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# 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 11 14_1 Ref: 20-20** | ID: | 20µm ± 2µm nominal |
| Packing Date: | 2020 11 14 | OD: | 363µm ± 10µm nominal |
| Length | 200mm ± 1mm nominal | Sharp angle: | 15° ± 1° nominal |

Source material:

Polymicro technologies ™, Polymicro Flexible Fused Silica Capillary Tubing, Inner Diameter 20µm, Outer Diameter 375µm; Part No.: TSP020375; Lot. No.: BIBE05A

Physical properties:

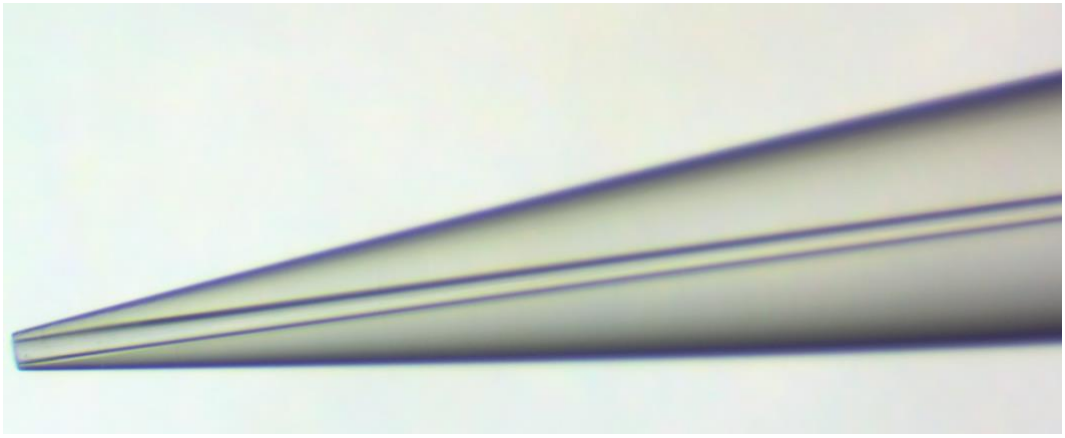
| | |
|---|---|
| Coating Thickness per Side | 20µm nominal |
| Cutting Style | Precision Cleave |
| Internal Diameter | 20µm |
| Internal Diameter Tolerance | ± 2µm |
| Material - Coating | Standard Polyimide |
| Material - Tubing | Synthetic Fused Silica |
| Net Weight | 0.210/g |
| Outer Diameter | 363µm |
| Outer Diameter Tolerance | ± 10µm |
| 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.

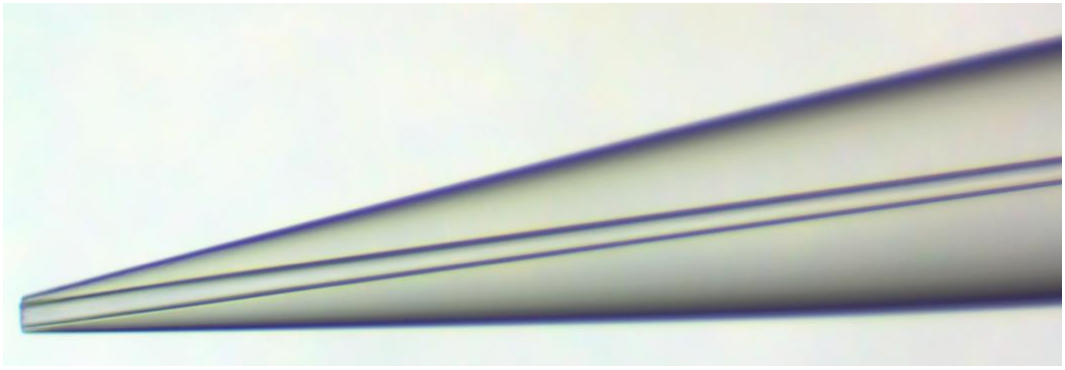
RoHS compliance: yes

| nano Emitter No.: | 1 |
|---|---|



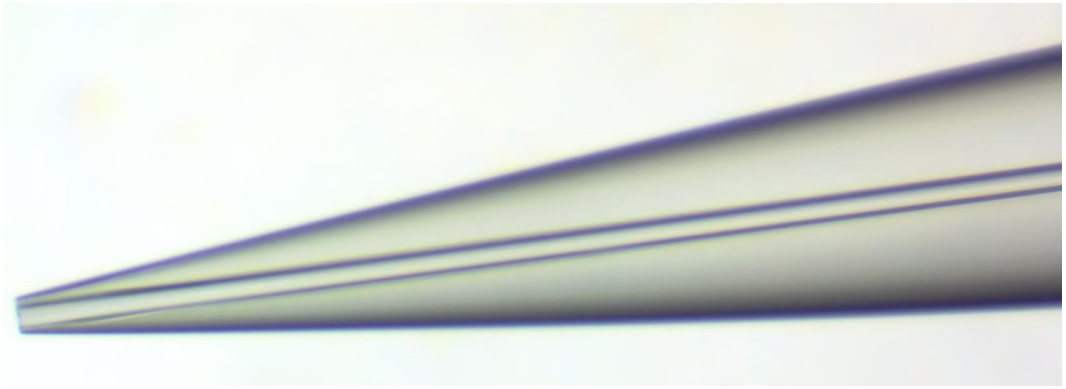
| Identification No.: | 2020 11 14_11 | Clogging test: | Pass |
|---|---|---|---|
| Sharp date: | 2020 11 14 | Length: | 200mm |
| Rinse: | HPLC $H_2O$ | Angle: | 14.9° |

| nano Emitter No.: | 2 |
|---|---|



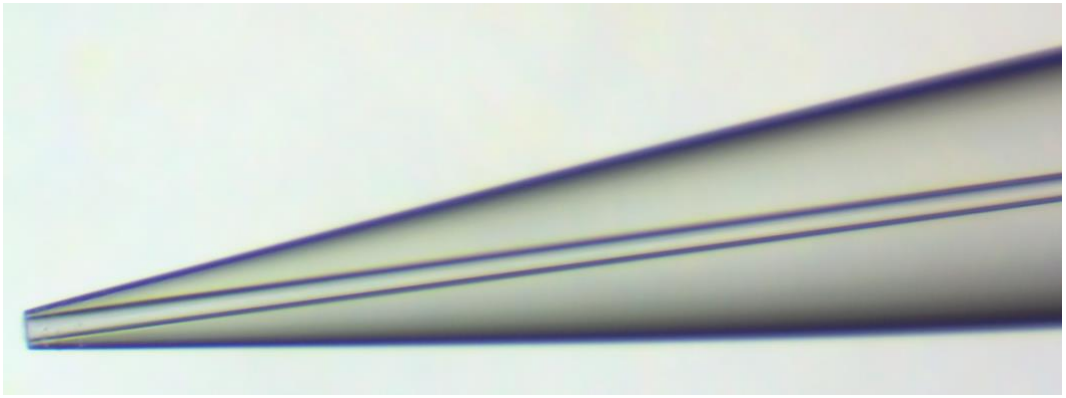
| Identification No.: | 2020 11 14_10 | Clogging test: | Pass |
|---|---|---|---|
| Sharp date: | 2020 11 14 | Length: | 200mm |
| Rinse: | HPLC $H_2O$ | Angle: | 14.5° |

| nano Emitter No.: | 3 |
|---|---|



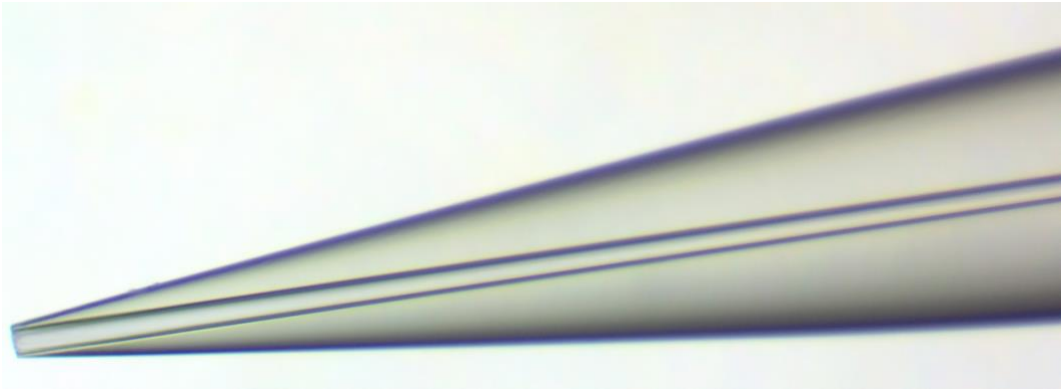
| Identification No.: | 2020 11 14_09 | Clogging test: | Pass |
|---|---|---|---|
| Sharp date: | 2020 11 14 | Length: | 200mm |
| Rinse: | HPLC $H_2O$ | Angle: | 14.1° |

| nano Emitter No.: | 4 |
|---|---|



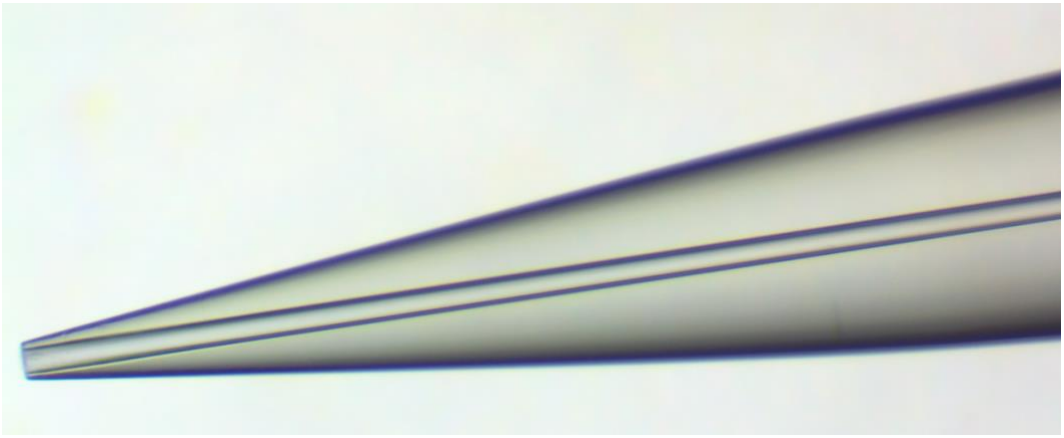
| Identification No.: | 2020 11 14_08 | Clogging test: | Pass |
|---|---|---|---|
| Sharp date: | 2020 11 14 | Length: | 200mm |
| Rinse: | HPLC $H_2O$ | Angle: | 14.2° |

| nano Emitter No.: | 5 |
|---|---|



| Identification No.: | 2020 11 14_07 | Clogging test: | Pass |
|---|---|---|---|
| Sharp date: | 2020 11 14 | Length: | 200mm |
| Rinse: | HPLC $H_2O$ | Angle: | 14.5° |

| nano Emitter No.: | 6 |
|---|---|



| Identification No.: | 2020 11 14_06 | Clogging test: | Pass |
|---|---|---|---|
| Sharp date: | 2020 11 14 | Length: | 200mm |
| Rinse: | HPLC $H_2O$ | Angle: | 14.8° |