° angle**  
length 109mm  
Tip Profile

- RS-5005 tip .05 x .01mm  
Material: INOX  
Biologie Tips
- RS-5058 tip .10 x .06mm  
Material: Dumoxel



RS-5005 Shown





RS-4919

Pattern #5, 90° angle  
length 106mm  
Tip Profile 

tip .05 x .01mm  
Material: INOX  
Biologie Tips



RS-5045A

Pattern #5, 15° up  
length 105mm  
Tip Profile 

tip .10 x .06mm  
Material: INOX



RS-5010 Shown

RS-4984

Pattern #55  
length 110mm  
light shanks,  
superfine points  
Tip Profile 

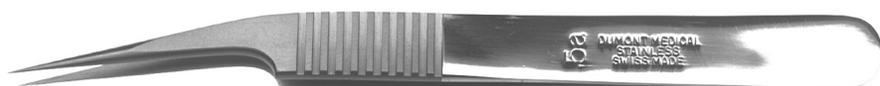
tip .05 x .01mm  
Material: Dumostar  
Biologie Tips

RS-5063

tip .05 x .01mm  
Material: Dumoxel  
Biologie Tips

RS-5010

tip .05 x .01mm  
Material: INOX  
Biologie Tips



RS-4928

Pattern #5A  
oblique points  
length 115mm  
Tip Profile 

tip .06 x .02mm  
Material: INOX  
Biologie Tips



**Pattern #N5**  
**cross action**  
 superfine points  
 length 108mm  
 Tip Profile

**RS-5020** tip .05 x .01mm  
 Material: INOX  
 Biologie Tips



**Pattern #6**  
 length 115mm  
 Tip Profile

**RS-5046** tip .17 x .10mm  
 Material: INOX



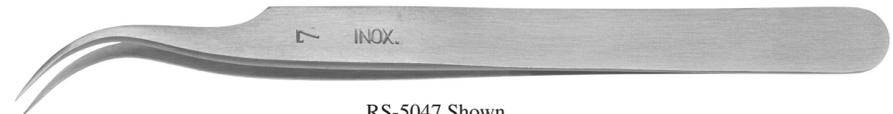
**Pattern #7**  
 length 115mm  
 Tip Profile

**RS-4907** tip .07 x .03mm  
 Material: INOX  
 Biologie Tips



RS-4907 Shown

**RS-5047** tip .17 x .10mm  
 Material: INOX



RS-5047 Shown

**RS-4980** tip .17 x .10mm  
 Material: Dumostar

**RS-4982** tip .07 x .03mm  
 Material: Dumostar  
 Biologie Tips

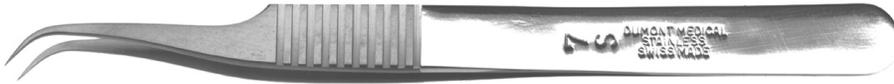
**RS-5037** tip .07 x .03mm  
 Material: Dumoxel  
 Biologie Tips

**RS-5039** tip .07 x .03mm  
 Material: Titanium  
 Biologie Tips

**RS-5057** tip .17 x .10mm  
 Material: Titanium

**RS-5064** tip .17 x .10mm  
 Material: Dumoxel





RS-4935

**Pattern #7S** short curve  
length 117mm  
Tip Profile

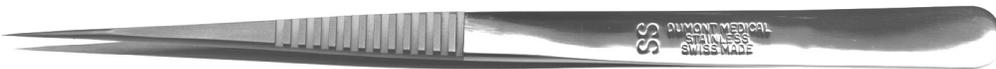
tip .07 x .03mm  
Material: INOX  
Biologie Tips



RS-5027

**Pattern #N7**  
**cross action**  
length 115mm  
Tip Profile

tip .07 x .03mm  
Material: INOX  
Biologie Tips



RS-4940

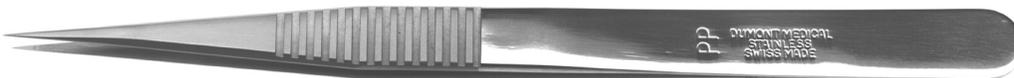
**Pattern #SS Long**  
**narrow, delicate**  
length 135mm  
Tip Profile

tip .10 x .06mm  
Material: INOX  
Biologie Tips



RS-4941

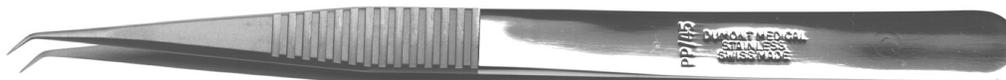
tip .10 x .06mm  
45° angle  
Material: INOX  
Biologie Tips



RS-4950

**Pattern #PP**  
**heavy duty**  
length 135mm  
Tip Profile

tip .10 x .06mm  
Material: INOX  
Biologie Tips



RS-4951

tip .10 x .06mm  
45° Angle  
Material: INOX  
Biologie Tips



**RS-4990 Vessel Cannulation Forceps**

for tubing of .35mm OD  
length 131mm  
tip width .75mm  
tip diameter .35mm  
Material: INOX



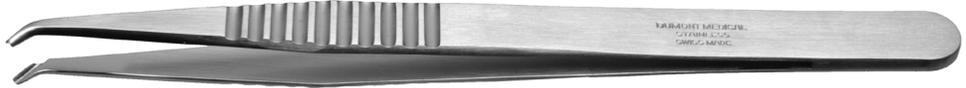
**RS-4991 Vessel Cannulation Forceps**

for tubing of .5mm OD  
length 130mm  
tip width .9mm  
tip diameter .5mm  
Material: INOX



**RS-4992 Vessel Cannulation Forceps**

for tubing of 1.0mm OD  
length 128mm  
tip width 1.4mm  
tip diameter 1.0mm  
Material: INOX



RS-4927

**Vessel Dilation Forceps**

length 120mm  
tip .20 x .16mm



RS-4929

**Vessel Dilation Forceps**

length 115mm  
tip .20 x .16mm



RS-4942

**Vessel Dilation Forceps**

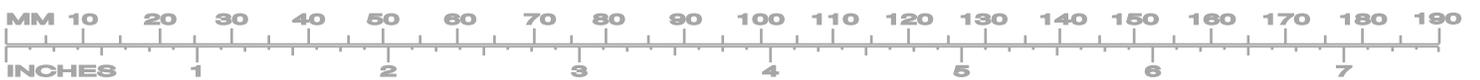
length 135mm  
tip .20 x .16mm



RS-4952

**Corneal Forceps**

length 135mm  
tip .30 x .30mm  
retention hole diameter .35mm



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