

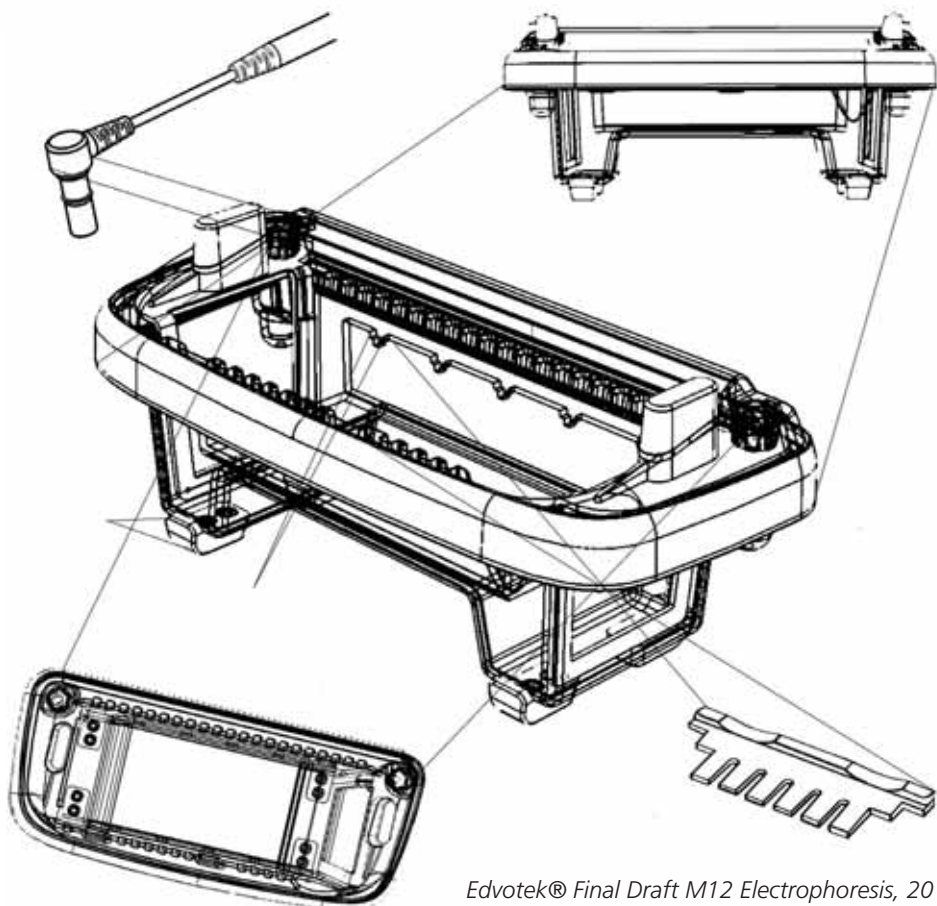
EDVOTEK®

# Innovation and Inquiry

2017 PRODUCT HIGHLIGHTS



# DNA ELECTROPHORESIS



*Edvotek® Final Draft M12 Electrophoresis, 2015*

Electrophoresis is a powerful biotechnology technique that is simple enough to be performed by students of all ages. As a leader in the electrophoresis field, EDVOTEK® has always created equipment with the classroom laboratory in mind. Recently, we re-visited our original designs and spent considerable thought on how to make our electrophoresis units safer, more intuitive, and efficient. The end result has incorporated the following NEW features while maintaining the attributes that made our original M12 a classic.

## **New M12 Features:**

- Large push tabs makes lid removal simple.
- Contoured lid for better gel viewing.
- Better venting for less condensation.
- Leads are tucked out of the way.
- Replaceable electrodes for easy repair.
- Pour spout helps with post lab cleanup.



## 01 M12 or M12 Dual Electrophoresis Apparatus

Run up to two groups of student samples at the same time. The M12 features one 7 x 14 cm gel tray and the M12 Dual features two 7 x 7 cm gel trays. Gives excellent results in 30-40 minutes.

**Cat. #502 M12 \$199**  
[www.edvotek.com/502](http://www.edvotek.com/502)

**Cat. #504 M12 Dual \$215**  
[www.edvotek.com/504](http://www.edvotek.com/504)

## 02 M36 HexaGel™ Electrophoresis Apparatus

DNA electrophoresis for your whole class with just a single gel tank! Six groups of students can load their own individual gels and the six gels are run together in 30-40 minutes giving excellent results! Includes six 7 x 7 cm trays.

**Cat. #515 M36 \$325**  
[www.edvotek.com/515](http://www.edvotek.com/515)

Made in the USA!

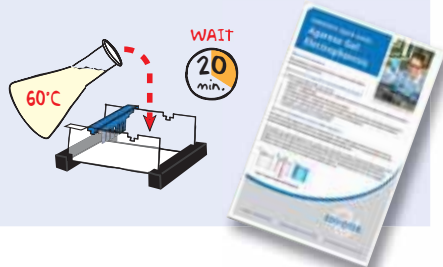


Lifetime Warranty & Tech support!

## QuickGuide™ Agarose Gel Electrophoresis



[www.edvotek.com/Quick-Guides](http://www.edvotek.com/Quick-Guides)



## What's in Your 100-Series Kit?

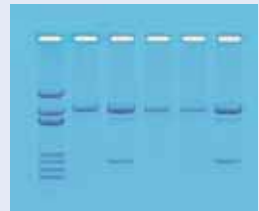
For many years, EDVOTEK® has worked with teachers to make electrophoresis experiments easy to perform in a classroom setting. For example, we have streamlined our pre-lab preparations by providing the DNA samples as pre-aliquoted QuickStrips™. The agarose powder and electrophoresis buffer are also supplied in pre-measured quantities, meaning that you just need to dilute, dissolve and go!




### Detection of Genetically Modified Organisms

*For 8 Gels.* 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 cycler is required.

**NEW**



**Cat. #121 \$89 [www.edvotek.com/121](http://www.edvotek.com/121)**



**EDVOTEK®**  
exclusive!


**QuickStrips™**

Conveniently provides the required samples and eliminates the need for PreLab teacher sample preparation.

Each single-serve mini-tube is sealed with leak-proof foil that is easily punctured with a pipet tip!

**READY TO LOAD**

Provided in EDVOTEK® 100 series and "S" series kits at no additional cost!

Look For THIS Icon 

## Principles & Practice of Agarose Gel Electrophoresis

*For 8 Gels.* Demonstrate to your class how electrophoresis separates molecules on the basis of size and charge. A safe, colorful, fast and simple way to teach a technique that will engage your students.

**Cat. #101    \$59    [www.edvotek.com/101](http://www.edvotek.com/101)**



## The Secret of the Invisible DNA: A Genetics Exploration

*For 10 Lab Groups.* Explore genetics with our "out of this world" experiment! In this lesson, we explore how DNA technology can be used to explore the relationship between genotype and phenotype using one of two exciting scenarios (medical diagnostics or alien genetics). Fluorescent dyes simulate DNA fragments, eliminating post-electrophoresis staining and saving you valuable classroom time!

**Cat. #S-52    \$65    [www.edvotek.com/S-52](http://www.edvotek.com/S-52)**

Improved!



## Cholesterol Diagnostics

*For 8 Gels.* Elevated blood cholesterol has been established as a serious risk factor for coronary heart disease and stroke which are leading causes of death in the United States. A disease known as familial hypercholesterolemia (FH) causes an increase in blood levels of the "bad" form of cholesterol, known as low density lipoprotein (LDL). In this experiment, a simulated genetic test for FH is demonstrated in which patients are tested for a DNA polymorphism linked to the FH gene.

**Cat. #118    \$89    [www.edvotek.com/118](http://www.edvotek.com/118)**



**NEW**

## EDVOTEK's All-NEW DNA Standard Marker

**Our all-new DNA Standard Marker Features:**

- Better separation
- Easier band measurements
- No unused bands

DNA Standard Marker sizes, in base pairs:  
6751, 3652, 2827, 1568, 1118, 825, 630.

Stain	Vol. to Load	# of Lanes
InstaStain® Blue	35 µl	20
FlashBlue™	35 µl	20
SYBR® Safe	20 µl	35
InstaStain® EtBr	20 µl	35

6751 —  
3652 —  
2827 —  
1568 —  
1118 —  
825 —  
630 —



**Cat. #750-1 \$35 800 µl**  
[www.edvotek.com/750-1](http://www.edvotek.com/750-1)

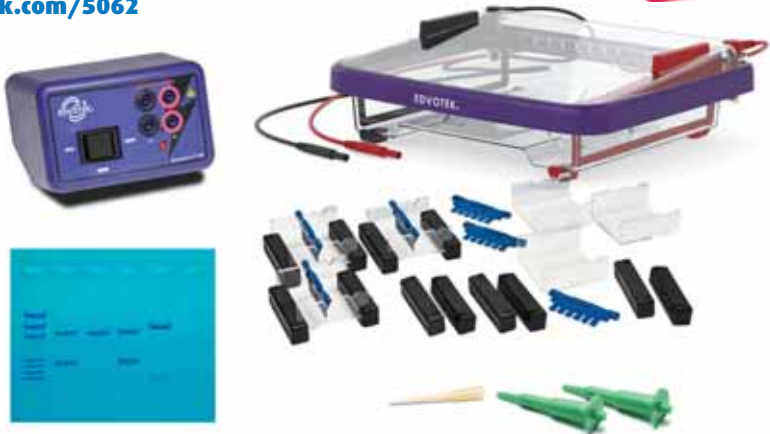
## Classroom DNA Electrophoresis LabStation™

*Supports up to 24 Students!*

**Includes:**

- 1 Cat. #515 M36 HexaGel™ Electrophoresis Apparatus (Six 7 x 7 cm Trays)
- 1 Cat. #509 DuoSource™ 150 (75/150 V for 1 or 2 units)
- 2 Cat. #588 Fixed Volume MiniPipet™ (40 µl)
- 1 Cat. #636 Yellow Micropipet Tips (1 - 200 µl / 2 Racks of 96)
- 1 Cat. #130 DNA Fingerprinting Classroom Kit

**Cat. #5062 \$519**  
[www.edvotek.com/5062](http://www.edvotek.com/5062)



## EDVOTEK® Fixed Volume MiniPipets™

\$24

Robust, accurate, easy to use, color coded, fun & cost effective micropipets which use standard micropipet tips. No need to calibrate and impossible to measure the wrong volume! Uses standard 1 - 200  $\mu$ l tips.

Cat. # 585	5 $\mu$ l MiniPipet
Cat. # 586	10 $\mu$ l MiniPipet
Cat. # 586-1	20 $\mu$ l MiniPipet
Cat. # 587	25 $\mu$ l MiniPipet
Cat. # 587-1	30 $\mu$ l MiniPipet
Cat. # 587-2	35 $\mu$ l MiniPipet
Cat. # 588	40 $\mu$ l MiniPipet
Cat. # 588-1	50 $\mu$ l MiniPipet
Cat. # 588-2	75 $\mu$ l MiniPipet
Cat. # 588-3	100 $\mu$ l MiniPipet
Cat. # 588-4	200 $\mu$ l MiniPipet



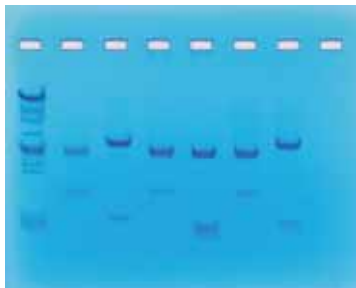
[www.edvotek.com/Edvotek-Fixed-Volume-MiniPipets](http://www.edvotek.com/Edvotek-Fixed-Volume-MiniPipets)

## DNA Fingerprinting Using Restriction Enzymes

*For 6 Gels.* Teach your students about restriction enzyme digests in the context of forensic science! Your students will cut DNA with restriction enzymes and then compare the banding pattern of the crime scene DNA versus that of two suspects using agarose gel electrophoresis.

**Cat. #225 \$105**

[www.edvotek.com/225](http://www.edvotek.com/225)



## Analysis of DNA Methylation Using Restriction Enzymes

*6 sets of Restriction Digestions.* In this experiment, students explore the effects of DNA methylation on restriction enzyme activity. Plasmid DNA will be digested with the restriction enzymes *DpnI* and *DpnII*. When digested with these enzymes, methylated and unmethylated DNA will produce restriction fragments that are distinct from one another. The restriction fragments are then analyzed using agarose gel electrophoresis. After visualizing the gel, students determine which sample is methylated.

**Cat. #205 \$125**

[www.edvotek.com/205](http://www.edvotek.com/205)



# INNOVATION IN PCR

## EdvoCycler™

Our EdvoCycler™ is a state-of-the-art, affordable, classroom PCR machine! So easy to use...it comes pre-programmed with all EDVOTEK® PCR kit protocols. These programs may be modified or deleted, plus there are extra memory slots for additional programs! The vivid 7-line LCD displays all program parameters on a single screen. A heated lid makes operation a snap. No oil is required. Proudly made in the USA and backed by a 2 year warranty!



**\$1,299**

for a  
Limited Time  
Only\*

Cat. #541 ~~\$1,799~~ \$1,299  
[www.edvotek.com/541](http://www.edvotek.com/541)

*\*For a limited time only, we are offering the EdvoCycler™ for \$1,299...a \$500 savings! Call 1.800.EDVOTEK using the source code **EVC2017** to take advantage of this amazing offer.*

**Sample capacity** 25 x 0.2 ml PCR tubes  
**Maximum ramp rate, °C/sec** 3° C  
**Temperature range** 4-99° C

**Display** Vivid 7-line LCD display

- Pre-loaded with all EDVOTEK® PCR programs
- Fully programmable
- Standalone machine - no PC required!
- Heated lid with magnetic latch
- No oil required
- Made in the USA





## What are PCR EdvoBeads™?

PCR EdvoBeads™ are a carefully formulated mixture of PCR components that have been freeze-dried into convenient, individual beads.



### What's in a PCR EdvoBead™?

- **DNA Polymerase** - This enzyme synthesizes new DNA strands.
- **dNTPs** - The building blocks for the new DNA strands.
- **Mg<sup>2+</sup>** - A required co-factor for DNA Polymerase.
- **Buffer** - Regulates the chemical environment of the PCR experiment.

### What are some advantages of PCR EdvoBeads™?

- Easy preparation of single PCR samples -- no need to calculate the concentration of each component.
- Using PCR EdvoBeads™ avoids multiple pipetting steps, reducing errors and the risk of contamination while saving time.
- PCR EdvoBeads™ are stable at room temperature with desiccant, making storage a breeze and minimizing expensive shipping charges.

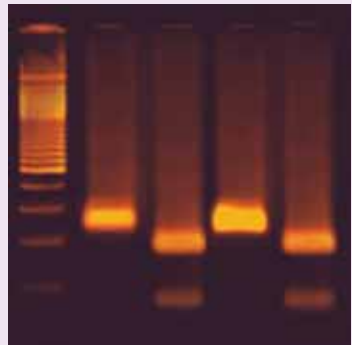
**For additional information about PCR EdvoBeads™, see <http://www.edvotek.com/625>**

### Exploring the Genetics of Taste: SNP Analysis of the PTC Gene Using PCR

*For 25 Reactions.* Single nucleotide polymorphisms (SNPs or "snips"), are the most common type of genetic variation among people. In this experiment, students identify the presence of the SNP in an amplified segment of the PTC gene that affects an individual's ability to detect the characteristic bitter taste of PTC paper.

**Cat. #345 \$219**  
[www.edvotek.com/345](http://www.edvotek.com/345)

**NEW**  
& improved!



# INNOVATION IN PCR

**NEW**

**LyphoTemplate™**

**LyphoPrimer™**

These kits feature NEW EDVOTEK® **LyphoTemplate™** & **LyphoPrimer™**. The reagents have been freeze-dried for easy storage — the Lypho-Template™ and LyphoPrimer™ are stable in the refrigerator! Just add buffer and perform your experiment! Furthermore, the reagents are color coded so that a correctly assembled PCR sample should be green in color. These innovations will help ensure experimental success.

## **LyphoTemplate™ and LyphoPrimer™ now available in the following kits:**

### **PCR Amplification of DNA**

*For 10 Lab Groups.* In this easy PCR experiment, students will make billions of copies of a small amount of DNA in just 90 minutes! They will just need to mix template DNA & primers with PCR beads that contain all of the other components required to carry out a PCR reaction. Students will see the increasing amounts of DNA for themselves, taking samples every few cycles and analyzing them on a DNA gel.

**Cat. #330 \$149**

[www.edvotek.com/330](http://www.edvotek.com/330)

### **Quick PCR**

*For 10 Lab Groups.* In this experiment, students will gain an understanding of the traditional three-step Polymerase Chain Reaction (PCR). Using PCR and Agarose Gel Electrophoresis, they will analyze a small section of Lambda DNA in a time-saving two-step process.

**Cat. #372 \$169**

[www.edvotek.com/372](http://www.edvotek.com/372)



[www.edvotek.com](http://www.edvotek.com)

- Online Catalog
- Order Products
- Experiment Protocols
- Tech Support
- Resources!



**FREE - Download our  
PCR Quick Guide:**

[edvotek.com/Quick-Guides](http://edvotek.com/Quick-Guides)



## TruBlu™ Blue Light Transilluminator

The all-new TruBlu™ Blue Light Transilluminator is for viewing DNA gels stained with SYBR® Safe — eliminating the need for UV light or ethidium bromide. The large 8 x 15 cm viewing area, the high intensity control and orange lid ensure superior visualization.



**Cat. #557 \$349**  
[www.edvotek.com/557](http://www.edvotek.com/557)

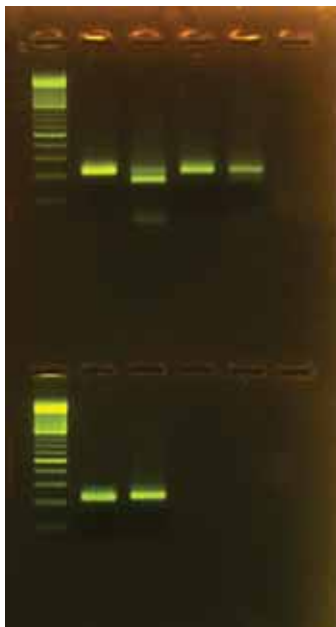
### Features:

- Viewing Area: 8 x 15 cm
- Optimized for various gel sizes
- Blue Light High Intensity Control
- Orange Contrast Lid
- Most Vivid Results in Education



Developed in concert with the inventor of the technology under license from Clare Chemical Research, Inc.  
 US Patent Nos. 6,198,107, 6,512,236, 6,914,250  
 EP Patent No. 0 965 034

Actual results from EDVO-Kit #345 using SYBR® Safe and the TruBlu™ Blue Light Transilluminator to visualize the DNA.



## Stain Your Gels with SYBR® Safe

Non-mutagenic and SAFE for the Biotechnology Classroom! As sensitive as ethidium bromide. Excellent gel results! Concentrate for 750 ml.

**Cat. #608 \$35**  
[www.edvotek.com/608](http://www.edvotek.com/608)

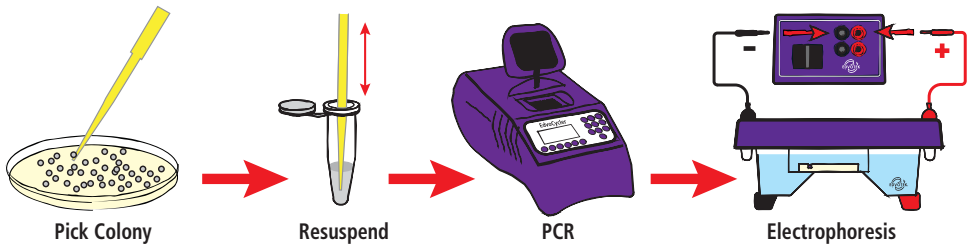


Enhance your Transformation with

## COLONY PCR!

Colony PCR represents a simple and easy way to determine whether cloning and transformation experiments were successful. In this experiment, students will use colony PCR to analyze bacteria transformed with pFluoroGreen. A single colony will be used as the DNA template for PCR. The resulting PCR sample will then be analyzed using agarose gel electrophoresis. If the bacteria have been transformed successfully, a PCR product representing the GFP gene will be produced. A bacterial housekeeping gene is amplified at the same time as a positive control. The presence of both bands is indicative of a successful transformation experiment.

### Flowchart of Colony PCR



### GFP Transformation Extension: Colony PCR

*For 10 Lab Groups.* In this experiment, students will use colony PCR to analyze bacteria transformed with pFluoroGreen.

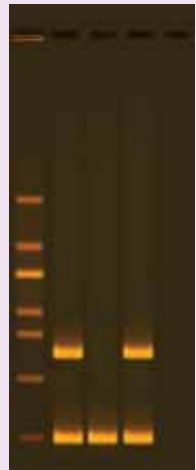
**Cat. #323 \$185**

**[www.edvotek.com/323](http://www.edvotek.com/323)**

*This kit is intended for use in conjunction with the following EDVOTEK Transformation Kits:*

- EDVO-Kit #222
- EDVO-Kit #223/AP08
- EDVO-Kit #303

**NEW**



## Identification of Genetically Modified Foods Using PCR

**BEST  
SELLER**

*For 10 Lab Groups.* Some foods contain raw materials from genetically modified organisms (GMO). Examples include tofu, corn flakes and corn meal. In this experiment, your students will extract DNA from food or plant material and perform PCR to determine if any GM indicator genes are present. Amplified DNA is separated and sized by agarose gel electrophoresis.



**Cat. #962 \$175**

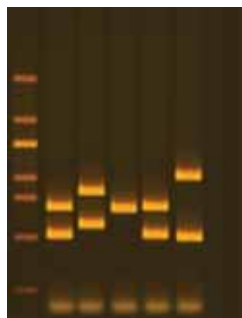
[www.edvotek.com/962](http://www.edvotek.com/962)

## VNTR Human DNA Typing Using PCR

*For 25 Students.* In DNA fingerprinting, variable number tandem repeats (VNTR) are used to identify individuals. In this kit, students will type themselves at the D1580 locus on chromosome 1. This region contains between 14 and 40 copies of a 16 base pair repeat.

**Cat. #334 \$189**

[www.edvotek.com/334](http://www.edvotek.com/334)



## Classroom PCR LabStation™

*Supports 25 Students.*

### Includes:

- 6 Cat. #502 M12 Electrophoresis Apparatus (7 x 14 cm Tray)
- 3 Cat. #509 DuoSource™ 150 (75/150 V, for 1 or 2 units)
- 6 Cat. #590 Variable MicroPipet (5 - 50 µl)
- 2 Cat. #534 Piccolo Microcentrifuge
- 1 Cat. #541 EdvoCycler™ (25 x 0.2 ml)
- 1 Cat. #558 Midrange UV Transilluminator (7.5 x 7.5 cm filter)
- 1 Cat. #539 1.8 L Waterbath

**Cat. #5067 \$4,999**

[www.edvotek.com/5067](http://www.edvotek.com/5067)



Forensic science (or forensics) is the application of scientific knowledge to answer questions of interest within the legal system. This interdisciplinary field uses scientific techniques from diverse fields like Biotechnology, Toxicology, Chemistry, and Physics to characterize physical evidence found at the scene of a crime. After analyzing the evidence, forensic scientists provide detailed reports and expert testimony. Using our lesson plan, your students will become crime scene investigators as they collect and analyze evidence to determine “whodunnit.”

## Free Lesson Plan:

Left at the Scene of the Crime!  
An Introduction to Forensic Science



[www.edvotek.com/site/pdf/  
Lesson\\_Plan\\_Forensic\\_Science.pdf](http://www.edvotek.com/site/pdf/Lesson_Plan_Forensic_Science.pdf)

## Forensics Blood Typing

*For 10 Groups.* The objective of this experiment is to introduce students to some of the techniques used by forensics scientists for analyzing blood. The students first check for the presence of blood using the phenolphthalein test. Then the students will apply the concept of blood type-based screening for potential suspect(s) present at a crime scene.

**Cat. #191 \$95**

[www.edvotek.com/191](http://www.edvotek.com/191)



## DNA Fingerprinting by PCR Amplification

*For 8 Gels.* Forensic DNA fingerprinting has become a universally accepted crime-fighting tool. Recent advances use the polymerase chain reaction (PCR) to amplify human DNA obtained from crime scenes. This experiment, based on a crime scene scenario, has an inquiry-based component.

**Cat. #130 \$89**

[www.edvotek.com/130](http://www.edvotek.com/130)



## Whose Fingerprints Were Left Behind?



*For 10 Lab Groups.* After a crime has been committed, the evidence left behind can identify a potential culprit, although a single piece of evidence is not usually enough to convict someone. Even in this age of DNA, fingerprints and blood stains are still important at helping to identify a criminal. In this experiment your students will learn to detect and analyze fingerprints and then use these techniques to solve a classroom crime.

**Cat. #S-91 \$69**

[www.edvotek.com/S-91](http://www.edvotek.com/S-91)



## Forensic Toxicology



*For 10 Lab Groups.* In today's forensic science laboratory, toxicologists identify drugs and toxins in samples collected from crime scenes, victims, and potential suspects. If present, the toxicologist also determines whether the drug or toxin contributed to a person's behavioral changes or death. In this forensic science experiment, students will use the Enzyme Linked Immunosorbent Assay (ELISA) to analyze simulated crime scene samples for the presence of drugs.

**Cat. #195 \$95**

[www.edvotek.com/195](http://www.edvotek.com/195)



## DNA Fingerprinting by Restriction Enzyme Patterns

*For 8 Gels.* Basic concepts of DNA fingerprinting are featured in this lab by comparing crime scene DNA with suspect DNAs. Fingerprint patterns are separated by agarose gel electrophoresis and the students determine who may have done-it!

**Cat. #109 \$89**

[www.edvotek.com/109](http://www.edvotek.com/109)



# TRANSFORMATION

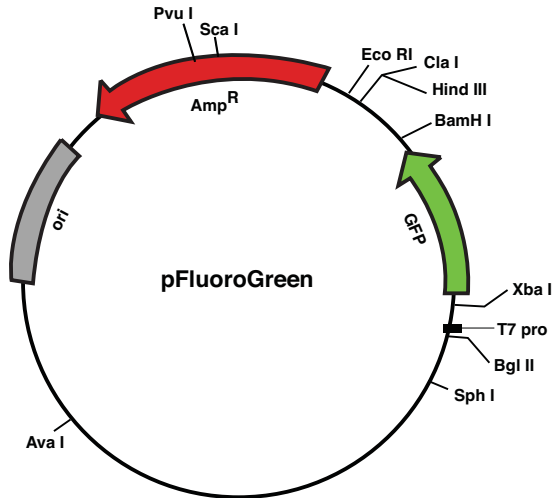
## What Is a Plasmid?

In addition to their chromosomal DNA, many bacteria possess extra, non-essential genes on small, circular pieces of double-stranded DNA. These pieces of DNA, known as plasmids, allow bacteria to exchange beneficial genes. For example, some genes that confer antibiotic resistance can be transferred between bacteria on plasmids.

## What Is Transformation?

In nature, some species of bacteria can acquire exogenous DNA from the surrounding environment through a process called transformation. The newly acquired genetic information is both stable and heritable.

In the laboratory, scientists can force bacteria like *E. coli* to take up DNA and become transformed, even though many bacteria are not naturally competent. It is believed that the combination of calcium chloride and a rapid change in temperature—or “heat shock”—alters the permeability of the cell wall and membrane, allowing DNA molecules to enter the cell.



### Transformation of *E. coli* with Green Fluorescent Proteins

*For 10 Lab Groups.* Transformed cells take up a plasmid containing the GFP gene. The GFP gene was isolated from the jellyfish *Aequorea victoria*. Transformed colonies expressing the GFP protein are visibly green in normal light but will fluoresce brightly when exposed to long wave UV light.

**Cat. #223/AP08 \$89**

[www.edvotek.com/223](http://www.edvotek.com/223)





## What are BactoBeads™?

BactoBeads™ Make Culturing  
Microorganisms Fast & Easy!



### Protocols and Online Resources:

[www.edvotek.com/BactoBeads](http://www.edvotek.com/BactoBeads)



### What's In a BactoBead™?

- Microorganisms
- Buffer
- Salts
- Nutrient Broth

### What Makes BactoBeads™ Special?

- Good for 9 months!
- Instantly soluble!
- Refrigerator storage!
- 8 Strains available!

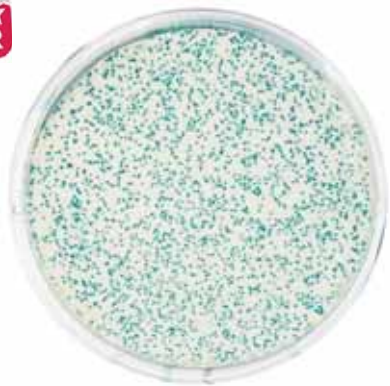
### How to Use:

1. Drop in media OR streak on plate.
2. Incubate overnight.

### Transformation of *E.coli* with pGAL™ (Blue Colony)

*For 10 Lab Groups.* In this experiment, your students can see a blue color change in transformed cells due to the switching on of a gene. The pGAL™ plasmid gives them a blue color due to the production of the  $\beta$ -galactosidase protein by the *lacZ* gene. IPTG is not required in this experiment since pGAL™ contains the complete *lacZ* gene.

Cat. #221 \$109  
[www.edvotek.com/221](http://www.edvotek.com/221)





## Rainbow Transformation

*For 10 Lab Groups.* 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.

**Cat. #224 \$109**

[www.edvotek.com/224](http://www.edvotek.com/224)

**NEW**



## Additional BactoBead™ Kits:

Cat. #222 Transformation of *E. coli* with Blue and Green Fluorescent Proteins

Cat. #951 Water Quality Testing I: Chromogenic Analysis of Water Contaminants

Cat. #953 Water Quality Testing III: Multiplex PCR Testing of Water Contaminants

Cat. #856 Environmental Toxicity Response in *C. elegans*



## EDVOTEK® 1.8 L Digital Waterbath

**BEST  
SELLER**

This classic EDVOTEK® waterbath has been improved to now include digital temperature control! We've also added a low-water sensor to prevent burn-outs and deepened the chamber to hold more bottles and flasks. The stainless steel chamber is corrosion resistant and temperature controlled from ambient to 95°C with cover (now included).

**Cat. #539 \$429**  
[www.edvotek.com/539](http://www.edvotek.com/539)



## Incubation Oven

This economical bacterial incubator features a digital temperature control with a range from Ambient +1° C to 60° C. Ideal for growing bacteria on agar plates at 37° C or for Southern and Western Blot analysis at 60° C. Includes two adjustable/removable shelves for increased capacity. Accepts bottles and flasks up to 2 L.

**Cat. #546 \$449**  
[www.edvotek.com/546](http://www.edvotek.com/546)

## How Do You Clone a Gene?

*For 5 Lab Groups.* In this kit, a set of multicolored links demonstrate a variety of molecular biology simulations. Students learn about digesting DNA with restriction enzymes, cloning genes in plasmids, protein structure and more!

**Cat. #S-20 \$55**  
[www.edvotek.com/S-20](http://www.edvotek.com/S-20)



# ENVIRONMENTAL SCIENCE



Environmental Science encourages students to engage in scientific exploration of the natural world. This interdisciplinary curriculum studies the relationships between natural systems using techniques from geology, biotechnology, ecology, physics, chemistry, and geography. Students are also encouraged to evaluate natural and man-made environmental problems, and to discuss the possible solutions. EDVOTEK® is dedicated to bringing biotechnology into your Environmental Science laboratory.

## The Dose Makes the Poison: Testing the Environmental Impacts of Pollution

NEW

*For 10 Lab Groups.* Biological assays, or bioassays, are powerful tools that allow scientists to determine the effects of a given substance on living organisms. In this inquiry-based lab students plan and perform a plant bioassay to determine the environmental hazard of common point and non-point source pollutants. The results are analyzed using averages, standard deviations, and TC50 calculations, integrating STEM.

Cat. #905 \$109 [www.edvotek.com/905](http://www.edvotek.com/905)



## Bioremediation by Oil Eating Bacteria

Improved!

*For 10 Lab Groups.* Oil spills cause devastation to the environment killing sea life, birds, and coastal plants. Spraying areas of contamination with oil-eating microbes accelerates the degradation of the oil. This process is known as bioremediation. In this open-ended experiment, students will grow a mixture of oil-eating bacteria and observe their effectiveness at degrading a variety of oils.

Cat. #956 \$105 [www.edvotek.com/956](http://www.edvotek.com/956)

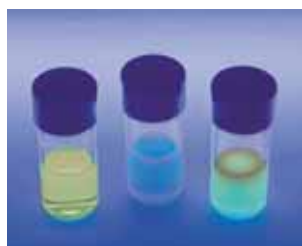


## Water Quality Testing I: Chromogenic Analysis of Water Contaminants

BEST SELLER

*For 10 Lab Groups.* In this experiment, students will test for coliforms in simulated contaminated water using color and fluorescent reagents. They can use these same reagents to test water samples from the environment. As an extension activity, a Gram Stain test can be performed on the collected samples.

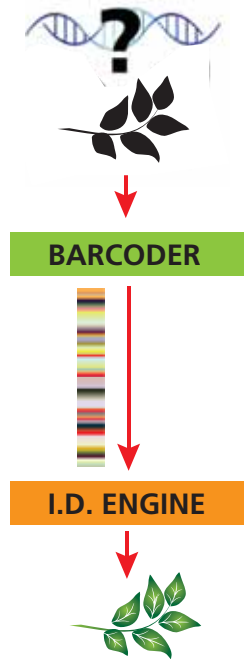
Cat. #951 \$89 [www.edvotek.com/951](http://www.edvotek.com/951)





# INTRODUCING DNA BARCODING

Naming and classifying organisms is part of our nature. For thousands of years, humans have been describing, discovering, and documenting the diversity of life. To date, classification systems include nearly 2 million species of animals, plants, and microorganisms. Historically, morphological features such as shape, structure, color, and pattern were used to classify organisms. Today, scientists can identify a specimen of interest by reading a short, standardized fragment of an organism's DNA. This information is then compared to a database of other sequences of previously identified species. If there is a match, the investigator knows what species the specimen belongs to and can retrieve information about that species. If the sequences do not match, the investigator has preliminary evidence of a new species. This process is called "DNA barcoding" because the genetic marker acts like the universal product code (UPC), which is used in retail to identify specific products.



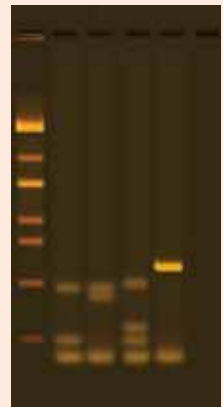
## Exploring Plant Diversity with DNA Barcoding

**NEW**

*For 10 Lab Groups.* In this inquiry-based lab, your class will explore the genetic diversity of ten selected plants. Students will isolate plant DNA and use PCR to amplify two polymorphic regions of the chloroplast genome. Digestion of PCR products and analysis by agarose gel electrophoresis will then be used to generate unique identification profiles for each plant.

**Cat. #338 \$219**

[www.edvotek.com/338](http://www.edvotek.com/338)



# PROTEIN ELECTROPHORESIS

SDS polyacrylamide-gel electrophoresis, or SDS-PAGE, is used to separate proteins according to their molecular weight. This powerful technique is used in research laboratories every day. However, that doesn't mean it is difficult to perform this technique in your classroom laboratory!

For many years, EDVOTEK® has worked with teachers to make these experiments simple and easy for students to perform. We offer a wide range of protein electrophoresis kits that are sure to fit into your curriculum. To complement our kits, we have recently redesigned our electrophoresis units to make them sleek, modern, and easy to use.

Large push tabs make lid removal simple.

Leads are tucked out of the way.

Rubberized grip edge for easy handling.

The improved support clip holds the gel securely.

Works with a wide variety of precast polyacrylamide gels.

Color-coded for foolproof setup.

*As always, our electrophoresis units are proudly made in the USA!*





## 01 **MV10 Vertical Protein Electrophoresis Apparatus**

Our newly redesigned MV10 is the most user-friendly vertical protein electrophoresis unit with a simple gel clip system. It runs one vertical polyacrylamide gel. All parts are color coded to ensure proper orientation.

**Cat. #581 \$225**  
[www.edvotek.com/581](http://www.edvotek.com/581)

## 02 **DuoSource™ 150 Power Supply (75/150 V)**

The DuoSource™ is a great value for protein electrophoresis! This power supply can run two MV10 units at once. Choose between 75 or 150 V.

**Cat. #509 \$179**  
[www.edvotek.com/509](http://www.edvotek.com/509)

## 03 **EDVOTEK® Variable Micropipet**

Our newly redesigned Variable Micropipet is easy to use, sturdy, highly accurate! Volume ranges from 5 - 50  $\mu$ l and uses standard micropipet tips.

**Cat. #590 \$179**  
[www.edvotek.com/590](http://www.edvotek.com/590)

## 04 **Precast Polyacrylamide Gels**

Three 12% Precast Polyacrylamide Gels. 9 x 10 cm.

**Cat. #651 \$39**  
[www.edvotek.com/651](http://www.edvotek.com/651)

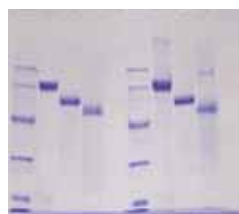
## 05 **Yellow Micropipet Tips**

1-200  $\mu$ l, 2 racks of 96 each.

**Cat. #636 \$10**  
[www.edvotek.com/636](http://www.edvotek.com/636)

# PROTEIN ELECTROPHORESIS

## Determination of Protein Molecular Weight



*For 6 Groups sharing 3 gels.* Using prestained LyphoProteins™, sub-unit molecular weights are determined by analysis using denaturing SDS vertical polyacrylamide gel electrophoresis. Prestained Proteins with unknown molecular weights are assigned molecular weights based on the relative mobility of prestained standard protein markers.

**Cat. #153 \$60 [www.edvotek.com/153](http://www.edvotek.com/153)**

## AIDS Kit III: Simulation of HIV Detection by Protein Electrophoresis

*For 6 Groups sharing 3 gels.* The Human Immunodeficiency Virus (HIV) causes acquired immune deficiency syndrome (AIDS), a serious disease that suppresses a patient's immune system which leaves them susceptible to infections. In this experiment, students will use SDS-PAGE to simulate the identification of HIV proteins in simulated patient samples. The results of this test are used to diagnose an HIV infection.



**Cat. #151 \$69 [www.edvotek.com/151](http://www.edvotek.com/151)**

# Protein InstaStain®

Protein InstaStain® sheets stain gels faster than conventional methods. Protein InstaStain® gives high quality and uniform gel staining with excellent results for photography. They are also environmentally friendly because they use a solid matrix, avoiding large amounts of liquid stain and waste disposal. 7.5 x 10 cm.

**Cat. #2016 For 15 gels \$39**

**Cat. #2017 For 30 gels \$59**

**[www.edvotek.com/2017](http://www.edvotek.com/2017)**

**Now provided in our  
protein kits at no  
additional cost!**



Place gel into a small tray with 100 ml fixative solution. Gently float a card of Protein InstaStain® into the liquid, stain side down. Remove the card after 30 sec.



Gently agitate on a rocking platform 1-3 hours or overnight. (Cover the tray with plastic wrap to prevent evaporation.)



After staining, protein bands will appear medium to dark against a light background.



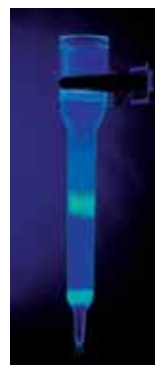


# PROTEIN ELECTROPHORESIS

## Purification & Size Determination of Green & Blue Fluorescent Proteins

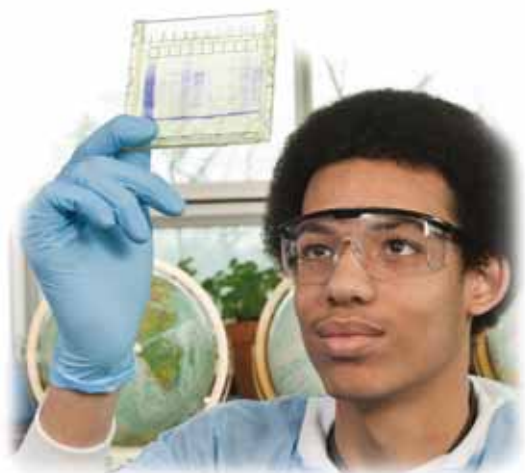
**BEST SELLER**

*For 6 Groups.* When bacteria are used to make medicinally useful proteins by transformation, the protein of interest must be separated from all of the other cellular proteins. In this experiment, the unique fluorescent properties of Green Fluorescent Protein (GFP) and Blue Fluorescent Protein (BFP) will be used as an assay during their purification from the extract of genetically modified strain of E.coli. The column fractions containing GFP or BFP will be identified by fluorescence and then purified. As an additional activity, purified protein fractions can be separated by SDS polyacrylamide gel electrophoresis (SDS-PAGE) to estimate the purity and size of the GFP and BFP proteins.



**Cat. #255      \$89      [www.edvotek.com/255](http://www.edvotek.com/255)**

**For Additional Protein Kits and Equipment, visit:**  
[www.edvotek.com/SDS-PAGE](http://www.edvotek.com/SDS-PAGE)



### NEW ONLINE RESOURCES!

Teaching biotechnology is easier and more exciting than ever!



[youtube.com/EdvotekInc](https://www.youtube.com/EdvotekInc)



[edvotek.com/Quick-Guides](http://edvotek.com/Quick-Guides)

## Dual Protein Electrophoresis LabStation™

**Cat. #5064      \$799      [www.edvotek.com/5064](http://www.edvotek.com/5064)**

### Includes:

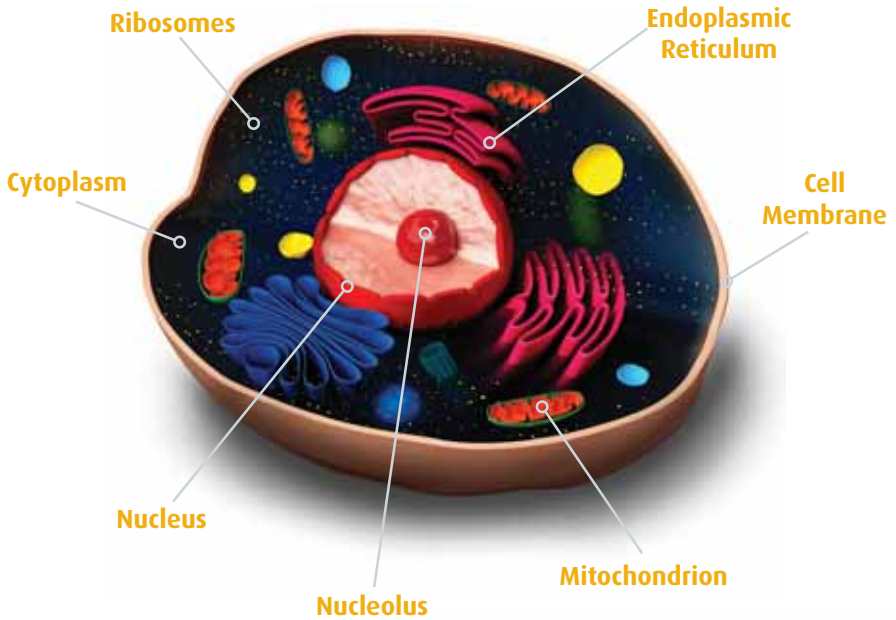
- 2    Cat. # 581    MV10 Protein Electrophoresis Apparatus
- 1    Cat. # 509    DuoSource™ 150 (75/150 V for 1 or 2 units)
- 4    Cat. # 590    Variable Micropipets (5 - 50 µl)



**Supports up to 16 Students!**

# CELL BIOLOGY

The basic unit of all living organisms, from bacteria to humans, is the cell. Contained within the cell is a diverse collection of organelles that an organism needs to live. Cell biology is the study of the structure and function of these organelles and how they work together.



## Eukaryotic Cell Biology

*For 6 Lab Groups.* In this experiment, students will learn how to grow eukaryotic cells in culture, basic cell staining and how to count cells. The techniques used in these experiments will provide the student with a skill set desired in both academic research and industry.

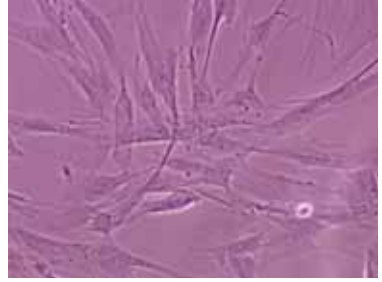
**Cat. #1001 \$225**  
**[www.edvotek.com/1001](http://www.edvotek.com/1001)**



**Cell Morphology** refers to the shape, appearance and structure of a cell. The morphology of a cell in culture relates to the functions of the tissue from which they originated. Changes in a cell's morphology indicate diseases like cancer or sickle cell anemia.

## Analysis of Mammalian Cell Types

*For 6 Lab Groups.* Your students will be amazed at the differences they observe between various mammalian cell types and how these cells function. Cells are fixed on microscope slides and students stain the cells on the slide to view morphological characteristics of the cell types. These cells are very safe for classroom use.



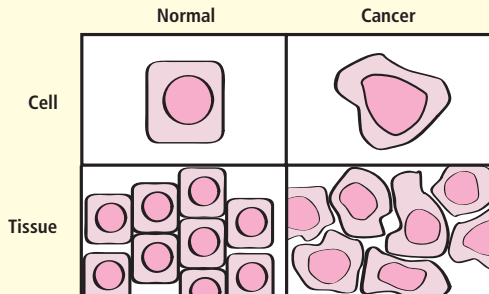
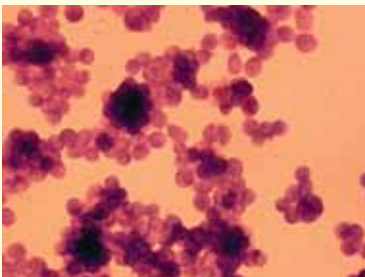
**Cat. #986 \$109**  
[www.edvotek.com/986](http://www.edvotek.com/986)

## Morphology of Cancer Cells

*For 6 Lab Groups.* When normal cells are grown in culture they stop growing when they become overcrowded. This is called contact inhibition. Cancer cells in culture grow in an uncontrolled way because they have lost this property. This helps tumors to form in the body. In addition, many different cell types can be present in a single tumor. This experiment allows students to see the differences between normal and cancer cells in both their growth and cell types.

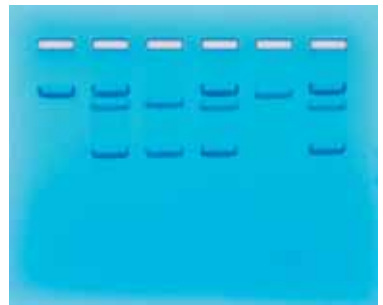
**Improved!**

**Cat. #990 \$95**      [www.edvotek.com/990](http://www.edvotek.com/990)



## Sickle Cell Gene Detection (DNA-based)

*For 8 Gels.* Sickle Cell Anemia is a common genetic disease that causes long rods in red blood cells, giving them a "sickled" appearance. These cells get stuck in small capillaries of the blood stream leading to oxygen deprivation that causes pain and organ damage. Sickle Cell Anemia is caused by a single point mutation in the hemoglobin gene that results in a faulty protein. In this experiment, your students will investigate the restriction enzyme that discriminates between HbA (normal) and HbS (disease) genes and perform a simulated test on a patient.

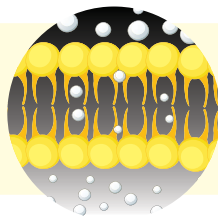


**Cat. #116 \$89**  
[www.edvotek.com/116](http://www.edvotek.com/116)

## Study Organelles in Your Classroom Laboratory

### Cell Membrane:

Surrounds the organelles, permeability allows molecules to move in and out of the cell.



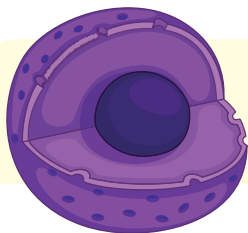
### What is Osmosis?

*For 5 Lab Groups.* Students will be introduced to the principles of osmosis. Activities will be performed utilizing dialysis tubing and various concentrations of salt. Dyes of different molecular weights will also be used to visually demonstrate the size selectivity of membranes.



**Cat. #S-74 \$55**

[www.edvotek.com/S-74](http://www.edvotek.com/S-74)



### Nucleus:

Contains DNA, acts as a cell's control center.

### Genes In a Tube™

*For 26 Students.* Teach your students how to extract and spool their own DNA in this exciting and easy activity. Students can transfer their DNA to a tube that can be used as a pendant on a necklace!

**Cat. #119 \$99**

[www.edvotek.com/119](http://www.edvotek.com/119)



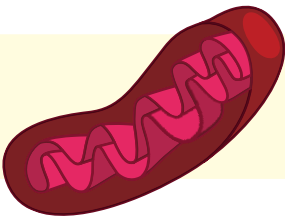
### Chromosome Spread (Pre-fixed Slides)

*For 6 Lab Groups.* In this experiment, cells have been arrested during metaphase and fixed to slides, allowing students to stain and observe the condensed chromosomes. Students will develop an understanding of karyotyping and the association of chromosomal abnormalities with diseases.

**Cat. #987 \$89**

[www.edvotek.com/987](http://www.edvotek.com/987)





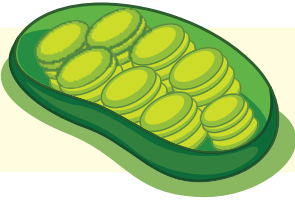
## Mitochondria:

Cell's powerhouse, converts food into energy.

### Cellular Respiration

*For 10 Lab Groups.* In this experiment, students learn how to apply the gas laws to the function of the microrespirometer. Students will observe cell respiration of germinating seeds and describe the effects of temperature on the rate of cell respiration.

**Cat. #AP06 \$109**  
[www.edvotek.com/AP06](http://www.edvotek.com/AP06)



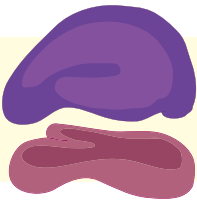
## Chloroplast:

Uses sunlight to create food for plants.

### Photosynthesis

*For 10 Lab Groups.* In this experiment, students will learn how to measure the rate of photosynthesis indirectly by studying the floating leaf disk assay, and test different variables that might affect the photosynthesis process.

**Cat. #AP05 \$69**  
[www.edvotek.com/AP05](http://www.edvotek.com/AP05)



## Ribosome:

Links amino acids together to form proteins.

### Diversity of Fish Proteins

*For 6 Lab Groups.* Study the diversity of fish with these pre-stained, lyophilized proteins. Total protein from Perch, Walleye and Salmon is extracted and pre-stained using an indicator dye. Each fish protein sample has a characteristic banding pattern when separated by denaturing SDS-polyacrylamide gel electrophoresis, which can be used to identify the specific species.

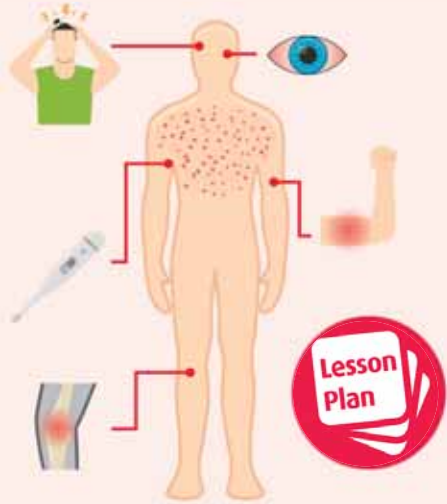
**Cat. #253 \$69**  
[www.edvotek.com/253](http://www.edvotek.com/253)



Looking for a way to keep your immunology or virology lessons fresh? Teach your lesson from a biomedical diagnostic point of view! Medical tests to diagnose and to monitor the progress of diseases are performed in clinical laboratories each day. Some common medical tests include blood testing to determine HIV status, throat cultures to diagnose strep infections, and genetic testing to identify inherited diseases.

Many medical diagnostic tests rely on the Enzyme Linked Immunosorbent Assay (or ELISA). To help with your pre-lab preparation, we created a FREE lesson plan describing how the ELISA is used to diagnose Zika infections! This will allow you to discuss virology, immunology, and disease testing with your students!

## Free Lesson Plan: Outbreak! Learning About Zika Virus Transmission & Testing



[www.edvotek.com/site/pdf/  
Lesson\\_Plan\\_Outbreak\\_Zika.pdf](http://www.edvotek.com/site/pdf/Lesson_Plan_Outbreak_Zika.pdf)

## Performing the ELISA with EDVOTEK:

### Single Antibody ELISA Diagnostics

*For 10 Lab Groups.* Teach your students the ELISA technique in less than half the time of traditional ELISAs! This experiment eliminates the need for the primary and secondary antibody normally needed for ELISAs because the detection antibody has an enzyme linked to it directly. Simply add substrate to discover which patient is infected.

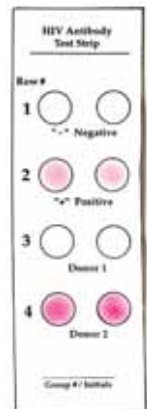
**Cat. #267 \$109**  
[www.edvotek.com/267](http://www.edvotek.com/267)



### How Does a Doctor Test for AIDS?

*For 10 Lab Groups.* Enzyme Linked Immunosorbent Assays (ELISA) test for antibodies present in the blood, which indicate infection. In this kit, students perform a simulated ELISA test to identify infected samples & compare them to control samples.

**Cat. #S-70 \$55**  
[www.edvotek.com/S-70](http://www.edvotek.com/S-70)



## Detecting the Silent Killer: Clinical Diagnosis of Diabetes

*For 10 Lab Groups.* Over 380 million people worldwide are afflicted by diabetes mellitus, a chronic disease that leads to high blood sugar. Due to genetic predispositions and/or 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 Enzyme-linked Immunosorbent Assay (ELISA).



**Cat. #280 \$139 [www.edvotek.com/280](http://www.edvotek.com/280)**

## What's In My Lunch? Quantitative Milk Allergy ELISA

*For 10 Lab Groups.* Milk proteins are the most common food allergens in children. Accurate detection and labeling is vital to inform consumers about potentially dangerous foods. In this experiment, students will master the concepts behind the enzyme-linked immunosorbent assay (ELISA). Students will perform an ELISA to detect the presence and measure the concentration of whey protein in various food products.

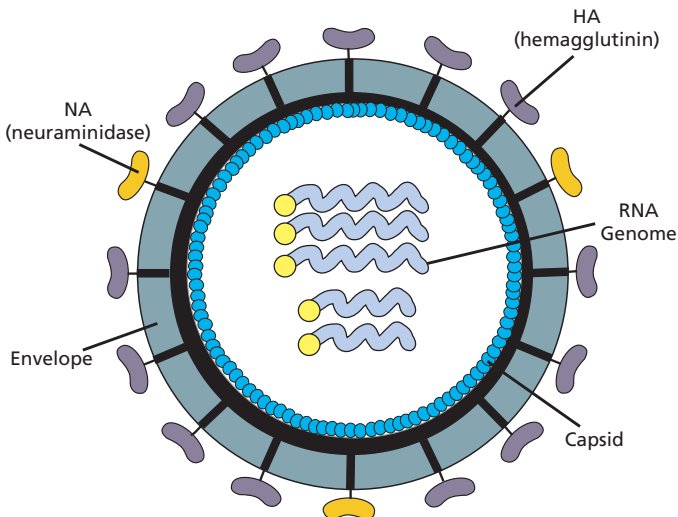
**Cat. #266 \$109**  
**[www.edvotek.com/266](http://www.edvotek.com/266)**



## Detection of the Influenza Virus

*For 8 Lab Groups.* The influenza virus, or "the flu," is a common contagious disease that affects the respiratory system. In this simulation, students will perform two common tests (RIDT, RT-PCR) used to diagnose the flu in a clinical setting.

**Cat. #122 \$125 [www.edvotek.com/122](http://www.edvotek.com/122)**



**Structure of the Influenza Particle**

# MODEL ORGANISMS

## What is a model organism?

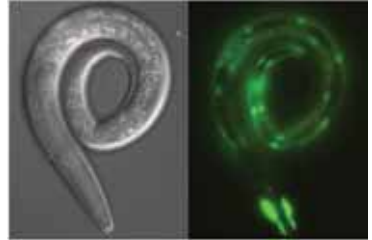
A model organism is any plant, animal or microorganism that allows us to study fundamental questions in biology that may be hard to study directly in complex organisms like humans.

## What can a model organism tell me about human biology?

Many of the basic principles of biology that were first identified in model organisms have later been demonstrated in humans. For example, Gregor Mendel used pea plants to establish that genes have different forms, or alleles, and that these alleles segregate independently from one another. Today, we know that human genes observe these rules of inheritance.

Bioinformatics has identified homologs of genes that are important for human health and development. We can study the function of these genes in a model organism since it is unethical to perform certain experiments in humans. For example, the fly model of Alzheimer's disease has provided new information on the disease, which has allowed scientists to identify novel targets for treatment.

## Examples of model organisms:



*Caenorhabditis elegans*



*Drosophila melanogaster*



*Arabidopsis thaliana*





*Arabidopsis*, commonly known as “thale cress”, is a small flowering plant that has had a big impact in the laboratory! This model organism has been used to answer fundamental questions in the molecular biology and genetics of flowering plants.

## Which Quick Plant™ is the Mutant?

**For 15 Lab Groups.** Gregor Mendel studied pea plants over the course of many years to understand inheritance. Now your students can use 3 different genetic strains of *Arabidopsis* Quick Plants™ to see the genetic ratios for themselves.

**Cat. #S-41 \$55**  
[www.edvotek.com/S-41](http://www.edvotek.com/S-41)

## Quick Plant™ Genetics Using PCR

**For 10 Lab Groups.** Unlike the wild type Quick Plants™, the *glabra* mutant lacks trichomes (single-celled hairs) on its leaves. Using PCR, your students will compare a region of DNA that differs between the *glabra* mutant and the wild type plants, so they will see this variation at the DNA level.

**Cat. #336 \$189**  
[www.edvotek.com/336](http://www.edvotek.com/336)



Wild and mutant *glabra* strains.

For over a century, the fruit fly *Drosophila melanogaster* has been a valuable model organism for research in genetics, developmental biology, and evolutionary biology. Many Nobel Prizes have been awarded for studies using the fruit fly!

## Fruit Fly Behavior (AP Biology Investigation 12)

**For 10 Lab Groups.** The objective of this experiment is to introduce students to the concept of distribution of organisms in a resource gradient and to learn the difference between kinesis and taxis. *Drosophila* must be requested 3 weeks prior to use.

**Cat. #AP12 \$99**  
[www.edvotek.com/AP12](http://www.edvotek.com/AP12)



André Karwath / CC-BY-SA-2.5

## Drosophila Genotyping Using PCR

**For 10 Lab Groups.** Students will learn about DNA polymorphisms by amplifying DNA regions that vary between wild & mutant *Drosophila*. Amplified DNA from wild-type and white-eyed flies are separated by agarose gel electrophoresis and analyzed.

**Cat. #337 \$189**  
[www.edvotek.com/337](http://www.edvotek.com/337)



# MODEL ORGANISMS

*C. elegans* is an important model organism for the study of embryogenesis, morphogenesis, development, nerve function, behavior and aging, and how genes regulate these processes.

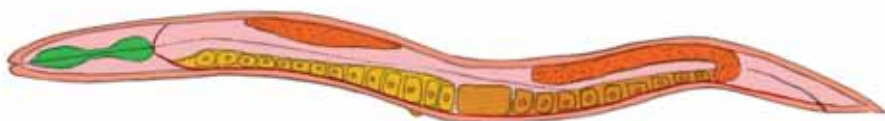
- **Small** – about 1 mm in length.
- **Easy to cultivate** – grow in Petri dishes and eat bacteria.
- **Fast generation time** – from egg to adult in four days.
- **Transparent** – allows us to visualize internal structures.
- **Invariable cell lineage** – the fate of every cell in the worm has been mapped.
- *C. elegans* is one of the simplest organisms with well-defined nervous system.
- **Sequenced genome** – the first for multicellular organisms (1998).

## ONLINE VIDEO:

Care and Feeding of *C. elegans*



[youtube.com/EdvotekInc](https://youtube.com/EdvotekInc)



## Effects of Alcohol on *C. elegans*

*For 10 Lab Groups.* The objective of this experiment is to observe and record the effects of alcohol on normal and alcohol mutant strains of *C. elegans*.

Cat. #851 \$105

[www.edvotek.com/851](http://www.edvotek.com/851)

## Chemotaxis: The Science of Attraction in *C. elegans*

*For 10 Lab Groups.* Students will observe and record the phenomenon by which normal and mutant strains of *C. elegans* can direct their movement in response to certain chemicals in the environment.

Cat. #852 \$105

[www.edvotek.com/852](http://www.edvotek.com/852)



## Introducing: E-Z *elegans*™

EDVOTEK's E-Z *elegans*™ are specially prepared cultures of the nematode *Caenorhabditis elegans* that make model organisms easy to use in the classroom setting! This gives you more flexibility when they can be used and since they can be stored in the refrigerator for up to one month, unlike perishable plates that must be used within 3-5 days. Furthermore, since they can be stored in the refrigerator, there is no requirement for a freezer!

NEW

E-Z *elegans*™

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



*For 10 Lab Groups.* 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 (GFP).



**Cat. #858 \$199 [www.edvotek.com/858](http://www.edvotek.com/858)**



## Environmental Toxicity Response in *C. elegans*

*For 10 Lab Groups.* In this experiment, students will observe and compare the effects of heavy metals found in the environment on normal and mutant strains of *C. elegans*.

**Cat. #856 \$105 [www.edvotek.com/856](http://www.edvotek.com/856)**



## Celestron LCD Digital Microscope II



Our professional-level Celestron LCD Digital Microscope II is a biological LCD microscope at an affordable price! The microscope allows for high-resolution imaging of specimen slides and even includes a 1 GB SD card, which provides enough storage to capture up to 620 high-resolution images. The LCD screen rotates 180 degrees so you can easily share your discoveries with others. For an even bigger audience, use the TV output to display on a television or projector.

**Cat. #553 \$199 [www.edvotek.com/553](http://www.edvotek.com/553)**

# RELATED EQUIPMENT

Transform your classroom into a state-of-the-art research lab with EDVOTEK's high quality biotechnology equipment! Our research quality equipment will provide your students with an authentic college science experience. We offer many different products to meet your scientific needs. Contact an EDVOTEK BioEducation Specialist at 1.800.EDVOTEK to learn more about outfitting your classroom!

## Piccolo™ Microcentrifuge

Our Piccolo™ Microcentrifuge is easy-to-use and handles most teaching lab applications including sample spin-downs and cell pelleting. Variable speed from 0 to 6,400 rpm (2046 x g max). Includes a 6-place rotor for 1.5/2.0 ml tubes, and a second rotor for two 8 x 0.2 ml strip tubes.

**Cat. #534 \$289**  
[www.edvotek.com/534](http://www.edvotek.com/534)



## TetraSource™ 300 Power Supply

*30-300 V for 1 to 4 units.* This mighty 750 mA power supply features an easy-to-use, fully programmable interface. Run experiments in the least time possible with this powerful and versatile unit!

**Cat. #5010 \$319**  
[www.edvotek.com/5010](http://www.edvotek.com/5010)



## White Light Box

This 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.

**Cat. #552 \$129**  
[www.edvotek.com/552](http://www.edvotek.com/552)



## Long Wave UV Mini-Light

A hand-held UV light that is used to detect hydrolysis of the fluorescent substrate and fluorescent *Artemia* and *Daphnia* after their ingestion. Also useful for observing fluorescence in Green (GFP) and Blue (BFP) fluorescent proteins.

**Cat. #969 \$35**  
[www.edvotek.com/969](http://www.edvotek.com/969)



## Pipets & Liquid Handling

[www.edvotek.com/Equipment/Pipets-Liquid-Handling](http://www.edvotek.com/Equipment/Pipets-Liquid-Handling)

### EDVOTEK® Variable Micropipets

Our Variable Micropipets are easy to use, sturdy, highly accurate and use standard micropipet tips. The volume is easily selected by twisting the top. The lightweight design and tip ejector makes operation fast & easy. Includes a tool and instructions for self-calibration.

Cat. #590	5 - 50 µl Micropipet	\$179
Cat. #591-1	20 - 200 µl Micropipet	\$179
Cat. #592-1	100 - 1000 µl Micropipet	\$179



### Micropipet Tips

Cat. #636	Yellow, 1-200 µl, 2 racks of 96 each	\$10
Cat. #636-B	Yellow, 1-200 µl, Bag of 1000 tips	\$40
Cat. #637	100-1000 µl, 2 racks of 100 each	\$20
Cat. #637-B	100-1000 µl, Bag of 1000 tips	\$45



### EdvoPette™ Pipet Controller

This lightweight, cordless pipetting controller is ideally suited as an aliquoting tool for instructors and teaching assistants. It utilizes all standard serological pipets. The speed can be fine-tuned by applying varying finger pressure to the operating buttons.

Cat. #594	\$299
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### Pipetting Pumps

Cat. #640	Green, for pipets 5-10 ml	\$18
Cat. #641	Blue, for pipets up to 2 ml	\$18



### Disposable Pipets

Cat. #644	1 ml pipets, 200/pkg	\$49
Cat. #645	5 ml pipets, 50/pkg	\$25
Cat. #646	10 ml pipets, 50/pkg	\$25



## UV Digital Photodocumentation System

Save money by purchasing both our Midrange UV transilluminator and our Photodocumentation System together! Comes with both Cat. #558 and Cat. #551.

The hood accommodates gels up to 9.5 x 11 cm. Photos may be downloaded to a computer.

The Midrange UV transilluminator is designed to visualize DNA stained with Ethidium Bromide, Sybr® Safe, and other fluorescent stains.

**Cat. #555 \$1,099**  
[www.edvotek.com/555](http://www.edvotek.com/555)



## Workshops & Conferences

[www.edvotek.com/Workshops](http://www.edvotek.com/Workshops)

At EDVOTEK®, we are committed to developing new and exciting resources for the biotechnology classroom. That's why we have developed an exciting series of professional development workshops for many of the conferences we attend. These short courses couple theory with active experimentation to help you update your skills and knowledge in various areas of biotechnology. We hope you enjoy teaching and learning with EDVOTEK and we'll see you soon at a conference near you!

### **NSTA STEM Forum & Expo**

Kissimmee, Orlando, FL

**July 12 - 14, 2017**

### **AP® Annual Conference**

Washington, DC

**July 26 - 29, 2017**

### **ASM Conference for Undergraduate Educators**

Denver, CO

**July 28 - 29, 2017**

### **NSTA Regional Conference**

Baltimore, MD

**Oct. 5 - 7, 2017**

### **CSTA Annual Conference**

Sacramento, CA

**Oct. 13 - 14, 2017**

### **PLTW Summit**

Orlando, FL

**Oct. 22 - 25, 2017**

### **NABT Annual Conference**

Saint Louis, MO

**Nov. 9 - 12, 2017**

### **CAST Annual Conference**

Houston, TX

**Nov. 9 - 11, 2017**

### **NSTA Regional Conference**

Milwaukee, WI

**Nov. 9 - 11, 2017**

### **NSTA Regional Conference**

New Orleans, LA

**Nov. 30 - Dec. 2, 2017**

Visit Our **NEW** and **IMPROVED** Website!

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## Related Resources

[www.edvotek.com/Resources](http://www.edvotek.com/Resources)

Here at EDVOTEK®, we've worked hard over the last year to bring you some new and exciting resources to make teaching biotechnology easier and more exciting than ever! We've created **Lesson Plans** and **Quick Guide Manuals**, FREE for you to download off our website. We have also filmed several **Instructional Tech Videos** that show step-by-step procedures. We hope you take advantage of these resources and enjoy teaching and learning with EDVOTEK®!



Using an Adjustable Volume Micropipet • Preparing Agarose Gels • Performing Agarose Gel Electrophoresis • Diluting a Concentrated Solution

[youtube.com/EdvotekInc](http://youtube.com/EdvotekInc)



Micropipetting Basics • Agarose Gel Electrophoresis • Polymerase Chain Reaction • Protein Electrophoresis Transformation • Quick Plants™ Culturing Microorganisms

[edvotek.com/Quick-Guides](http://edvotek.com/Quick-Guides)

## Ordering Information

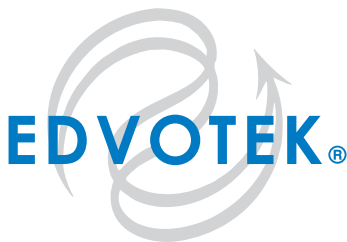
Simply place your order one of the following ways:

web **www.edvotek.com**  
email **orders@edvotek.com**  
phone **1.800.EDVOTEK**  
**(1.800.338.6835)**  
fax **202.370.1501**  
mail **1121 5th Street NW**  
**Washington, DC 20001**

### Shipping

**USA** All orders are shipped from Washington, DC via EDVOTEK preferred carriers. A shipping, handling and insurance charge is applied to all shipments. Normal delivery time within the US and Puerto Rico is 2-7 business days by ground delivery. Additional fees or surcharges may apply for expedited shipping methods, or for shipments requiring wet or dry ice.

**International** All orders are shipped from Washington, DC via EDVOTEK preferred carriers, unless instructed otherwise. An international shipping, handling and insurance charge is applied to all orders.



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