

NIKON SIM Methods

Please note this is for reference only and should not be copied and pasted directly into manuscripts.

Sample Prep:

- 1.5 thickness coverslips are best for SIM. Ideally you will use a mounting media which has the same refractive index as glass. Prolong Gold/Diamond (Invitrogen) and homemade polyvinyl alcohol base medias (Gelvator/Moviol) give the best results. Vectashield is strongly discouraged. Of course TIRF SIM has to be conducted in aqueous media (e.g. PBS).
- Here is the guidance from Nikon on which objective and type of SIM to do for different thickness samples: 100x FOV = 36x36 μ m; 60x FOV = 32x32 μ m

100X 2D-SIM: $\leq 3 \mu\text{m}$

100X 3D-SIM: $\leq 7 \mu\text{m}$

100X TIRF-SIM $\leq 200 \text{ nm}$

60X 3D-SIM $\leq 20 \mu\text{m}$

n.b. 60x is water immersion