

DiATOME

at the forefront of innovation

Topographic contrast of ultrathin cryo sections for correlative superresolution light and electron microscopy

Our application specialist is at your disposal for any further information or assistance you might require.

cryo immuno°

The first cryo knife with a diamond platform, guarantees the best possible sectioning for sucrose infiltrated samples (Tokuyasu).

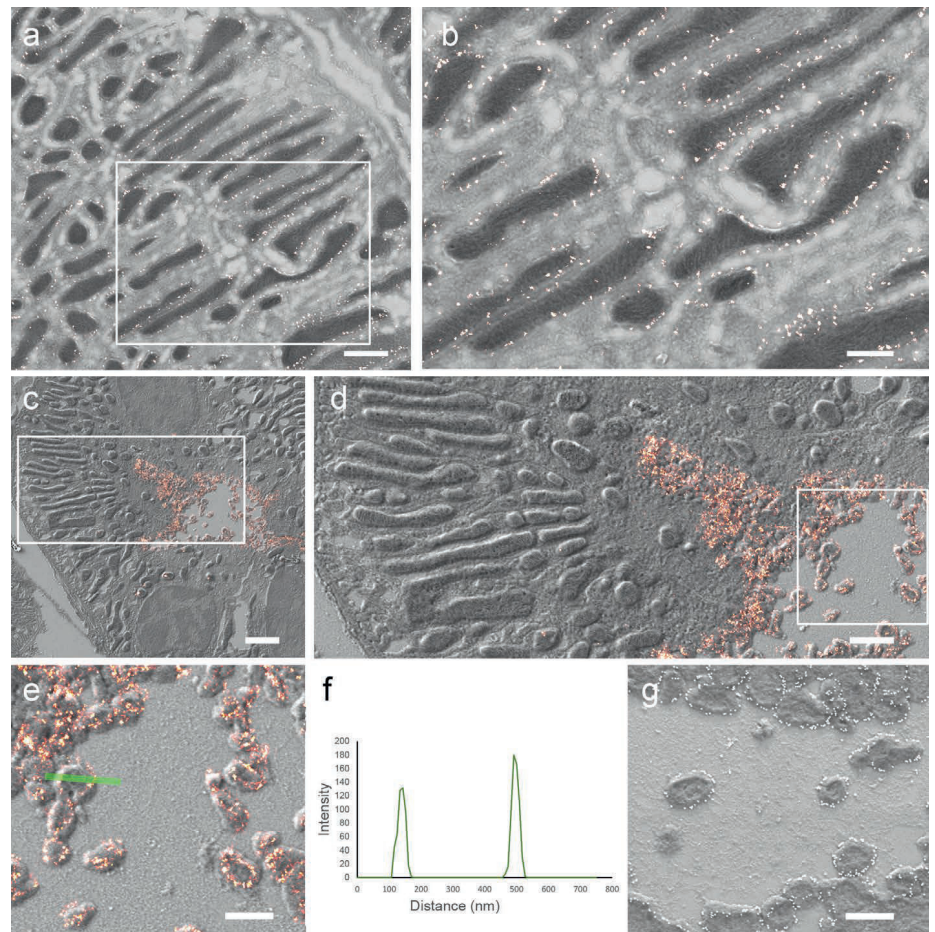
The diamond platform guarantees an easy and gentle section pick-up. The sections are collected directly from the diamond surface using a loop and a sucrose/methyl-cellulose droplet (W. Liou et al., *Histochemistry and Cell Biology*, Vol. 106, pp. 41 – 55, 1996. P. J. Peters et al., *Current Protocols in Cell Biology*, pp. 4.7.1 – 4.7.18, 2006).

The 35° angle leads to a considerable reduction in mechanical stresses and therefore to improved structure preservation in sucrose infiltrated samples (E. Bos et al., *Journal of Structural Biology* 175, pp. 62 – 72, 2011).



Figs. a – g: Correlative super-resolution light and electron microscopy of Tokuyasu cryo sections from mouse kidney. **a – b:** Tom20 protein is expressed in outer membranes of mitochondria. **c – f:** pNCC is localized at plasma membranes and in microvilli. **g:** Similar results are obtained with immunogold on the expression of pNCC. **Scale bars:** a: 1 μm ; c: 2 μm d: 1 μm ; b, e, g: 0.5 μm

Mateos et al., *Sci. Rep.* 6 34062 (2016) is licensed under CC BY 4.0.



Knife Type	Knife Angle	Size [mm]	Thickness Range	Boat Type	Code (new knife)*	Application
cryo immuno	35°	2.0mm 3.0mm	30–300	Triangular holder	DCIMM3520 DCIMM3530	• Sucrose infiltrate samples (Tokuyasu)

*** Product Codes shown are for new knives.**

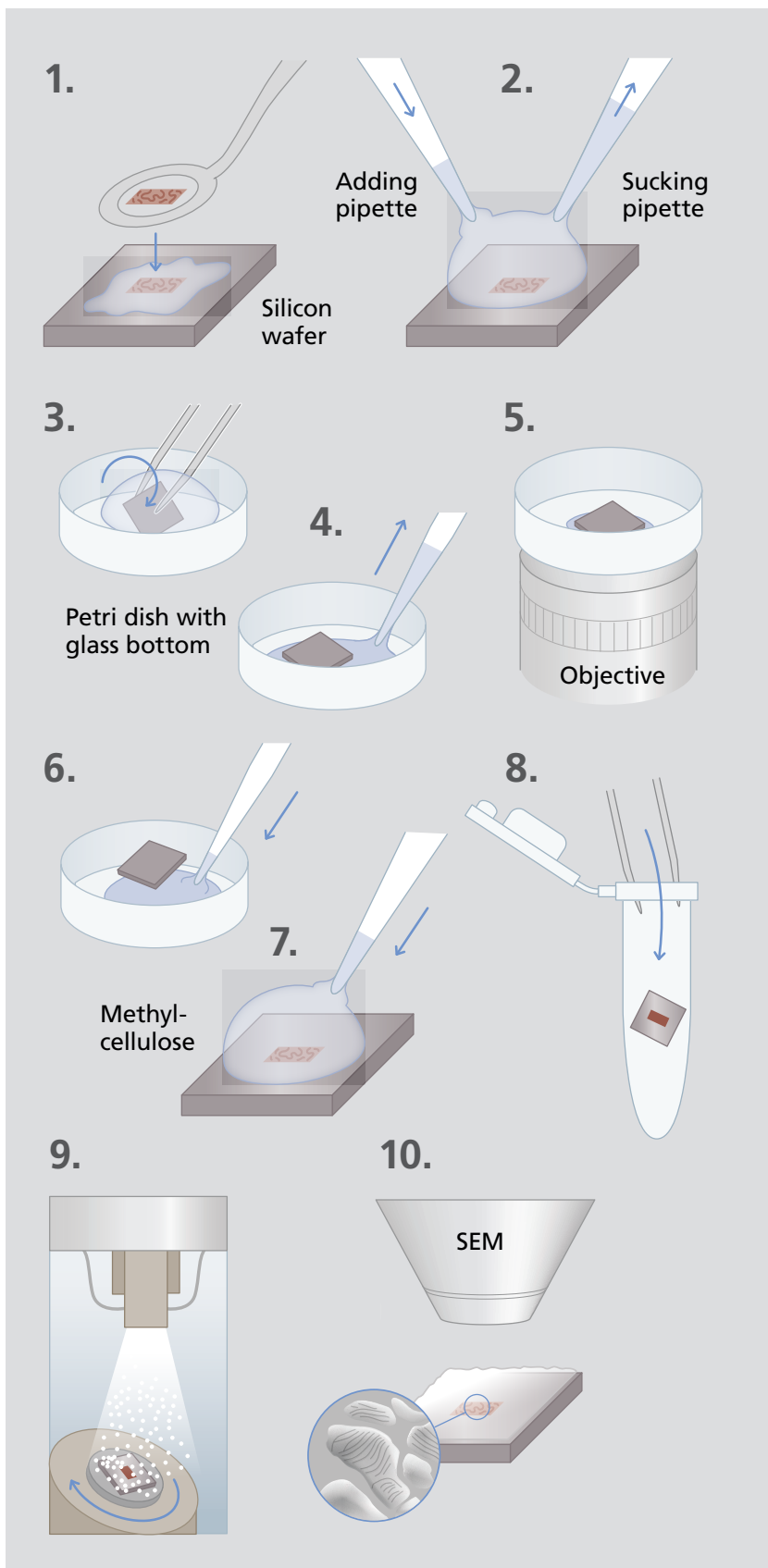
To order a resharpened knife, add “-R” to the Product Code that corresponds to your knife.

Example: Product Code DCIMM3530-R = Resharpened cryo immuno 3.0mm 35° Knife.

Figs. 1 – 10:

Preparation procedure to gain topographic contrast of ultrathin cryo sections for correlative super-resolution light and electron microscopy. Design work produced by T. Gschwend, Multimedia and E-Learning Services, University of Zurich.

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