ITEM OPPORTUNITY SYNOPSIS:

Silanized Glass Plates 3" x 5"	2021-095
Item to be Scouted	**Supplier Scouting Number**

339115

NAICS Code, if known

TECHNICAL INFORMATION:

1. Describe the Item:

a. Please describe the item application/ the end use of item.

Silane treated glass plates in sizes 3" x 5" for casting polymer films.

b. Provide the item number if applicable: (N95 Mask vs Protective Mask).

N/A

2. Summary of Technical Specifications and Performance Requirements:

a. Provide dimensions / size / tolerances / performance specifications for the item.

3" x 5" in size plates made of regular glass.

b. List required materials needed to make the product, Including materials of product components, if applicable.

Procedure 1: Glass sheets, chlorotrimethylsilane, dichlorodimethylsilane, heptane

Procedure 2: Glass sheets, chloroform, ethanol, (3-Aminopropyl)triethoxysilane, acetone

c. Are there applicable certification requirements to supply this item? (i.e. ISO certification) Are there any applicable regulations that apply to the production of this item? (i.e. FDA regulations or EPA regulations) Are there any other standard requirements? (i.e. ASME Standard, IEEE Standard) Please specify.

N/A

d. Describe the manufacturing processes (elaborate to provide as much detail as possible).

See attachments for Procedure 1 and Procedure 2

e. Additional Comments:
Is there other information that would impact the item's performance or usefulness? Please explain.

Uniform coating required on the glass surface.

BUSINESS INFORMATION:		**f. Potential Business Volume Estimate (i.e., # Units Per Day, Month, Year):**
		First order of 200 slides with follow up orders in the future.
		g. Target Price / Unit Cost Information:
		$0.50 per slide
	3. Delivery Requirements:	**a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)**
		30 days
		b. Describe packaging requirements (i.e., individually/ group packaging).
		Group packaging is acceptable.
		c. Where is this opportunity located? Is there a preferred shipping proximity - if applicable?
		Requirement in York, PA.
	4. Additional Comments:	**a. Opportunities will be posted for 30 days unless another timeframe is given below**
		_____ days
		b. Is there other information you would like to include?

Photos or diagrams of the item (helpful but not required).

Procedure for treatin~ ~lass

Chemicals:

- heptane
- dichlorodimethyl silane
- chlorotrimethyl siliane
- di. water

Equipment:

- 4 - 3L vessels/containers
- plastic pitcher for water
- one liter graduated cylinder
- 250mL graduated cylinder or similar
- white, plastic waste containers from oil vault (6796)

Let oil vault know that large amounts of silane waste will be produced and see if they can pick up the waste every day or every other day, if possible.

Set up four vessels of the appropriate size. Vessels are on top of gray cabinet in back of lab.
#1 14% dichlorodimethyl silane (420mL) and 86% heptane (2580mL)
#2 water
#3 17.5% (525mL) chlorotrimethyl silane and 82.5% heptane (2475mL
#4 water

Dip untreated glass in each container consecutively; holding them in #1 and #3 for 20-30 seconds. Let the rack with plates drip dry in the hood for approximately 5 minutes in hood before removing plates to bench top. Each batch will treat approximately 720 plates. After this amount, the chemicals should be discarded and changed for fresh if more plates are to be treated. After treatment, plates should be allowed to dry on bench top and any residue should be cleaned off with a Kimwipe or equivalent and plates put back in boxes marked with a "T" to indicate they have been treated.

Preparation of slides with adherent coating (silanizing slides)

This protocol describes preparation of slides with adherent coating to be used for immunohistochemistry (silanizing slides). Alternatively, coated slides are commercially available (quite expensive).

It is important that trays and racks are clean and free of dust!
Wear gloves whenever you touch the slides!

1. Coating (silanizing) slides

- Use clean standard microscopic slides (26 x 76 mm) with a labeling area and arrange them in trays with the surface freely accessible.
- Incubate slides 10 min in **$CHCl_3$**.
- Incubate slides 10 min in **96% EtOH**.
- Dry slides 10 min on the air.
- Incubate slides 5 min in **2% TESPA** in Acetone.
- Incubate slides 5 min in **Acetone W 1**.
- Incubate slides 5 min in **Acetone W 2**.
- Incubate slides 5 min in **H_2O**.
- Dry slides 10 min on the air.
- Dry slides 16-20 h at 50°C, cool 1 h at RT, and store them in clean boxes labeled “SILANIZED SLIDES/date”.

2. Materials and reagents

Glass Trays or **POM Trays** for slides and suitable slide holders (do not leave organic solvents in POM Trays!)

2% TESPA in Acetone: 2% 3-(Triethoxysilyl)-propylamin in Acetone [5ml/250ml] (prepare fresh!)

$CHCl_3$, **96% Ethanol**, **Acetone W 1 + 2** (technical grade, these can be reused several times)

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