

# 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 tweezer. The information below is provided to help compare the various alloys and their respective properties. Please note that not all tweezer patterns are available in all alloys.

- CARBON STEEL:** At Rockwell 60, carbon steel is one of the hardest tweezer 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 tweezer 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 tweezer 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

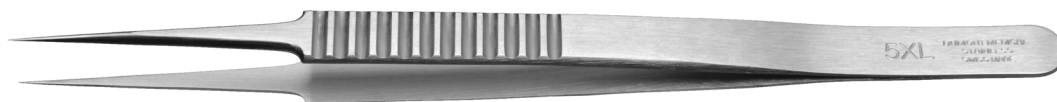
Tip Profile 


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



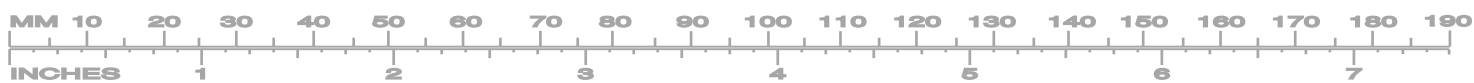
Pattern #5 XL  
length 150mm  
Tip Profile 

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

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

RS-4984

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

RS-5063

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

RS-5010

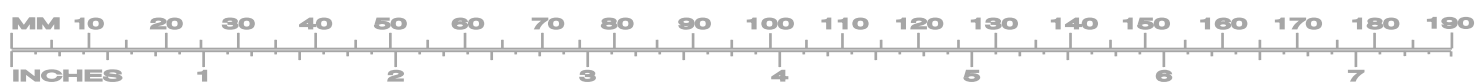
tip .05 x .01mm  
Material: INOX  
Biologie Tips




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

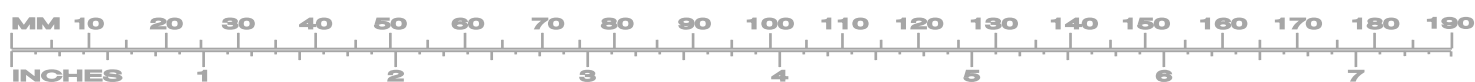
**Pattern #PP**  
**heavy duty**  
length 135mm  
Tip Profile

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

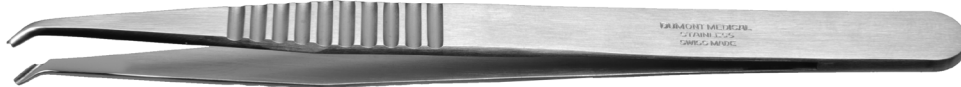
for tubing of .5mm OD  
length 130mm  
tip width .9mm  
tip diameter .5mm  
Material: INOX



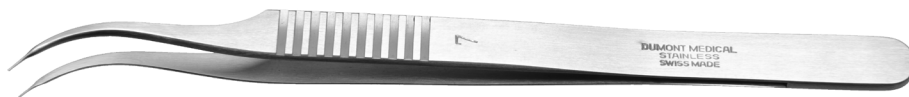
RS-4992

## Vessel Cannulation Forceps

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



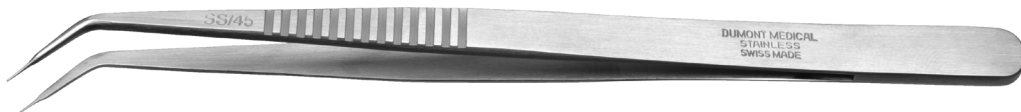
RS-4927

**Vessel Dilation Forceps**length 120mm  
tip .20 x .16mm

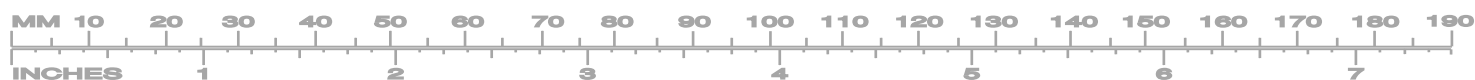
RS-4929

**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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