



# Institute of Food Research

## Protocol from the *Salmonella* group



### Microarray glass slide blocking

**CAUTION:**

**BEWARE – 1,2-dichloroethane (DCE) is a potent carcinogen. Handle in a chemical fume hood and wear safety glasses.**

**STEPS 4 TO 9 IN THE MICROARRAY GLASS SLIDE BLOCKING SECTION SHOULD BE CARRIED OUT IN A FUME CUPBOARD**

1. Using our inhouse microarray printing facility, spots are printed on Corning GAPS II slides (Cat: 40005). Positions of finished microarray grids are marked using a diamond tipped pen.
2. Slides are baked for 2-4 h at 80°C or UV crosslinked twice using the autocrosslink program of a Stratalinker (Stratagene)
3. Place slides in a glass staining rack (VWR, Cat: 406/0230/00, ([Photo 1](#)) ready for blocking
4. In a fume hood, dissolve 1.5g of anhydrous succinic anhydride (Sigma, Cat: 239690) in 300 ml of anhydrous 1,2-dichloroethane (DCE) (Sigma, Cat: 284505) in a glass staining trough (VWR, Cat: 406/0230/10). Ensure all the succinic anhydride has dissolved (which may take some time and cannot be dissolved by heating) before continuing.

**BEWARE – 1,2-dichloroethane (DCE) is a potent carcinogen. Handle in a chemical fume hood and wear safety glasses.**
5. Add 3.75 ml of n-methylimidazole (Sigma, Cat: M50834)
6. In a fume hood incubate the slides (in the glass holder) in the DCE solution for 1 hour with gentle agitation.
7. Wash slides in 300 ml fresh DCE for 2-3 minutes.
8. In a fume hood, transfer slides to 1 L boiling water for 2 minutes. The water will bubble violently when this occurs.
9. Transfer the glass staining rack to a plastic microarray slide staining trough (VWR, Cat: 406/0236/00) containing 96% ethanol. Leave for 1 minute.

10. Remove slides from the 96% ethanol and spin dry slides at 1200 rpm for 5 minutes at room temperature in a plastic staining trough, [Photo 2](#). The slides should be spun dry immediately after removing from the ethanol so they don't dry out slowly causing smearing on the slides.
11. Place dried slides in a plastic slide staining rack (VWR, Cat: 406/0237/00) and plastic microarray staining trough until ready for use. The blocked slides can be stored for one month in the dark