

Lighting Up Life: Expression of GFP in *C. elegans*



Scientists can directly manipulate an organism's genome to produce a phenotype using engineered genes called transgenes. In this experiment, students will use fluorescent microscopy and PCR to analyze *C. elegans* (nematodes) that have been engineered to express the Green Fluorescent Protein.

Kit includes: instructions, *C. elegans*, *E. coli* OP50 cells, S-Buffer, Ready-Pour NGM Agar, NGM Medium Salts, UltraSpec-Agarose™ powder, Electrophoresis buffer (50x), 10x Gel Loading Solution, InstaStain® Ethidium Bromide, FlashBlue™ Liquid Stain, tubes, pipets, wax beads, petri dishes, Counting Chamber, Microscope Slides, Sterile Loops.

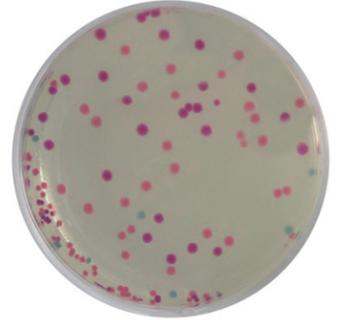
All you need: Covered Box, Fluorescent and Dissecting Microscopes, timers, waterbath, incubator (optional), thermal cycler or three waterbaths, electrophoresis apparatus, power supply, balance, microcentrifuge, UV transilluminator or white light visualization system, automatic micropipets with tips, microwave or hot plate, pipet pump, flasks or beakers, hot gloves, distilled or deionized water, ice buckets and ice.

-  For 10 Lab Groups
-  Growing Bacteria Overnight
Plating Worms 15 min.
Worm Growth 3-4 days
Set Up 30 min.
PCR 2 hours or overnight
Electrophoresis 90 min.
-  Cat. #858 \$199

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Rainbow Transformation

Transformation is of central importance in molecular cloning since it allows for the selection, propagation, expression and purification of a gene. Positive selection for cells containing plasmid DNA is accomplished by antibiotic growth selection. In this experiment, your students will transform bacteria with a new set of rainbow color plasmids that transform non-pathogenic bacterial cells into bright, colorful cells.



-  For 10 Lab Groups
-  Set Up & Plating 50 min.
Incubation overnight
Transformation efficiency 15 min.
-  Cat. #224 \$99

Kit includes: instructions, cells, plasmid DNA, IPTG, cells, Ampicillin, transformation solution, ReadyPour™ Agar, Luria broth, petri dishes, sterile pipets and loops.

All you need: waterbath, 37° C incubation oven, microwave or hot plate.

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Detecting the Silent Killer: Clinical Diagnosis of Diabetes

Over 380 million people worldwide are afflicted by diabetes mellitus, a chronic disease that leads to high blood sugar. Due to genetic predisposition and high-calorie, low-activity lifestyles, that number continues to grow. Without early detection and treatment of diabetes, severe medical complications can occur. In this simulation, students will diagnose diabetes in three patients using the urine glucose test and the Enzyme-linked Immunosorbent Assay (ELISA).



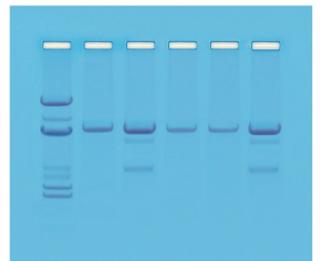
-  For 10 Lab Groups
-  Complete in 90 min.
-  Cat. #280 \$139

Kit includes: instructions, samples, antigens & antibodies, various solutions and reagents, pipets and microtest tubes.

All you need: 37° C incubation oven, waterbath, automatic micropipets with tips, laboratory glassware, distilled or deionized water.

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Detection of Genetically Modified Organisms (Ready-to-Load™)



For centuries, humans have used selective breeding and conventional hybridization to produce desirable qualities and to increase crop yields. Today, scientists use genetic engineering to directly manipulate the DNA, quickly producing these desirable traits. In this experiment, students will use agarose gel electrophoresis to explore the molecular methods used by scientists to identify genetically modified organisms. No thermal cycling is required. Students are also encouraged to explore the controversy surrounding the use of genetically modified organisms.

-  For 6 Gels
-  Complete in 60 min.
-  Cat. #121 \$79

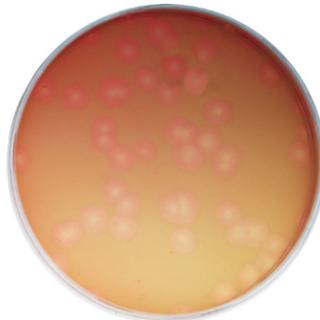
Kit includes: instructions, Ready-to-Load™ QuickStrip™ DNA samples, UltraSpec-Agarose™ powder, practice gel loading solution, electrophoresis buffer, InstaStain® Blue and FlashBlue™ stain, calibrated pipet, and microtipped transfer pipets.

All you need: electrophoresis apparatus, power supply, automatic micropipets and tips, balance, microwave or hot plate, white light visualization system.

[Click HERE for more info!](#)

Exploring the Bacteriophage Life Cycle

Although bacterial viruses, or bacteriophages, are present in many natural environments, they cannot survive autonomously. They require a host cell to reproduce and survive. In this experiment, students will learn about the different life cycles of bacterial viruses. They will then perform a viral plaque assay to indirectly visualize a virus and determine its titer.



-  For 10 Lab Groups
-  Complete in 120 min.
-  Cat. #209 \$99

Kit includes: instructions, cells, Phage Beads, Ready Pour Agar, COLORTOP™ Agar, Microtest tubes, Sterile loops, Petri Plates, Luria Broth, PBS.

All you need: 37° C incubation oven, water bath, automatic micropipets with tips.

[Click HERE for more info!](#)

Candy Electrophoresis

Investigate how agarose gel electrophoresis unlocks the color code used by food scientists to make colorful candies. Students will extract color additives from common candies and separate the dyes on agarose gel electrophoresis. A fun lab extension involves the use of candy to build a DNA model.



-  For 10 Lab Groups
-  Complete in 45 min.
-  Cat. #5-47 \$55

Kit includes: instructions, Dye Extraction Buffer, Standard Dye Marker, UltraSpec-Agarose™ powder, 50X Electrophoresis buffer, Practice Gel Loading Solution, Transfer pipets, Plastic Cups, Microcentrifuge tubes.

All you need: various colored candy samples, electrophoresis apparatus, power supply, Automatic micropipets with tips, Microwave or hot plate, Pipet pump, Flasks or beakers.

[Click HERE for more info!](#)



EdvoFoto™ Digital GelCam

EDVOTEK has integrated an easy-to-use digital camera and specially designed hood to provide a low cost solution for gel photodocumentation.

Features: UV hood with 7 x 14 cm viewing area, 40.5mm Bandpass Filter, 5MP Photo, 720p HD Video, USB 2.0, Mac/Windows compatible.

-  Cat. #551 \$599

[Click HERE for more info!](#)

White Light Box

EDVOTEK's all new White Light Box features a spacious 25 x 25 cm viewing area illuminated by long life LEDs and is housed in a slim aluminum body. It's designed to safely enhance the visualization of DNA stained with FlashBlue™, proteins stained with Coomassie Blue and autoradiograms.



Features: 25 x 25 cm Viewing Area, 90 Lumens LED Chips, 8 Watt Power Rating, 110/220 Dual Voltage, 50/60 Hz Frequency, Two-Year Warranty, Made in the USA.

-  Cat. #552 \$109

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