UVP Gel Compact Imager

Cellphone-driven Bioimaging System

Biolmaging

analytikjena
An Endress+Hauser Company

UVP Gel Compact

The UVP Gel Compact is a stand-alone, fully automated, and cellphone-driven bioimaging system

The UVP Gel Compact imager is an autonomous, independent, and cellphone-driven bioimaging system designed for the documentation and analysis for various types of samples which include but are not limited to DNA gels, protein gels, and colony plates, etc. The UVP Gel Compact allows users to capture images and analyze them via their personal mobile device equipped with Analytik Jena's VisionWorks Software App. The new VisionWorks application was generated for easy gel capture and analysis and allows for total control of the UVP Gel Compact darkroom.

The system features a 302 nm wavelength transilluminator, overhead white and blue LEDs, and phone holder/adapter that can accommodate most phone sizes on the market.

Applications

- Fluorescence imaging
- DNA gels
- Protein gels
- Colorimetric imaging
- Colony counting

UVP Gel Compact

Cellphone-driven imager for gel documentation and analysis

Features

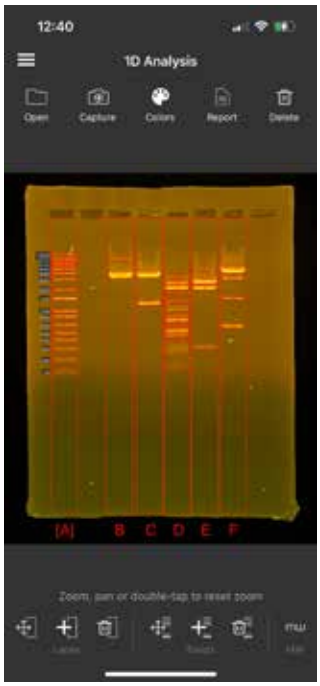
- **Camera:** Unique feature of using your own cellphone to take images of your sample
- **Illumination:** Overhead white and blue LED light, and UVP UV Transilluminator at 302 nm
- **Filter Tray:** Four (4) position automated emission filter tray with EtBr emission filter included
- **Software and Automation:** Darkroom fully automated and controlled through cellphone via the VisionWorks mobile app. VisionWorks App allows the user to capture images with a smartphone which instantly uploads to the cloud for analysis and notation
- **Accessories:** A phone adapter/holder is included with each unit allowing for a range of phone sizes that work seamlessly with the UVP Gel Compact. *Phone is not included with the unit*
- **Optional Accessories:** The UVP Visi-White Converter plate, UVP Visi-Blue converter plate, UVP Visi-Blue LED Transil-luminator, and a range of emission filters are available for purchase

VisionWorks Software

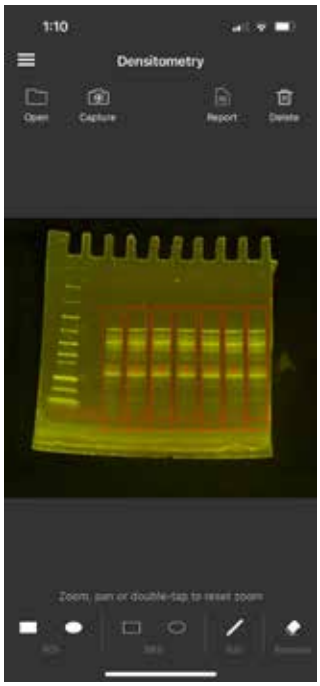
VisionWorks App for image acquisition and analysis in the palm of your hand

Home Screen

Capture Settings



Molecular Weight Calibration



Densitometry Analysis

About VisionWorks App

Enjoy all the capabilities of our VisionWorks Touch software on your smartphone with the new VisionWorks App (available for iOS and Android). Analytik Jena's new VisionWorks App is a powerful software that gives users full control of the UVP Gel Compact darkroom for easy acquisition and analysis using their personal smartphone. This feature is the perfect match for the modern lab and educational market.

The VisionWorks App comes with automated 1D lanes and bands detection, molecular weight calibration, the densitometry analysis. Common applications include, but are not limited to: Colony Counting, DNA gel, RNA gel, and protein gel capture and analysis.

Software Features

- User friendly interface (self-explanatory icons)
- Software controlled lighting and filter (connection through Bluetooth)
- Auto and manual focus in software
- Auto and manual capture
- Automatically save the captured image in phone gallery
- Cloud analysis for 1D lanes and bands, auto detection, molecular weight calibration, area density analysis, colony counting and classification
- View result report in the App
- Report can be shared via email

A New Way to Image

An accurate, affordable, and accessible bioimaging system for gel and bacteria documentation and analysis

The UVP Gel Compact can be used for various types of gel documentation and analysis. The system comes with a 302 nm UV transilluminator and blue and white LED excitation light sources. It is capable of imaging DNA and protein samples stained with EtBr, GelGreen, GelRed, SYBR Safe, Coomassie Blue, Silver Stain, and Stain Free gels etc. The system is also capable of imaging fluorescent bacterial colonies expressing GFP and RFP signals.

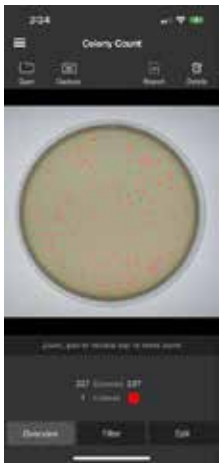
Sample Capture and Analysis Workflow

Colony Counting

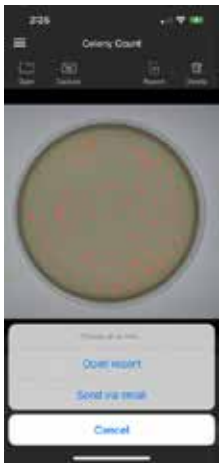
The E.coli colony plate image was captured with an Apple iPhone 13 Pro with the VisionWorks App, UVP Gel Compact Darkroom, UV to White converter plate and UV transilluminator.

1. E. coli sample captured by phone

2. Apply cloud based colony count analysis



3. Colony count result displayed

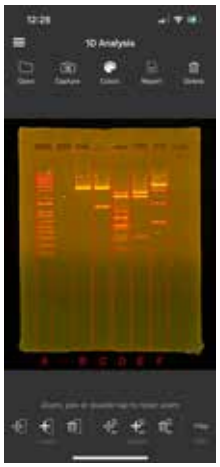


4. View result report in software or share via email

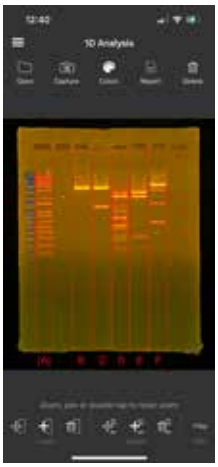
1D Gel Analysis

The pBR322 plasmid DNA was digested with FastDigest restriction enzymes and stained with EtBr DNA dye. The image was captured with an iPhone 13 Pro with the VisionWorks App, UVP Gel Compact Darkroom, 302 nm Transilluminator, and EtBr emission filter.

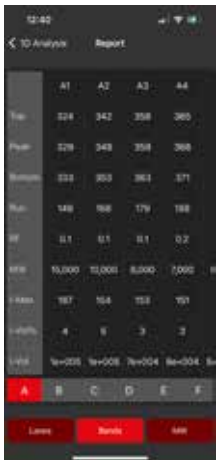
1. DNA gel captured by phone



2. Apply cloud based 1D analysis



3. Apply molecular weight calibration



5. View result report in software or share via email

Technical Data

Darkroom	
Filter Tray	4-position filter wheel
Illumination	Overhead Epi-Blue and Epi-White LEDs
Filter and Illumination Control	Fully automated through VisionWorks App
Transilluminator	Choice of: UVP UV Thin-Line Transilluminator at 302 nm UVP Visi-Blue Transilluminator at 460 - 470 nm
Max. Sample Area	16.8 x 21 cm
Connectivity	Darkroom will be able to connect to user's cellphone via Bluetooth for full control

Lighting Modules			
	EPI Light Source	Excitation Wavelength (peak)	Positioning
Blue	LED	460 nm	Overhead
White	LED	N/A	Overhead

UVP Elite UV Transilluminator Configuration	
Filter Size	16.8 x 21 cm
Wavelength Transilluminator	302 nm
Emission Filters	Included Broad Band filter, 535 – 660 nm
Converter Plates (optional accessories for purchase)	UVP Visi-Blue Converter Plate (UV to Blue) UVP Visi-White Converter Plate (UV to White)

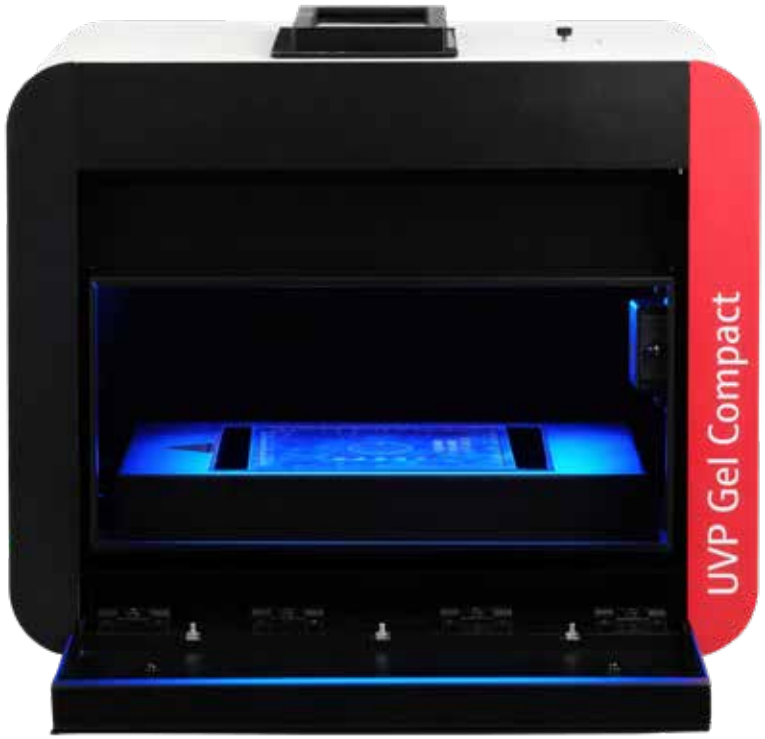
UVP Visi-Blue Transilluminator Configuration	
Filter Size	16.8 x 21 cm
Wavelength Transilluminator	460 - 470 nm
Emission Filters	Included Amber filter, 570 nm – 740 nm

Additional Technical Data	
Cellphone Compatibility	Compatible with an extensive range of single or multiple lens cellphones. Phone-case compatibility: Transparent and opaque cellphone cases that do not obscure the camera
Software Requirements:	Android 10 or above | iOS 13 or above
Fuses	Fuse 3.15A for darkroom. 2 Required.
Power Supply	100/115V, 50/60 Hz, 3.1 Amps at 120V / 230V, 50/60 Hz, 1.55 Amps at 230V Main supply voltage fluctuations are not to exceed 10% of nominal supply voltage
Operation Conditions	5 °C to 40 °C, max. 80 % air humidity for temperatures up to 31 °C, decreasing linearly to 50% maximum relative humidity at 40 °C. Max. 2000 m NN.
Dimension (W x D x H):	18 x 13.5 x 14.5 in. (45.72 x 34.29 x 36.83 cm)
Weight	29 lbs. (13.1542 kg.)

Order Information

100-120 V	230 V	UVP Gel Compact Imaging System
849-97-0947-01	849-97-0947-02	UVP Gel Compact, 302 nm Transilluminator
849-97-0947-03	849-97-0947-04	UVP Gel Compact, Blue light Transilluminator
		Emission Filters
38-0340-07		Emission filter 513 – 557 nm: GelGreen, FITC, FAM™, GFP
38-0349-02		Emission filter 535 – 660 nm: Ethidium Bromide, GelRed, GelGreen
38-0220-04		Emission filter 575 – 640 nm: Ethidium Bromide, RFP, Deep Purple
38-0384-02		Emission filter 570 – 740 nm: SYBR Safe and SYBR Green, SYPRO® Orange, SYBR® Gold
		Converter Plates
38-0408-01		UVP Visi-White™ Converter Plate, UV-to-White, 16.8 x 21 cm
38-0409-03		UVP Visi-Blue™ Converter Plate, UV-to-Blue, 16.8 x 21 cm

* Please visit our website to view the full range of available accessories.



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Pictures: Analytik Jena US LLC
Subjects to changes in design and scope of delivery as well as further technical development.

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