

Nano-ESI emitters, the Sharp Singularity

Traceability & Quality Control Report

We are aware that the stability and the ionization efficiency of a nano-electrospray depends on several factors, including the particular sample being electro sprayed, the skill of the operator, the quality of the emitter, and the particular geometry of the emitter.

This document provides full traceability on the emitter production and geometric details. It is intended to help you find what influences your signals and better control the quality of your nano-electrospray.

Pack			
Pack No.:	2020 10 04_2 Ref.: 20-05	ID:	20 μ m \pm 2 μ m nominal
Packing Date:	2020 10 04	OD:	363 μ m \pm 10 μ m nominal
Length	50mm \pm 1mm nominal	Sharp angle:	15° \pm 2° nominal

Source material:

Polymicro technologies TM, Polymicro Flexible Fused Silica Capillary Tubing, Inner Diameter 20 μ m, Outer Diameter 375 μ m; Part No.: TSP020375; Lot. No.: BRR105AA

Physical properties:

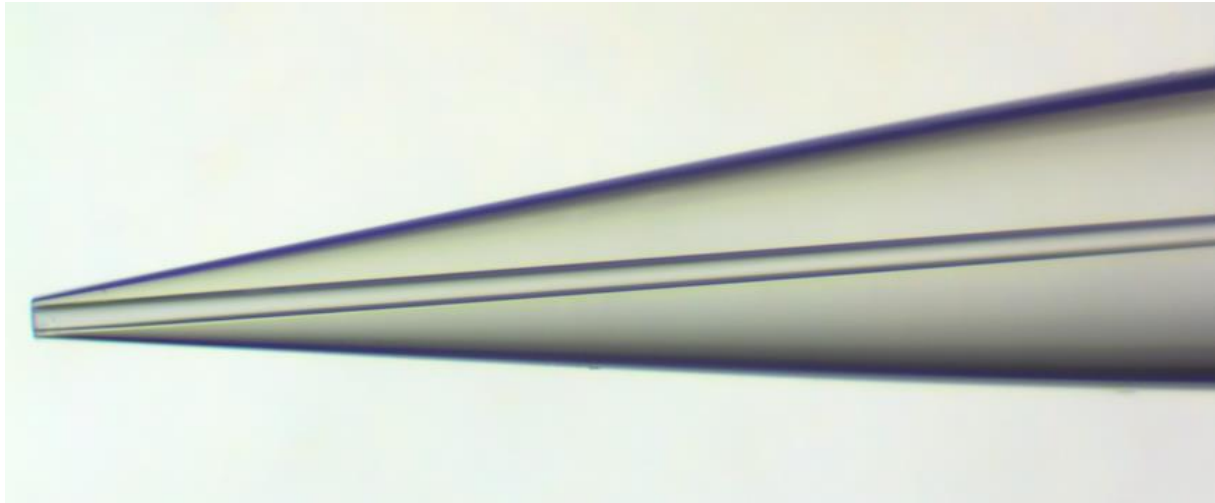
Coating Thickness per Side	20 μ m nominal
Cutting Style	Precision Cleave
Internal Diameter	20 μ m
Internal Diameter Tolerance	\pm 2 μ m
Material - Coating	Standard Polyimide
Material - Tubing	Synthetic Fused Silica
Net Weight	0.210/g
Outer Diameter	363 μ m
Outer Diameter Tolerance	\pm 10 μ m
Packaging Type	Spool
Proof Tested @ Minimum 100kpsi	100% for Strength
Temperature Range - Operating	-65° to +350°C
Tubing Length	10.0m minimum

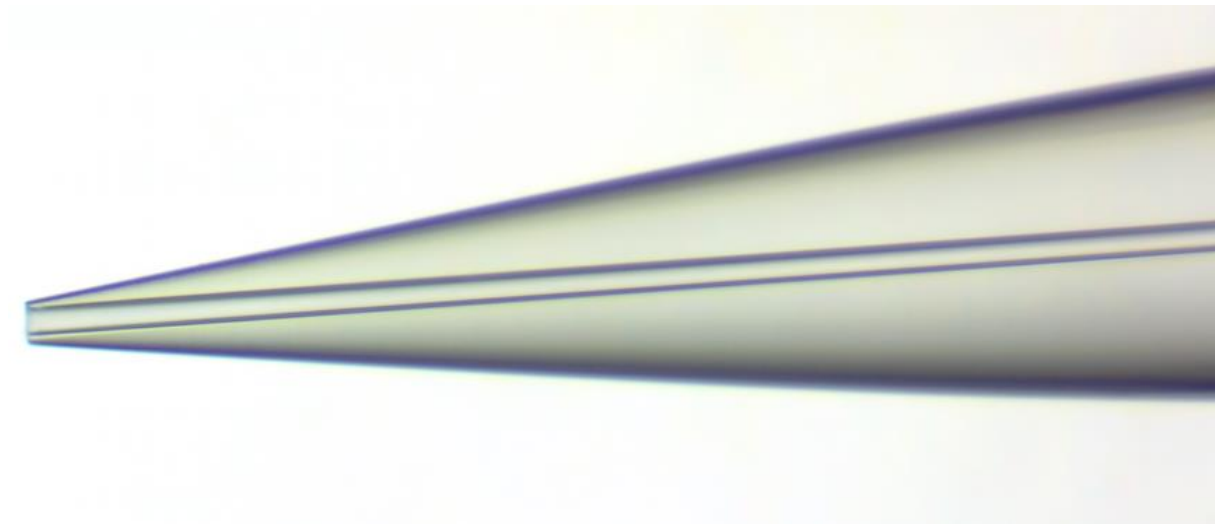
Chemical resistance:

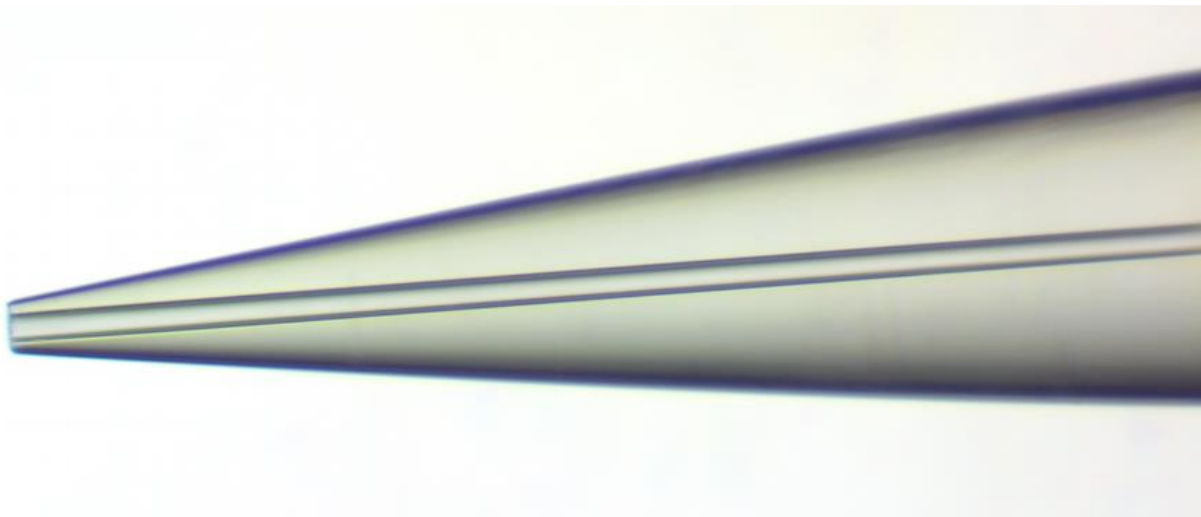
Sulfuric acid: When heated to 100-130°C, sulfuric acid removes the polyimide

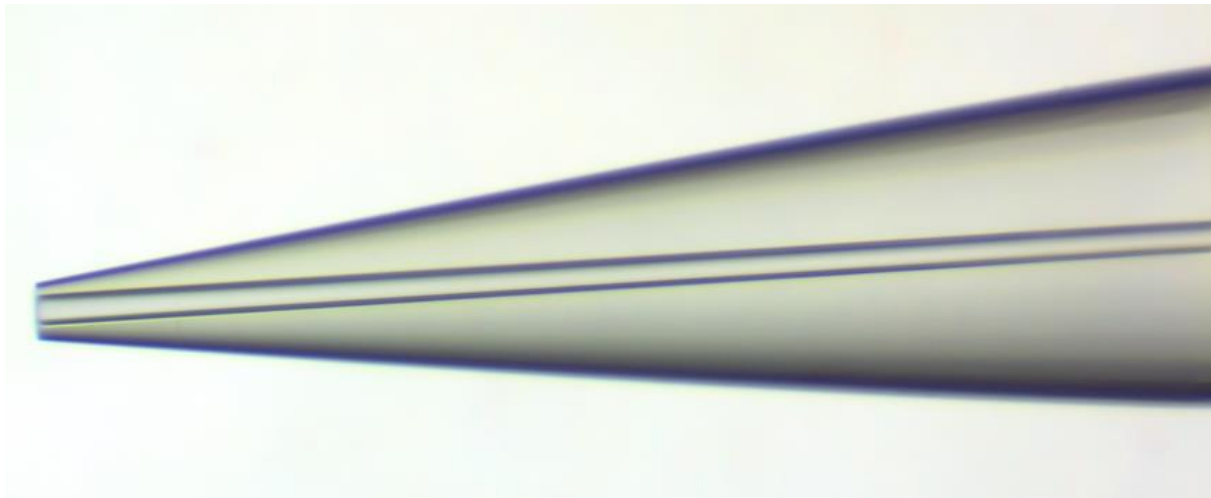
Strong bases: Caustic solutions, such as Sodium hydroxide, will also attack the polyimide.

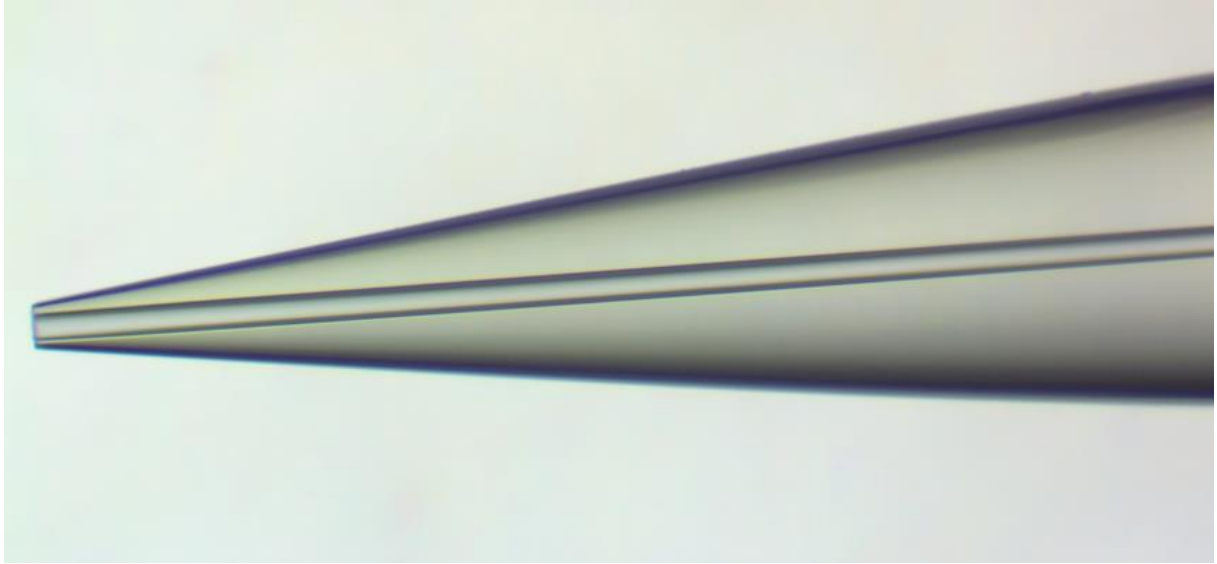
RoHS compliance: yes

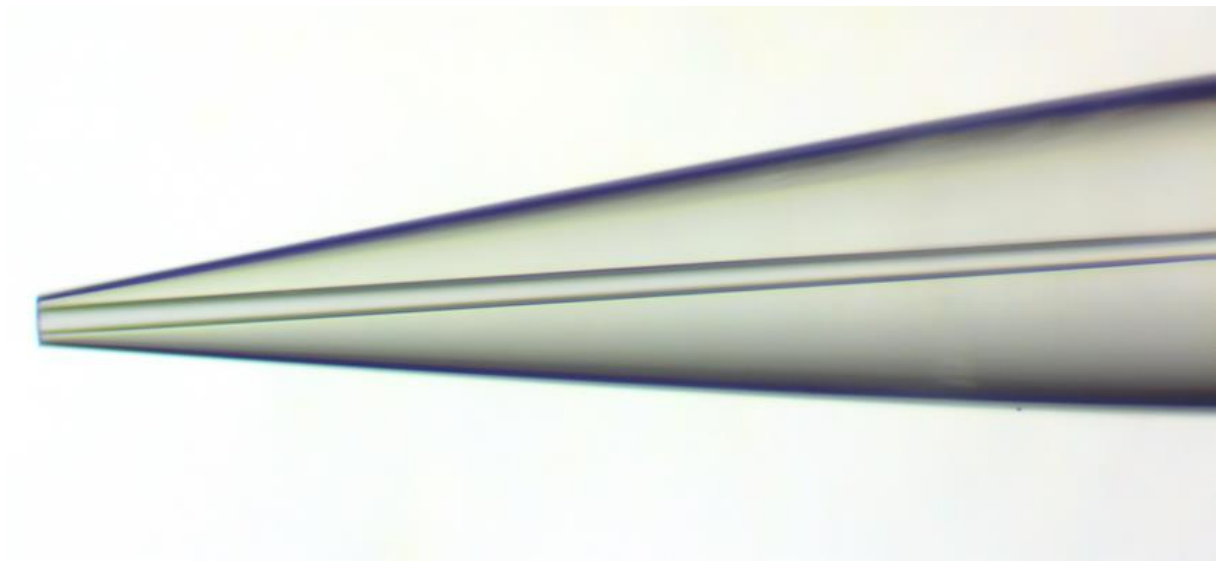
nano Emitter No.:	1		
			
Identification No.:	2020 10 04_12	Clogging test:	Pass
Sharp date:	2020 10 04	Length:	50mm
Rinse:	HPLC H ₂ O	Angle:	14.8°

nano Emitter No.:	2		
			
Identification No.:	2020 10 04_11	Clogging test:	Pass
Sharp date:	2020 10 04	Length:	50mm
Rinse:	HPLC H ₂ O	Angle:	15.3°

nano Emitter No.:	3		
			
Identification No.:	2020 10 04_10	Clogging test:	Pass
Sharp date:	2020 10 04	Length:	50mm
Rinse:	HPLC H ₂ O	Angle:	15.1°

nano Emitter No.:	4		
			
Identification No.:	2020 10 04_09	Clogging test:	Pass
Sharp date:	2020 10 04	Length:	50mm
Rinse:	HPLC H ₂ O	Angle:	15.6°

nano Emitter No.:	5		
			
Identification No.:	2020 10 04_08	Clogging test:	Pass
Sharp date:	2020 10 04	Length:	50mm
Rinse:	HPLC H ₂ O	Angle:	15.1°

nano Emitter No.:	6		
			
Identification No.:	2020 10 04_07	Clogging test:	Pass
Sharp date:	2020 10 04	Length:	50mm
Rinse:	HPLC H ₂ O	Angle:	15.4°