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Product Name :

DNA/Chromosome Staining Lab Activity

Product Code :

SLE/EB/13



Science Lab
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Description :

The DNA/Chromosome Staining Lab Activity gives each student a preserved plant root tip to stain and squash into a slide of dividing cells. The tips were grown and harvested for maximum mitotic activity before preservation, so every slide should show several examples of each stage of mitosis. One kit holds enough material for30 students working individually.

Root tip staining activity details

Parameter	Detail
Specimen material	Specially grown and preserved plant root tips (included)
Preparation of material	Grown and harvested under specific conditions for maximum mitotic activity at the time of preservation
Expected result	Multiple examples of every stage of mitosis on each microscope slide prepared
Student procedure	Prepare and stain samples, then perform a cell squash for microscopic observation
Skills taught	Cell division; tissue staining; microscopic observation
Quantity	Enough material for 30 students working individually
Also needed	Compound microscope with a high-power objective
Product code	SLE/EB/13
Minimum order	10 units
Dispatch	Usually within 7 to 10 working days
Supplied by	ScienceLab (Jain Scientific Equipments Pvt Ltd), Ambala, India

Root tip squash practical, step by step

Making the squash. Stain a root tip as the kit instructions direct, lay it on a glass microscope slide in a small drop of liquid and trim away the older part so that only the darker tip end remains. Lower a cover slip, fold filter paper over it and press straight down with the thumb so the cells spread into a single layer.

Finding and naming the stages. Begin on low power of a binocular LED microscope and look just behind the root cap for a band of small, square, tightly packed cells. Switch to high power and draw one cell each in prophase, metaphase, anaphase and telophase, labelling the chromosomes, the equator and the poles. Check the drawings against a prepared mitosis and meiosis slide set.

Scoring a mitotic index. Each student counts the cells in one field of view and marks each
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