

MCP-3 Capillary Coating Procedure

This document describes the procedure for applying Lucidant's MCP-3 coating to a bare capillary.

Complete processing time: ~30 minutes.

Materials List: (Quantity – Tube – Contents/Storage Conditions)

10 – Tube A – dry polymer, -20 oC storage

1 – Tube B – liquid, 20mL, room temperature storage

DI Water – not supplied

1M NaOH – not supplied

0.1M HCl – not supplied

Preparation of Coating Solution: (5 minutes)

1. Add 1.0-mL of DI water to Tube A

Prior to coating bare capillaries, pipette 1.0 mL of DI water into a single Tube A. Allow for about 1 minute for the polymer to dissolve. The polymer solution can be mixed using a vortexer. Prior to use, check to see that all dry polymer has dissolved. The solution can be slightly turbid.

2. Add 1.0-mL of Tube B into Tube A

Slowly pipette 1.0-mL of the solution in Tube B into the polymer solution that is now in Tube A. Allow this mixture to stir until it is completely mixed which should take about 1 minute.

This solution can be mixed using a vortexer. The new solution in Tube A (~2-mL) is now called the “coating solution”. To minimize degradation of the activated polymer in Tube A, use immediately.

Single Capillary Pre-treatment and Coating: (~2.5 hours)

3. Flow 1M NaOH solution through capillary for 30 minutes.

4. Flow DI water through capillary for 5 minutes.

5. Flow 0.1M HCl solution through capillary for 60 minutes.

6. Flow the “coating solution” from Tube A (~2-mL) through the capillary for 5 minutes.

7. Stop the flow of the “coating solution” from Tube A and allow the “coating solution” to sit in the capillary for 20 minutes.

8. Rinse the capillary with DI water for 5 minutes.

9. Dry the capillary with a nitrogen flow at 50°C for 30 minutes.