Procedure for Coating Microarray Slides with MCP-2
Rev. 2.3

(Note: surface must contain free hydroxyl groups. For optimal results, surfaces should be treated immediately prior to coating. A chemical treatment works well: 1N NaOH 1h, rinse with water, 0.1N HCl 20 min., rinse with water, then follow the procedure below. Oxygen plasma treatment for 10 min. is a superior method.)

1. Dilute the MCP-2 stock solution 1:50 with Coating Solution (Lucidant #COT1). Vortex to mix.
   For example, add 1 mL of 50X MCP-2 stock solution to 49 mL of Coating Solution (Lucidant #COT1) to prepare 50 mL.
   Prepare this solution immediately prior to use.

2. Immerse the slides in the solution 30 min. at room temperature.

3. Wash slides individually in a large volume of water. For small numbers of slides, one slide at a time is grasped by forceps and swirled for a few seconds in 1 L deionized water.

4. Immediately dry the slide with a stream of nitrogen.

5. Dry the slide at 80°C under high vacuum (< 2 mm Hg) for 15 min.

6. Store inside a vacuum-sealed bag, with a desiccant pack or in a desiccator. Store frozen (-20°C or lower). Under these conditions, coated slides are stable for at least 1 year.

Note: some cloudiness may occur when diluting the stock MCP-2 solution. This does not appear to affect the performance of the coating.

Suggested spotting guidelines

1. Control relative humidity (rh). Lower rh (30-45%) works best. A tray of desiccant inside the arrayer can help control rh on humid days.
2. Bake substrates at 80°C 15 min. immediately before spotting.
3. 50 mM trehalose in spotting buffer may slightly increase spot diameter, but leads to greater uniformity within spots.
4. An optimized Spotting Buffer is available from Lucidant (#SPT1).

Suggested blocking procedure

1. After spotting, block remaining reactive groups with Blocking Solution (Lucidant #BLK1) 30 min. at room temperature (50°C for oligonucleotide arrays).
2. Rinse well with deionized water.
3. Dry slides.