

# Protocol for Preparing Poly-Lysine Slides for Microarrays page 1

## Basics:

- The following protocol is for coating 180 slides with poly-l-lysine.
- Be sure slide racks are bent slightly inwards in the middle to hold slides more securely.
- DO NOT use powdered gloves at any time during this protocol.
- To avoid dust, try to keep slides covered or submerged in solution at all times.
- It is recommended that at least two batches of poly-lysine slides are prepared per printing.

1. Prepare wash solution for 180 slides:  
200 g NaOH pellets  
1200 ml 95% EtOH  
800 ml H<sub>2</sub>O
2. Mix wash solution until NaOH pellets are completely dissolved.
3. Rinse slide dishes completely with H<sub>2</sub>O. Add one rack of Gold Seal Microslides(30 slides/rack) per slide dish. Pour wash solution over slides and cover.
4. Shake slides gently for 2 hours in wash solution. Although the slides come "pre-washed" there are still significant amounts of oils and debris. This basic wash is necessary to completely clean the slides before applying the poly-lysine.
5. Rinse slides with several liters of Milli-Q H<sub>2</sub>O. I like to fill a large container with H<sub>2</sub>O so that I can vigorously dump the rinse over the slides. Let the slides sit in the water while you prepare the poly-lysine solution.
6. Prepare poly-lysine solution (\*\*use only plastic-ware when preparing poly-lysine):  
180 slides: 1500 ml H<sub>2</sub>O  
205 ml 1XPBS (filtered)  
352 ml poly-l-lysine
7. Mix ingredients on stir plate in plastic beaker in order listed above.
8. Before adding poly-lysine, dump H<sub>2</sub>O from slides. Immediately after adding poly-lysine pour solution over slides.
9. Let slides shake gently in poly-lysine for 30 minutes.
10. Rinse slides again with Milli-Q H<sub>2</sub>O in same fashion as described above.
11. Immediately spin slides in tabletop at 600 rpm until dry.
12. To ensure slides are completely dry, place racks in 50°C vacuum oven for at least 5 min.

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**13. Store slides in a clean plastic slide box. Slides MUST be stored for at LEAST 14 days before spotting DNA. We do not recommend using slides that are more than 4 months old as degradation of poly-lysine has been observed.**

**\*\*Poly-lysine solution can be reused if you expect to prepare a large volume of slides. To do so, filter lysine solution after step 9 and store at 4°C in a plastic container. When ready to use, distribute solution to slide dishes and add an additional 10-15 ml of new poly-lysine to each dish. This should be repeated a maximum of 6 times.**