

minipcr

# The miniPCR DNA Discovery System™

The complete biotechnology toolkit  
for your lab or classroom



miniPCR™ PCR machine

blueGel™ electrophoresis system

micropipette (2-20 µL)

MADE IN USA.

[www.labexpert.co.th](http://www.labexpert.co.th)

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# minipcr

The PCR machine for everyone, everywhere



- ✓ Superior PCR performance
- ✓ Interactive App
- ✓ Portable and perfect for every bench
- ✓ Designed, engineered, and built in USA

## bluegel<sup>™</sup> by minipcr

Integrated DNA electrophoresis and visualization



- ✓ Integrated electrophoresis and illuminator
- ✓ Fast results using up to 10x less reagents
- ✓ Visualize DNA as it separates
- ✓ No Ethidium Bromide, UV, or high voltage

## miniPCR<sup>™</sup> micropipette

Accurate, simple, affordable



- ✓ 2-20  $\mu$ L range
- ✓ Essential biotech tool
- ✓ Lightweight, durable, and factory-calibrated
- ✓ Digital dial for accurate volume settings

# miniPCR™, opening up the world of DNA

The PCR machine for everyone, everywhere



- ✔ Superior performance
- ✔ Interactive software
- ✔ Transparent. Not a black box!
- ✔ Portable and perfect for every bench
- ✔ Designed, engineered, built in USA

## Powerful

Big results in a small package



### DNA AMPLIFICATION

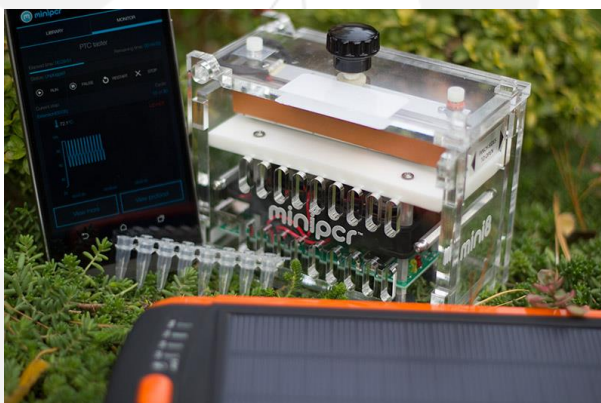
miniPCR™ copies targeted pieces of DNA in a process known as polymerase chain reaction (PCR), with the same quality as professional benchtop thermal cyclers.

### FULLY COMPATIBLE

Works interchangeably with standard PCR assays, reagents, and consumables.

## Portable

miniPCR™ travels wherever your science goes



### GO PLACES

PCR is the gold standard for DNA-based detection of pathogens, contaminants, and species identification. miniPCR™ can operate in the field for up to 6 hr. on portable rechargeable batteries (optional).

### TRAVEL LIGHT

Sturdy, miniaturized 2 x 5 x 4 in. design weighs less than 1lb.

# Simple

User-friendly software interface



## PROGRAM IN SECONDS FROM YOUR PHONE

With the miniPCR™ App, easily create and share experiments in a few taps. The free miniPCR™ App is available for Windows, Mac, Android, and Chrome operating systems.

## MONITOR AND ANALYZE

Follow the process in real time, export run data for analysis.

## Technical specifications

**Sample format:** 8 x 0.2ml PCR tubes (strip compatible)

**Max Heating Ramp Rate:** 3.2°C / sec

**Heated Lid:** Independent lid heater up to 120°C, PID control

**Max Cooling Ramp Rate:** 2.2°C / sec

**Program Sharing and Backup:** Unlimited libraries, .pdf file

**Temperature control:** Resistive Heating; Forced-Air cooling

**Control System:** Embedded thermistors and PID algorithm

**Temperature Range:** Ambient – 99°C

**Dimensions:** 2" x 5" x 4" (5.1 cm x 12.7 cm x 10.2 cm) approx.

**Weight:** 1 lb. (450 g) approx.

**Internal memory:** Runs last stored program at power ON

**Power Supply:** AC 100-240V, 50-60hz, 70W

**Adjustable lid:** Compatible with flat or domed caps

# miniPCR™ Apps

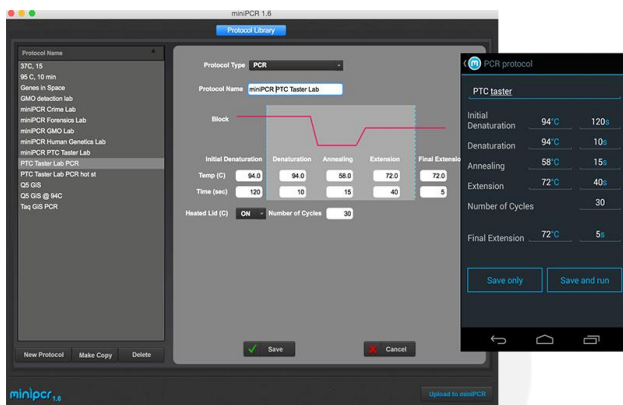
Beautiful, powerful, and simple



- ✔ Program in seconds
- ✔ Follow experiment in real time
- ✔ Export data for analysis
- ✔ Available for Android, Mac, Windows, and Chrome OS
- ✔ New: Chrome OS!

## Program and Share

Store, modify, backup and share programs with ease



### STORE AND RUN YOUR PCR AT PUSH OF A BUTTON

miniPCR™ app makes setting up and finding your PCR programs a breeze. Store an unlimited number of programs directly on your own computer, tablet, or smartphone.

Once programmed, miniPCR™ will store and run your programs at the push of a single button. There is no need to remain connected to a computer or mobile device.

## Monitor and Analyze

Connect multiple miniPCR™ machines to a single Mac or Windows computer



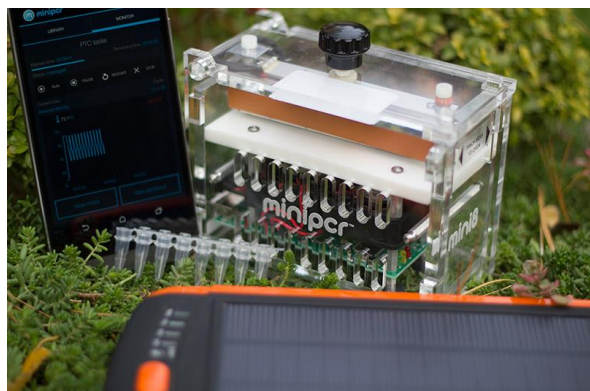
### VISUALIZE THE PCR PROCESS

Scientists and students can observe how temperature changes enable DNA amplification in real time.

Run data can be exported, stored, documented, and analyzed.

# Take your PCR Mobile

The miniPCR™ mobile app takes PCR convenience and simplicity to new heights



## FULL PROGRAMMING, LIBRARY STORAGE, AND SHARING CAPABILITIES ON THE GO

The free miniPCR™ app is available for these operating systems:

- Windows
- Mac OS
- Android  
(USB host-enabled devices via OTG adapter)
- Chrome OS

## miniPCR™ App Features

### PROGRAM AND SHARE

Intuitive visual programming interface

Set PCR parameters with flexibility and simplicity

Heat Block mode sets precise, stable incubations in seconds

Copy, edit, and modify programs with ease

Unlimited program storage

Store, export, and share program libraries

### MONITOR AND ANALYZE

Plot reaction parameters in real time

Bring DNA science to life through animations and graphs

Full control of run and device status (Run, Pause, Stop)

Plot DNA exponential amplification curve (mobile and Chrome versions)

Export data to .csv file for analysis and quality control

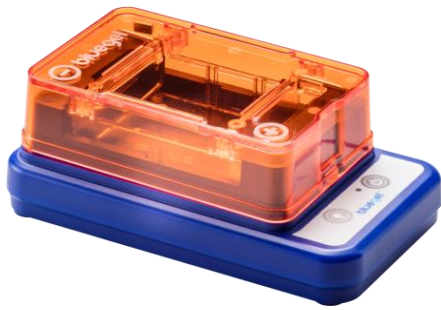
Quantify ramp rates, cycles, and uniformity

# blueGel™

by minipcr

## light up the world of DNA

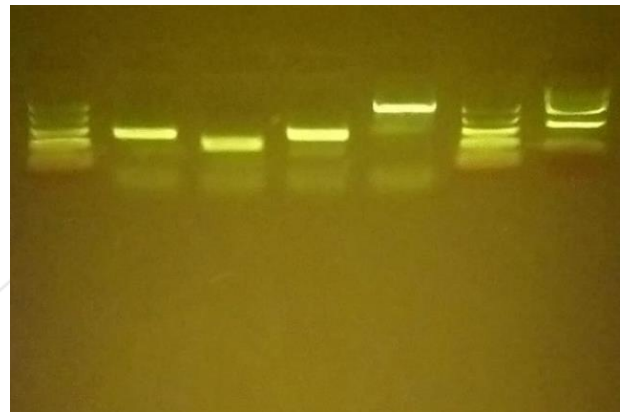
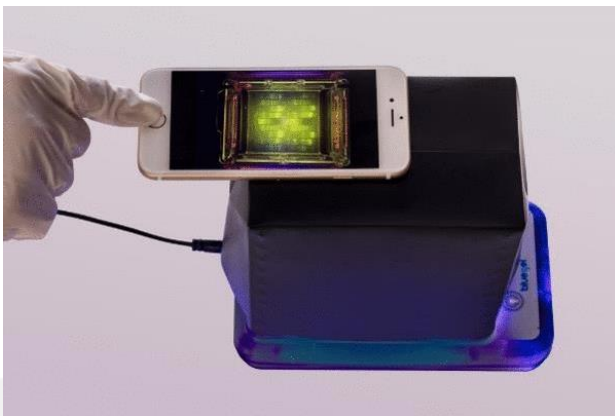
Integrated electrophoresis and visualization system



- ✓ Fast results using up to 10x less reagents
- ✓ Visualize DNA as it separates
- ✓ No Ethidium Bromide, UV, or high voltage
- ✓ Compact, high-quality, engineered & built in USA

## Rapid results

Fast and direct DNA visualization



### INSTANT VISUALIZATION

Turn on safe blue light and watch DNA separation at any time. Take a picture with your phone, tablet, or camera.

### FAST RESULTS

Observe DNA separation in as little as five minutes!

### REAL TRANSILLUMINATION

Uniform lighting. No edge artifacts.

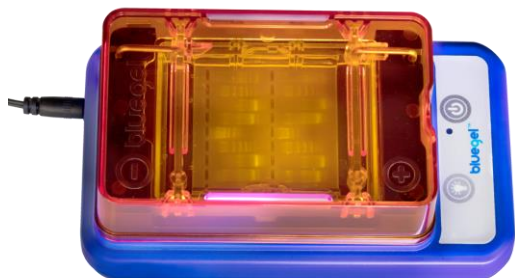
### Fold-a-View™ PHOTO DOCUMENTATION HOOD

New! – A portable, foldable darkroom



## Safe

No UV light or ethidium bromide



### SAFE FOR YOU

Utilizes blue LED light and safe green DNA dyes. No need for UV protection or ethidium bromide. Load and run gels safely without possibility of electric contact. Runs fast on low voltage (48V).

### SAFE FOR DNA

No UV damage to DNA for downstream applications.

## User friendly

Minimizes errors and allows flexibility



### ERROR PROOF

blueGel™ agarose gel and electrodes only fit the right way. Never run a gel backwards again.

### INNOVATIVE CASTING SYSTEM

Seamless casting tray eliminates leaks. 6 cm. gel length separates tight bands. Flexible comb configuration allows for 9 to 26 wells per gel. Fitted with comb holder for easy storage.

## Portable

Compact and integrated



### ALL-IN-ONE

Integrated electrophoresis, power supply, and transilluminator. Simply plug into a wall outlet.

### ECONOMICAL

Uses up to 10x less reagents. Low energy consumption.

### TRAVEL LIGHT

Weighs less than one pound with a small 9" x 4" x 3" footprint. Stacks and stores into included travel bag.



# Technical specifications

**System includes:** electrophoresis and transillumination units, one casting platform, one buffer chamber, two gel trays, two combs, Fold-a-View™, universal power adapter, and carrying bag.

Licensed under US patents 6198107, 6512236, 6914250, and EP 0965034.

## Features

Gel electrophoresis unit with built-in transilluminator

### Casting system with integrated comb holder

Seamless polycarbonate ABS injection molded parts

### Platinum and stainless steel electrodes

Two-button operation; one for Run, one for Light

### High intensity blue LED transilluminator panel

**Gel size:** 60 x 60 mm

**Gel volume:** 15 ml

**Buffer volume:** 25 ml, optimized for TBE

**One or two rows of combs:** 9 or 13 wells each

**Power supply:** AC 100-240V, 50-60hz, 48V

**Dimensions:** 9" x 4" x 3" height (23 x 10 x 7 cm.)

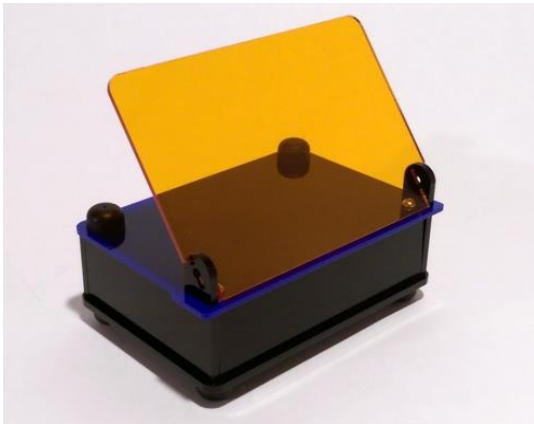
**Weight:** 0.75 lbs., 350 gr





## Visualize DNA safely and efficiently

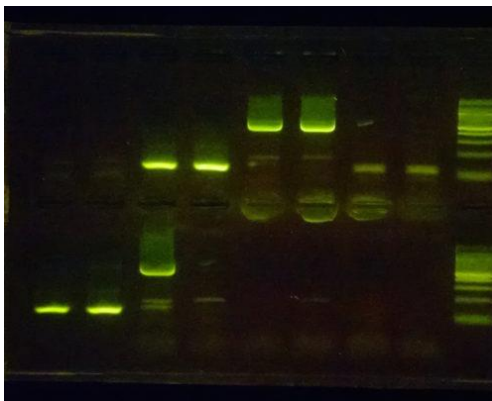
Blue light DNA transilluminator



- ✔ High sensitivity DNA detection
- ✔ No risk of UV damage
- ✔ Hinged lid optimized for band cutting and gel excision
- ✔ Compatible with SYBR family Green DNA stains

## Safe

Damage-free DNA staining and visualization



### SAFE DNA VISUALIZATION

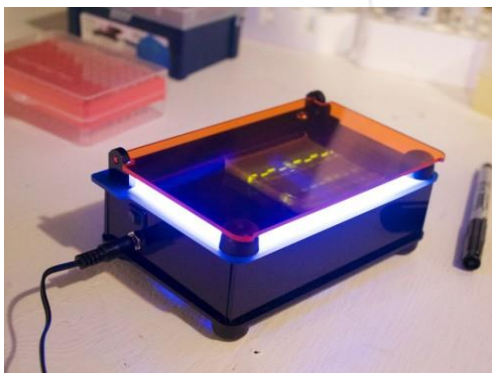
No protective goggles or equipment required.  
Safe blue LEDs with significantly longer lifespan than UV lamps.  
No UV damage to DNA for downstream applications.

### CONSISTENT RESULTS

Dual high-intensity blue LED illuminator panel (121 LEDs)  
Emission spectrum centered around 470nm  
GreenView Plus™ and compatible dye DNA staining  
SyBr family compatible

## Perfect benchtop companion

Universal fit and large viewing area



### UNIVERSAL FIT

Large gel viewing area: 110 mm x 80 mm  
Lock-and-cut hinge for easy band cutting and gel excision  
Fits gels from all major electrophoresis systems

### READY TO USE OUT OF THE BOX

12 V power adapter included  
One-button operation and easy storage  
Scratch-resistant acrylic with integrated lid (never lose it!)



## User friendly

View, document, and cut DNA bands with ease

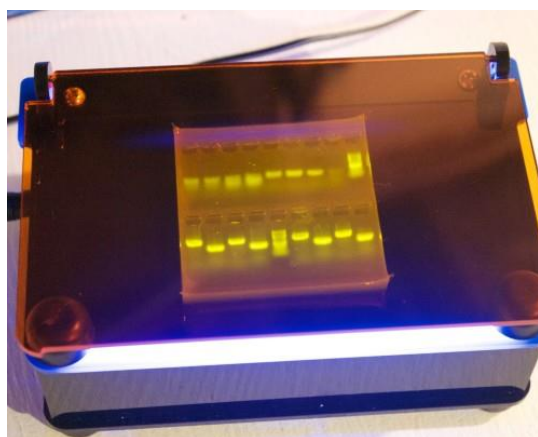


### USER FRIENDLY

Hinged orange filter for direct visualization or gel excision  
Even gel illumination and documentation – no UV light bulb artifacts!  
Document gels with your own phone, tablet, or professional camera  
Scratch-resistant surface for band cutting

## Broad compatibility

Documentation and gel cutting even in bright ambient light



### PATENTED TECHNOLOGY

Same patented technology used by other major brands

### COMPATIBLE WITH MAJOR DYES

- SYBR Safe
- GreenView and GreenView Plus
- GelGreen
- GRSafe, Gel Star
- SYBR Gold, SYBR Green I and II
- SYPRO Ruby, Orange
- And others!

## Technical specifications

### Features

Blue-light transilluminator with built-in hinged lid

**Emission spectrum optimized for safe stains**

Blue light, compatible with SyBr family DNA stains

**High intensity consistent LED panel**

Non-flickering, powerful LEDs for sensitive DNA staining

**Viewing area:** 110 x 80 mm

**Illumination:** 121 high-intensity LEDs

**Emission spectrum:** Peak at 470 nm

**Dye compatibility:** GreenView Plus, GelGreen, SyBr SAFE

**Power supply:** AC 100-240V, 12V adapter included

**Dimensions:** 7" x 4" x 3" height (16.5 x 10.7 x 6.8 cm.)

**Weight:** 14 oz., 400 gr.



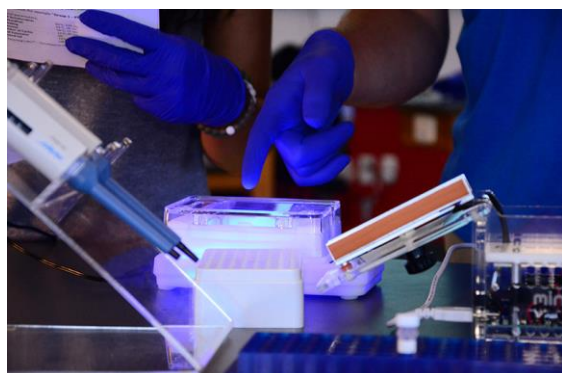
# miniPCR Learning Labs

Hands-on DNA investigations for teachers and students



- ✔ Teach PCR, electrophoresis, restriction digest, etc.
- ✔ Engaging real world applications
- ✔ Detailed lab guides
- ✔ Research-grade reagents

## Real-world biotech applications

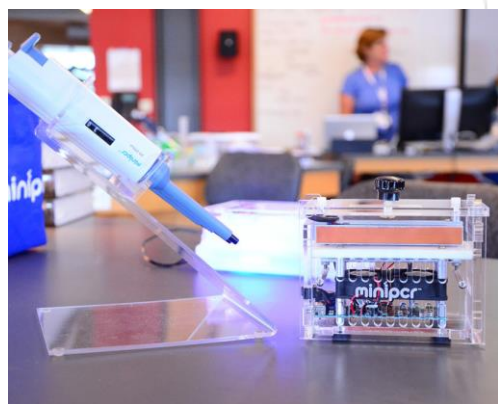


**Relevant topics from middle school to college**  
Forensics, food safety, GMO detection, human genetics, etc.

**Engaging study guides**  
Pre and post lab questions promote inquiry, content mastery, and debate on societal implications

**Core biotech skills**  
Master lab techniques including DNA extractions, PCR, electrophoresis, restriction digest, and more

## Aligned with standards



**Step-by-step learning guides**  
NGSS and Common Core aligned  
AP Biology ready  
Promote structured and guided inquiry

## Classroom-friendly



**Designed to fit classroom needs**  
Complete labs in as little as two 45-min class periods. Materials sufficient for 32 students

**Innovative kit designs**  
Simplified steps for faster experimental results.  
Load-Ready™ reagents for direct electrophoresis

## miniPCR™ micropipettes

Accurate, simple, affordable



- ✓ Variable volume ranges from 0.5 to 1000  $\mu\text{l}$
- ✓ Universal fit with standard tips
- ✓ Digital dial for accurate volume settings
- ✓ Robust, simple and reliable
- ✓ Built-in tip ejector

## miniPCR™ micropipettes

Micropipettes are an essential tool in the laboratory workflow. Transferring small volumes of liquid is an indispensable skill scientists acquire over time. miniPCR micropipettes offer an accessible way to develop and practice this skill, for learners and professionals alike.

## Technical Specifications



**Dimensions:** 18 cm. x 3 cm. x 2 cm.

**Weight:** 320 grams

**Material:** plastic (non-autoclavable)

**Repeatability:**

- H10 (for 5  $\mu\text{l}$ ):  $\leq 0.8\%$
- H20 (for 10  $\mu\text{l}$ ):  $\leq 0.6\%$
- H200 (for 100  $\mu\text{l}$ ):  $\leq 0.3\%$
- H1000 (for 500  $\mu\text{l}$ ):  $\leq 0.3\%$

**Included:** micropipette, calibration wrench, pipette tips (sample size)