

The Peel-Blot Technique: A Cryo-EM Sample Preparation Method to Separate Single Layers from Multi-Layered or Concentrated Biological Samples

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Materials

Name	Company	Catalog Number	Comments
600-mesh grids	SPI	2060-C-XA	
Anti-capillary forceps	Ted Pella	510-5	
Carbon to coat mica			
Cryo-EM			Cryo-EM grids may be screened at 120 kV or 200 kV. High-resolution data is collected at 300 kV.
Dumppont #5 forceps	Ted Pella	5622	
Grid box for cryo-EM storage	Ted Pella	160-40	
Kim Wipes			
Liquid nitrogen			
Mica	Ted Pella	56	The mica is carbon-coated and cut into squares that are slightly larger than a TEM grid. The carbon thickness may require optimization to avoid thin carbon that breaks easily upon multiple peel blots.
Negative stain			1-2% uranyl acetate is suitable for many samples. Other stains such as phosphotungstic acid can be substituted.
Parafilm			
Polystyrene container			Used for vitrifying the peel-blot grid. A polystyrene shipping container can be recycled for this purpose and lined with aluminium foil.
Submicron filter paper	MilliporeSigma	DAWP04700	
Transmission electron microscope	JEOL	JEM-1400	Any TEM operated at an accelerating voltage of 80-120 kV will be suitable for screening of negatively stained grids.

Trehalose			Prepare 4% trehalose solution.
Whatman #4 filter paper	MilliporeSigma	WHA1004150	This corresponds to the 20-25 μm pore size filter paper in the protocol.