

Materials List for:

Studying Mitotic Checkpoint by Illustrating Dynamic Kinetochore Protein Behavior and Chromosome Motion in Living *Drosophila* Syncytial Embryos

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URL: <https://www.jove.com/video/3763>

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Materials

Name	Company	Catalog Number	Comments
Essential equipment and reagents:			
Confocal imaging system: The imaging system described in this protocol is a Leica TCS SP2 laser scanning confocal inverted microscope system. The method described is also suitable perhaps with some minor modifications for other imaging systems.			
Dissecting microscope: We use an Olympus SZX7 with DF PLAPO 1X-4 lens.			
Needle puller: Flaming/brown micropipette puller (from Sutter Instrument, Model: P-97).			
Microinjection system: An Eppendorf microinjection system is described but any other appropriate system can be used.			
Fly food distributor: Jencons Scientific Ltd peristaltic pump.			
Reagents:			
Maize meal	SUMA, UK		100.0g
Brown sugar	Billington's, UK		50.0g
Dry yeast	DCL YEAST Ltd. UK		25.0g
Agar	Fisher Scientific	106556	12.5g
Sorbic acid	BDH, VWR International Ltd. UK	8829310	0.4g
Benzoic acid	Fisher Scientific	1019599	2.9g
Nipagin (Methyl -4-Hydroxybenzoate)	BDH, VWR International Ltd. UK	K35969015	0.9g
H ₂ O up to 1L			
Table 1. Fly food ingredients.			
Holocarbon 700 and 27 oils purchased from Sigma.			
Dry yeast: Thomas Allison, UK.			
Preparing the heptane glue: Take about 1.5 meters of double-sided Scotch tape, put it into a 15ml Falcon tube with 5ml of heptane and rotate for 3-5 hours or overnight. After that time split into 4 equal aliquots in 1.5 ml eppendorf centrifuge tubes and spin for 5 min at a fast speed in a bench-top centrifuge to remove any debris. Store the heptane glue solution in a 10ml volumetric flask and keep for use. The glue strength will vary according to the concentration and the amounts of the glue used. Normally, the thinner glue produces lesser noisy background when scanned by confocal microscope.			
<ul style="list-style-type: none"> <i>Coverslip:</i> BDH, VWR International Ltd. UK <i>Microscope slide:</i> BDH, VWR International Ltd. UK <i>Siliconised glass capillaries:</i> GC-100-10, Harvard <i>Fine loading tip:</i> 20µl eppendorf lot: W215818J Tweezers Fine pen brush 			