Gel Documentation at its Best
UVP GelStudio Imaging Systems

Biolmaging

analytikjena
An Endress+Hauser Company

The GelStudio Product Family

From the trusted experts in gel documentation, comes the next generation of digital imagers.

The method of gel documentation has essentially remained the same for over two decades. With the introduction of digital imaging systems, researchers have benefitted from the convenience of storage data along with instant and accurate sample quantification. The effectiveness of digitized gel imaging can be measured by the growth of the technique used throughout biochemistry, forensics, genetics, molecular biology and biotechnology.

The GelStudio Series by Analytik Jena is a direct response to the expanding needs of the researchers. Upgradeable designs give you the edge in your lab. The UVP GelStudio product family features the newest technology, a uniquely intuitive software interface and a top-of-the-line 5MP gel imaging camera, giving you uncompromised data, every single time.
With a GelStudio in your lab, your research is unlimited.

UVP GelStudio

GelStudio Product Family

Gel Documentation at its Best.

UVP GelStudio PLUS

UVP GelStudio Imaging Systems

Gel imagers designed with you in mind.

The creators behind the UVP GelStudio imaging systems are renowned for delivering advanced solutions to genomic and proteomic applications. UVP GelStudio imagers offer high-resolution and sensitive imaging of DNA & protein gels. They also work with an unlimited range of excitable stains and dyes.

All imagers run the powerful VisionWorks® Software, full package image capture, enhancement functions and analysis software. Application-based icons for automation, which are included in the software package, offer one-touch capture. The software allows for creating custom icons and workflows based on users' needs.

The UVP GelStudio guarantees top image quality and an optimized range of high performance features. With its high resolution camera, high dynamics and excitation ranges from 400 to 800 nm, this series introduces a new benchmark that goes far beyond publication-quality images.

UVP GelStudio
UVP GelStudio *touch*

A New Standard in Gel Documentation.

Image quality is the top priority

- **Performance:** High quality images, with an 5 MP camera and efficient photon-to-signal conversion.
- **Sensitive:** Wide aperture lens optics capture more light in low-light applications. Signals come faster and are stronger.
- **Customized:** User-controlled image enhancement tools to optimize images, using binning, display control, background subtraction, inversion, dark frame correction, noise removal, and many more functions.

Upgradeable gel imaging station

- **Versatile:** Ideal for imaging and documentation of DNA and Protein gels, blue/white excitable dyes, TLC plates, colorimetry, colony plates, and a wide range of fluorescent dyes. Excitation in a range of 400–800 nm.
- **Modular:** Modules for multiplexing, with the option of upgrades that can be carried out in the field.
- **Free Choice:** Various UV wavelengths, white or blue LED transilluminator.
- **Flexible:** Application-based icons for commonly used applications provide one-touch capture.Templates and macros for creating custom one-touch workflows.

Data integrity

- **Powerful:** Numerous features for image enhancement and data analysis.
- **Uncompromised:** Unmodified raw data. Users have the choice of applying image enhancement tools.
- **Reproducible:** Calculation of accurate concentration results, including the calibration standard.

Designed by researchers for researchers

- **Compact:** Small footprint and compact form maximize the use of laboratory bench space.
- **Unrivaled:** Integrated touch-screen computer.
- **Extensive:** A wide illuminated imaging area for simultaneous imaging of multiple samples.
- **Ergonomic:** Thin-Line Transilluminator in a slide-out tray for easy prep.
- **Safe:** UV protection shield protects those doing prep work over the transilluminator.
- **Practical:** Fold-down door minimizes benchtop interferences.

Versatile for All Your Application Needs

The UVP GelStudio Systems are built to image DNA gels, protein gels, colorimetrics, and colony plates.

Supporting a wide range of applications

All GelStudio systems come with a 302 nm UV transilluminator and overhead white and RGB LEDs as standard enabling a wide scope of fluorescent and non-fluorescent imaging applications. Additional optional accessories such as emission filters, conversion screens and epi-UV sources add further versatility to the systems on demand.

Application-based automation and powerful data analysis – all in one stand-alone package

The VisionWorks® Software is a powerful platform. It features automated image capture, enhancement functions and extended analysis tools – all in one package. This software works with both stand-alone and external computer versions of the Studio series imagers.

This unique ability expands the tools available right on the benchtop when using the stand-alone platform. For those users who prefer to perform analysis on an external computer, all imagers include unlimited copies of the software for external use. Laboratory workflows are easy to automate and application-based icons are included for commonly used experiments. Customized application icons can be created for total workflow solutions, applications creating using macros facilitate one-touch workflows.

Revolutionary Thin-Line Transilluminator

All imagers are available as a package, which includes a 302nm, UV Thin-Line Transilluminator. The UV Thin-Line Transilluminator uses innovative long-life UV tubes, which practically eliminate service requirements. Instant-on functionality reduces warm-up time to almost zero.

An optional UVP Visi-Blue™ LED Transilluminator is available. It additionally supports blue excitation applications, including GelGreen™ and SYBR® Green (460–470 nm). A blue LED transilluminator represents the safest option for your lab, with no risk of DNA damage. It is also useful when DNA samples must be used for additional procedures that are performed after the imaging workflow. As an economical alternative to blue-light applications, a UVP Visi-Blue™ Converter Plate can be used with the Thin-Line Transilluminator to convert UV to blue.

For Coomassie blue, silver stains, and other trans white-light applications, the optional UVP Visi-White™ LED Transilluminator is recommended. An economical solution to additional white-light applications is available by simply pairing the UVP Visi-White™ Converter Plate with the UV Thin-Line Transilluminator.

With the help of a UVP eLITE Light Source, which uses Xenon light engine technology, uniform and high-intensity light across the full range of brilliant multispectral excitation can be produced for a variety of fluorescent dyes.


VisionWorks

A New Standard for Image Quality and Data Integrity

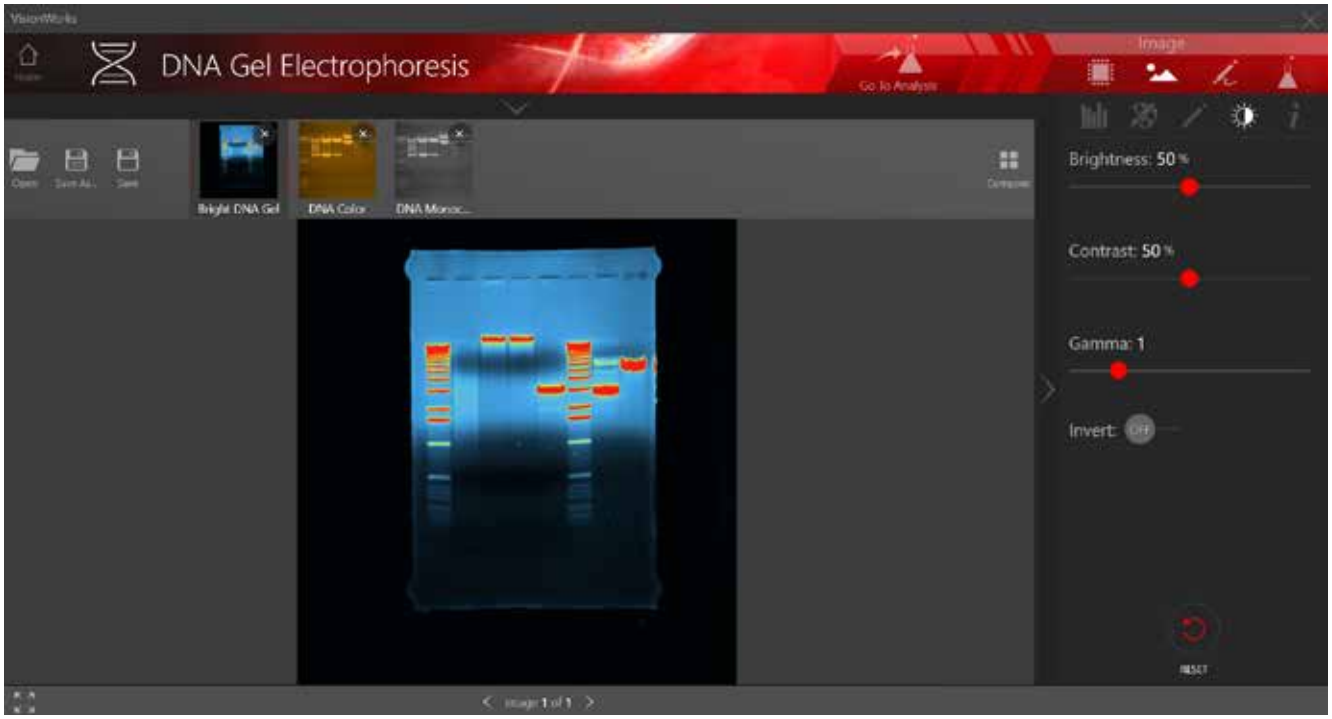
High performance gets the best results - guaranteed excellent image resolution, sensitivity and data integrity.

Clean images

The UVP GelStudio includes a high-performance 5 MP imaging camera. Capture the finest detail with our high resolution camera. The imagers are designed with an uncompromising focus on high-quality imagery, ensuring that they can bring the most value to your research.

Uncompromised data

Data integrity is essential for accurate and reproducible results. The VisionWorks® Software tools provide users with the freedom to apply image enhancement and analysis features when needed. They create uncompromised raw data and preserve the true data, promising the highest quantitative value.



An Enhanced Benchtop Experience

Compact design, small footprint, a large integrated touch-screen computer and several ergonomic features – the UVP GelStudio design maximizes space and user comfort.

The UVP GelStudio *touch* provides a seamless, efficient imaging experience

An integrated 13.3 inch, wide touch-screen computer allows for the clear visualization of even the faintest bands and the fine details of images. Users can multitask easier than ever before on the wide screen. Large and visible icons on the software interface increase accessibility, ensuring an improved and simple workflow. The computer also offers a huge hard drive for storing large amounts of images. The 7 USB ports make it possible to attach a keyboard, mouse, and other accessories, adding to the unit's user-friendliness. Additionaly the device can be connected to local net works - either WLAN or ethernet.

Designed for ease of use and convenience

With a small footprint and fold-down door, the UVP GelStudio maximizes the use of the often limited laboratory bench space and removes benchtop interference. There when you need it for performing gel excision or procedures over the transilluminator surface, the low-profile transilluminator sits on a slide-out tray. All lighting and controls are software automated and are right at your fingertips. A software controlled five-position filter wheel, in a slide-out tray, allows for simple changeover, to various emission wavelengths.

Users are alerted to the presence of UV, by a bright red "UV On" indicator light. A user-defined, software controlled UV shut-off timer is, activated after a set period of inactivity. A UV protection shield is also provided with the system to allow safe and convenient pre-imaging procedures on the transilluminator.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VisionWorks
UV On
UVP GelStudio PLUS
analytikjena

UVP GelStudio PLUS Imaging Systems

Image larger samples using the GelStudio PLUS models.

The UVP GelStudio PLUS imaging systems are essential to laboratories performing genomic and proteomic applications with larger sample sizes. The systems are customized for high resolution and sensitive imaging of DNA & protein gels using a wide variety of fluorescent dyes and conventional stains.

Gel imaging is enhanced, with a large 15.6", integrated touch-screen computer, a unique Slide2Hide door, and a Thin-Line Transilluminator, with a large 25 x 26 cm illuminated area. The UVP GelStudio PLUS *touch*, is a touch-screen operated system. This stand-alone system, is also available as a PC-controlled version, on the UVP GelStudio PLUS. The systems were designed for limited exposure to UV radiation. An integrated UV Protection Shield maximizes protection from UV radiation. Automation features allow several benefits to improving laboratory workflow and efficiency. On the UVP GelStudio PLUS systems, all VisionWorks® software packages include templates, to preset capture settings.

With all of these advanced features in one imaging system, the UVP GelStudio PLUS guarantees top image quality and data accuracy, elevating your research to the next level.

UVP GelStudio PLUS
UVP GelStudio PLUS *touch*

Setting the Standard in Gel Imaging.

Designed for laboratory efficiency and ease-of-use.

- **Efficient:** Largest touch-screen interface. 15.6 inch interface for clear visuals of fluorescent bands. Multitasking is simpler using multiple windows and for viewing several images.
- **Optimized:** Thin-Line Transilluminator 25 x 26 cm imaging area, for multiple gels and various sizes. Lighting is optimized for uniformity and high-intensity.
- **Small footprint:** A stand-alone design, maximizes the use of limited laboratory bench space. Reduced bench top interferences, with a unique Slide2Hide door, which neatly slides away, underneath the darkroom.

Application based software automation and quantitation.

- **Easy:** Quick and simple image capture and enhancement.
- **Seamless:** Software automated templates, to preset and save capture settings for various applications, from one researcher to another.
- **Powerful:** All imagers include the full package VisionWorks® Software for complete image capture, quantitation, analysis, and data reporting features.

50 years of experience in imaging.

- **Trusted:** The creators of the UVP GelStudio PLUS imaging systems, are referenced in thousands of publications and scientific articles worldwide.
- **Innovative:** Delivers the most advanced and reliable solutions for researchers.
- **Experienced:** Customized technical support and customer service teams.

Advanced camera, optics and light sources.

- **Sensitive:** 5.0 MP camera to capture high resolution, publication quality images.
  Quick: Maximum light is captured with a wide aperture, f/1.2 lens. Exposure times are reduced, allowing quicker speeds for image capture.
- **Custom:** Upgradeable with the addition of the UVP eLITE Light Source, for multispectral excitation, of a wide range of fluorescent dyes, from 400 - 800 nm.

Highest regard for protection from UV radiation.

- **Integrated:** UV Protection Shield is built-in to protect skin and eyes, while performing preparative work on gels over the transilluminator.
- **Convenient:** Red UV On Indicator light, to alert users to the presence of UV light.
- **Automatic:** Software timer shuts off UV sources, when the system is not in use.

Optimized Work Flows and Convenience

Multitasking, efficiency and ease-of-use is ensured, with the large touch-screen interface, the Thin-Line Transilluminator and the Slide2Hide door.

The Thin-Line Transilluminator is slim and sits on a slide-out tray, for simple preparative work on gels. Thin, long-life UV bulb technology delivers high-intensity and uniform transillumination, for a large imaging area of 25 x 26 cm. This is ideal for imaging multiple gels, and several colony plates of various sizes.

The UVP GelStudio PLUS *touch* has the largest, 15.6" integrated touch-screen computer, to provide a conveniently wide viewing area. Multiple gel images can be viewed, with clear visualization of faint bands. The interface contains ample space for multi-tasking on several windows and programs. Large and visible application icons on the VisionWorks *touch* Software, increase accessibility for improved and efficient work flows.

Additionally, the touch screen computer, which uses a Windows operating system, is wireless network capable and has a huge hard drive to store large amounts of images, templates and data. There are 7 USB ports for the use of additional accessories such as a keyboard and mouse, adding to the unit's user-friendliness.

Designed for convenient benchwork.

The Slide2Hide door features an ergonomic design, with smooth operation that limits bench-top interference, when tucked beneath the darkroom. Access to the interior of the darkroom is easy and unintrusive.

Expand your range of applications with modular lighting options

The UVP GelStudio PLUS imagers expand to perform an even wider range of applications with the addition of accessories. Overhead white, green, red and blue LEDs come as standard in the series, and optional UV lamps can be installed in the system to provide overhead UV illumination to support excitation ranges from 250-800nm.

- Long-life UV lamp technology for minimum service requirements, independent of the number of times the transilluminator is turned on/off
- UV lamps are instant-on, with no need to warm-up
- A UV intensity switch with low and high settings is included, to provide optimal UV radiation for gel documentation or for preparative work

VisionWorks® Software

All versions of the UVP GelStudio and UVP GelStudio PLUS series imagers are operated by VisionWorks® software. This guarantees powerful capture, quantitating and analysis.

Automation based on applications

Application-based template icons come preset and preloaded for common experiments.

One-touch workflows for drastically improved laboratory efficiency

For more complex application workflows, macros are used to automate several workflow actions so that they can be activated by one touch. Additionally, user accounts can easily be set up with passwords to save and protect user data.

Extensive image enhancement and analysis tools

Image enhancement and analysis features are included with all systems. Researchers can personalize their experiments and make use of enhancement features and annotation tools, e.g., for publication purposes. The software offers many powerful tools such as background subtraction, inversion, pseudocolor, compositing and more.

The extensive analysis features are optimized for accurate and reproducible results. Several custom tools are available, such as: automatic lane and band detection, 1D analysis, area density, and colony counting. Once the quantitation results have been generated reports are created to show thorough analysis of Molecular Weight (MW), Rf, band intensities and area density calculations. All data can be conveniently exported to Excel.

UV Protection is a Priority

An integrated UV Protection Shield maximizes protection from UV radiation when working over the transillumination surface while the darkroom door is open.

The UV Protection Shield is neatly stowed away and there is no need for a separate storage location. It is easily pulled down for immediate use, and can be set at a custom angle according to the user's needs. When the Thin-Line Transilluminator is rolled out, the shield protects users from UV while performing preparative work on gels. Additionally, the systems are equipped with a red "UV On" indicator light, to alert users to the presence of UV light.

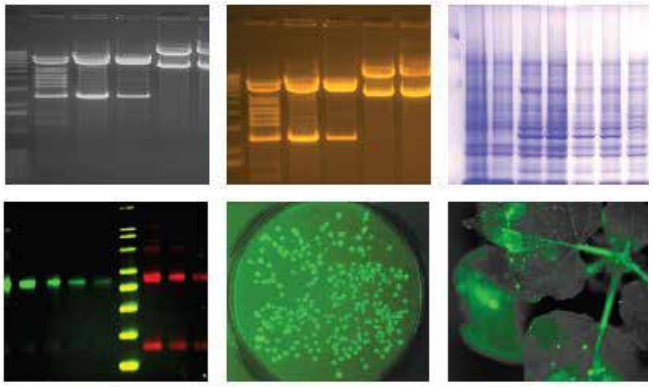
- Protected when working over the transilluminator surface
- The angle of the shield can be freely adjusted according to user needs
- Side angle design shields nearby personnel from UV radiation
- Convenient red "UV On" indicator light

Technical Data

Specifications/features	UVP GelStudio	UVP GelStudio PLUS
Light sources	▪ Overhead: white, red, green and blue LEDs included. ▪ Base lighting: Thin-Line Transilluminator, (302 nm) with High/Low intensity control ▪ Illuminated area: 16,8 x 21 cm	▪ Overhead white, red, green and blue LEDs included ▪ Base lighting: Thin-Line Transilluminator, (302 nm) with High/Low intensity control ▪ Illuminated area: 25 x 26 cm
Filter wheel	Five-position automated filter wheel	
Darkroom features	▪ 13.3" integrated, multi-touch computer (UVP GelStudio *touch* only) ▪ Fold-down door ▪ Thin-Line Transilluminator in a pull-out tray ▪ UV On indicator light ▪ USB port (right panel of unit) ▪ 6 additional USB ports (back side of unit) ▪ Access port for optional UVP eLITE Light Source	▪ 15.6" integrated, multi-touch computer (UVP GelStudio PLUS *touch* only) ▪ Slide2Hide door ▪ Thin-Line Transilluminator in a pull-out tray ▪ UV On indicator light ▪ USB port (right panel of unit) ▪ 6 additional USB ports (back side of unit) ▪ Access port for optional UVP eLITE Light Source
Accessories included	▪ Ethidium bromide filter ▪ VisionWorks® Software for image capture, enhancement and analysis (unlimited licenses) ▪ Flash drive with VisionWorks® Software (license free) ▪ UVP Fluorescent Focus Target ▪ UV Gel Tray ▪ UV Protection Shield ▪ Empty flash drive for data and image storage ▪ Keyboard and mouse (touch screen systems only)	▪ Ethidium bromide filter ▪ VisionWorks® Software for image capture, enhancement and analysis (unlimited licenses) ▪ Flash drive with VisionWorks® Software (license free) ▪ UVP Fluorescent Focus Target ▪ UV Gel Tray ▪ Integrated UV Protection Shield ▪ Empty flash drive for data and image storage ▪ Keyboard and mouse (touch screen systems only)
Dimensions: L x W x H	41 x 46 x 61 cm (16 x 18 x 24 inch)	43 x 47 x 82 cm (17 x 19 x 32 inch)
Wireless network capability	Wireless network capable, Wi-Fi, accessory for wired-to-ethernet connection available	Wireless network capable, Wi-Fi, accessory for wired-to-ethernet connection available

Applications

- Multiplex fluorescence
- RGB
- DNA gels
- Protein gels
- Fluorescent dyes
- Colorimetric imaging
- Colony counting



Order Information

VWR Cat. No.		Description
230 V	115 V	
75873-952	75873-990	UVP GelStudio
75873-988	75873-986	UVP GelStudio *touch*
75873-982	75873-984	UVP GelStudio PLUS
75873-978	75873-980	UVP GelStudio PLUS *touch*

VWR Cat. No.	Description
	MultiSpectral Light Sources
75803-210	UVP eLITE Xenon, kit with Epi-Light fibers
	Emission Filters
82020-626	Emission filter, 50 mm squared, with transmission range of 510-560 nm, for, e.g., SYBR® Green
75803-236	Emission filter, 50 mm squared, with transmission range of 520-620 nm, for, e.g., SYBR® Gold
82020-624	Emission filter, 50 mm squared, with transmission range of 580-630 nm, for, e.g., Deep Purple, EtBr, RFP
	Converter Plates
82026-878	UVP Visi-White™ Converter Plate UV-to-white, 25 cm x 26 cm filter size
82026-880	UVP Visi-Blue™ Converter Plate, 25 cm x 26 cm filter size, 460-470 nm
	NIR Accessories
76265-602	Overhead NIR Module 660nm, 787nm

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Pictures: Analytik Jena AG
Subject to changes in design and scope of delivery as well as further technical development.

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