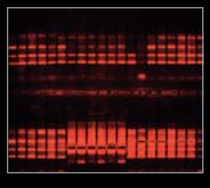
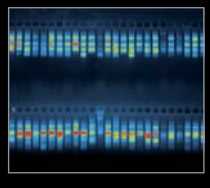
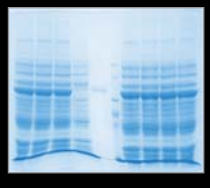
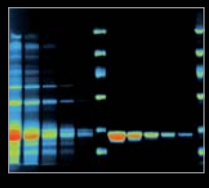
MOLECULAR IMAGING

CHEMILUMINESCENCE • FLUORESCENCE • ANALYSIS SOFTWARE





VILBER LOURMAT

Turn your search into answers

VILBER is the leading European provider of molecular imaging systems, analysis software and UV fluorescence equipment. Founded over 50 years ago to serve the research, VILBER has pioneered the post electrophoresis market and introduced breakthrough products such as stand alone gel-documentation, Bio-1D imaging software, Super-Bright UV technology, dedicated chemiluminescence imaging system and 3D approach to 1D gel analysis.

Through a network of owned subsidiary offices and local distributors located in over 60 countries around the world, VILBER offers a broad range of products:

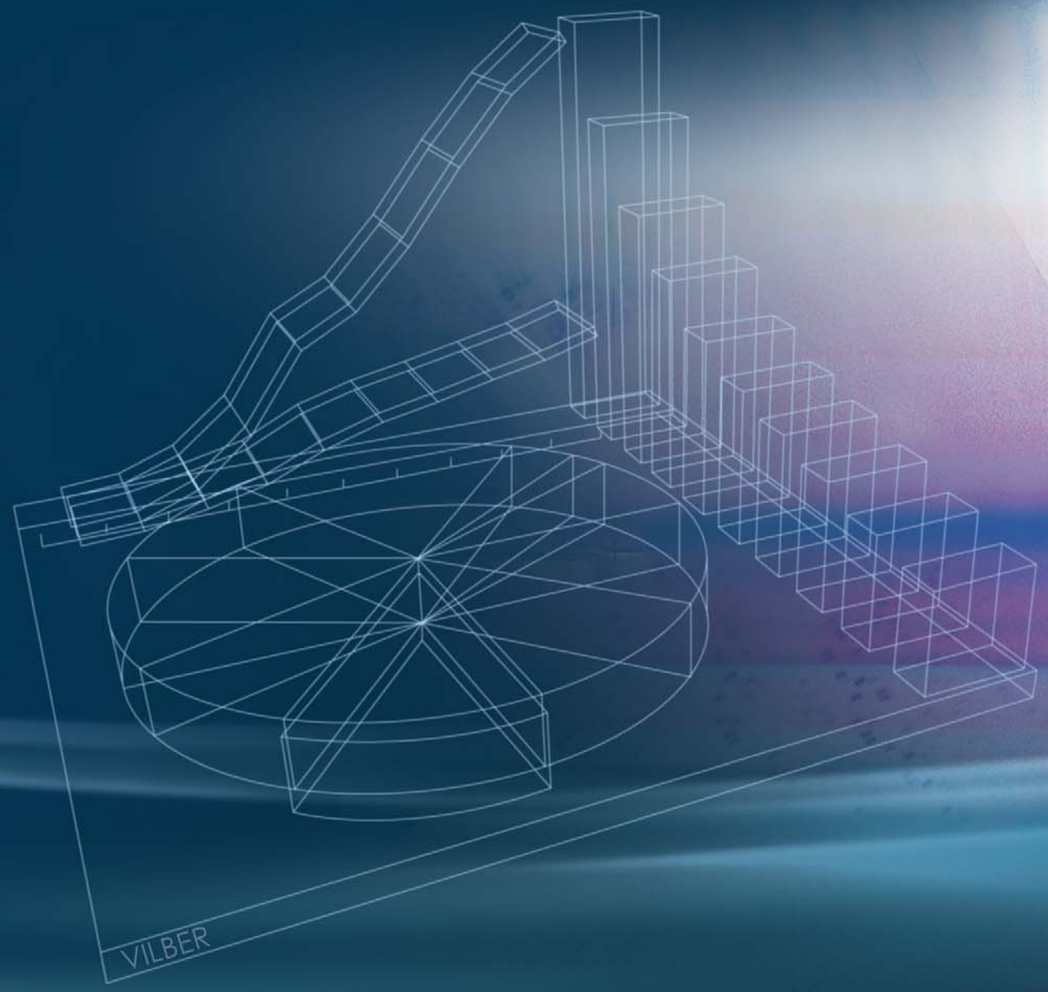
> Gel documentation systems

> Chemiluminescence imaging systems

> Image analysis software

> UV instruments for molecular biology such as transilluminators, crosslinkers and UV lamps.

For more information about VILBER, visit our website at **www.vilber.com**



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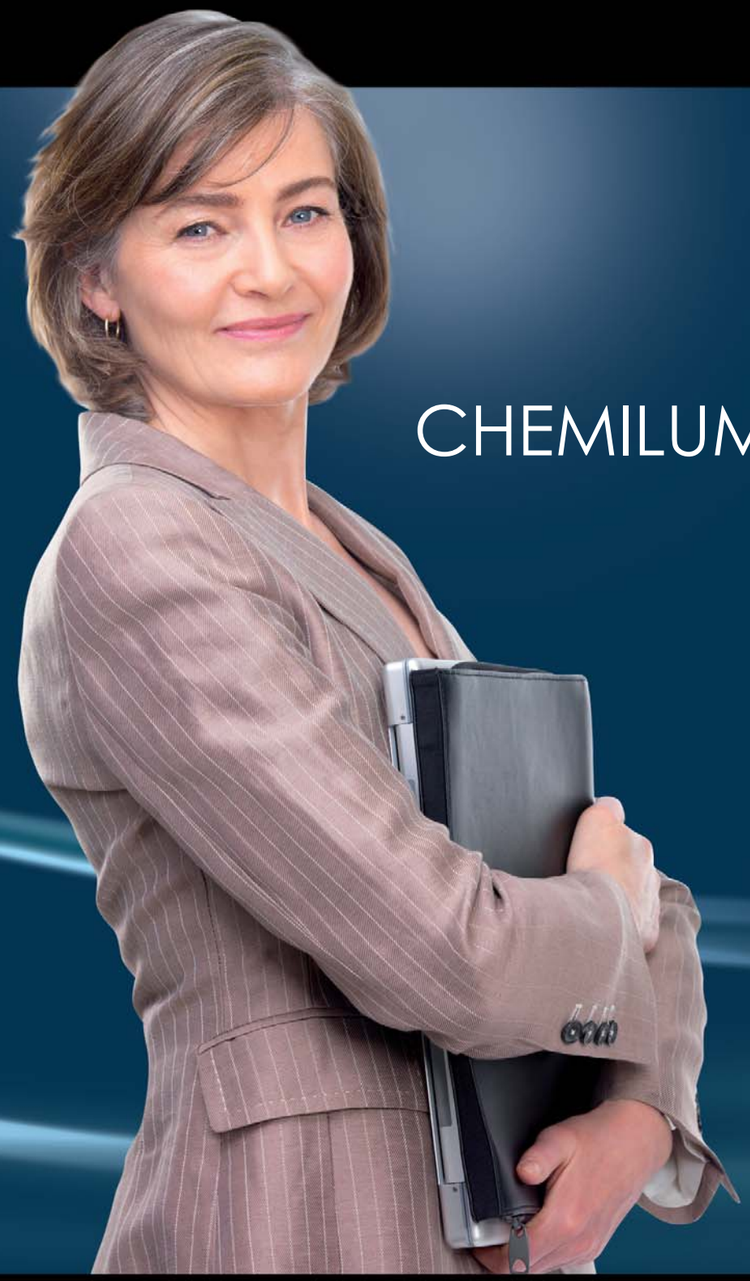


CHEMILUMINESCENCE

UNRIVALLED SENSITIVITY

Very high sensitivity is one of the main requirements regarding chemiluminescence imaging. The Fusion systems' cameras use the latest generation of sensors and semi-conductors. Combined with our unique High Sensitivity Camera (HSC) technology, the Fusion systems are ideal for ECL™, CDP Star™, CSPD™, SuperSignal™ and other chemiluminescent enhancers.

Our superior sensitivity, resolution and dynamics provide optimal performance in virtually all situations. The Fusion system is ready to work for your most demanding bio-luminescence, multiplexing or fluorescence applications.

ONE-CLICK

Fusion FX7 and FX5 have unrivalled ease of use thanks to the motorised filter wheel, motorised lens with feedback control, & automatic lighting controls. The image acquisition process is as quick as instinctive. The systems come in standard with autofocus and autoexposure as standard. With just one click, the system will automatically capture the best possible image.

The user-interface has rich features and guides you into the advanced functions such as the video mode or the multiplexing module. Our software offers multiple analysis features such as molecular weight, band quantification and colony counting.

MAXIMUM LIGHT TRANSMITTANCE

The quality of the optics is essential in transmitting the extremely weak chemiluminescence light to the CCD sensor efficiently. Fusion FX and Fusion SL systems have an outstanding large-aperture lens for optimum light transmission. The optics of the Fusion is based on a supremely bright fixed lens with an f-stop of 0.95. Unlike an ordinary camera lens, it has been specially designed to provide high performance at an extremely short distance.

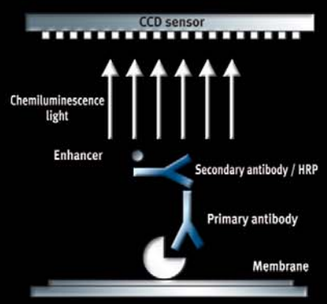
> HOW CHEMILUMINESCENCE WORKS

Chemiluminescence is used to detect proteins or DNA. This detection method does not require any external excitation such as UV light. The light emission is caused by a chemical reaction exciting a compound to a high-energy state. This unstable compound rapidly looses its excess energy by emitting light. The emitted light has a wavelength between 400 and 500 nm according to the substrate used.

The chemiluminescent reaction occurs when an enzyme such as horseradish peroxidase (HRP) or alkaline phosphatase reacts with a chemiluminescent substrate (such as luminol or dioxetane) to produce a weak signal. With the addition of an enhancer, the light intensity and the light duration increase.

Until recently, the documentation was based on X-ray film, which did not allowed quantification. The recent improvements of CCD imaging in terms of sensitivity make this technology simply perfect for chemiluminescence documentation and quantification.

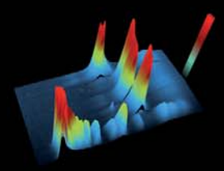
> KEY FEATURES



PROTOCOL DRIVEN SOFTWARE

The Fusion FX7 and FX5 acquisition software is protocol-driven. Acquisition parameters such as lighting, filter selections, exposure times, and sensitivity can all be saved for future use to ensure instrument reproducibility and one-click image acquisition.

The parameters are saved in a profile. Just recall your application profile before image acquisition and the Fusion system will automatically apply your protocol-driven set-up to the next image capture.



VILBER

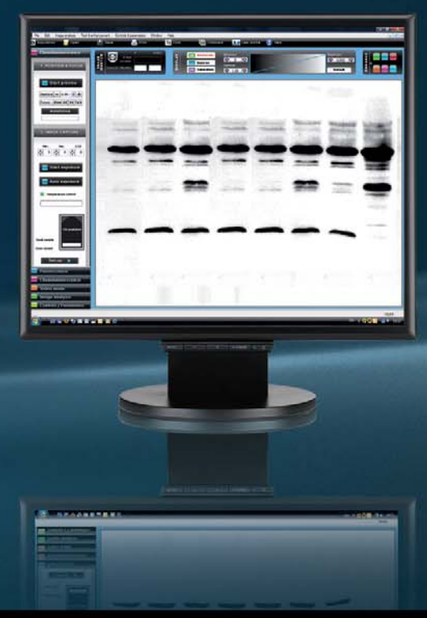
FUSION FX7

The ultimate sensitivity

Fusion FX7 is an image acquisition system dedicated to the capture of chemiluminescence and fluorescence images. Using the most advanced cooled CCD technology in combination with a state of the art motorised optical lens, the Fusion FX7 offers a very high sensitivity and an extended dynamic range.

Fusion FX7 is especially designed to be very simple to use. Just load the sample, adjust the optics and launch the image acquisition according to your protocol.

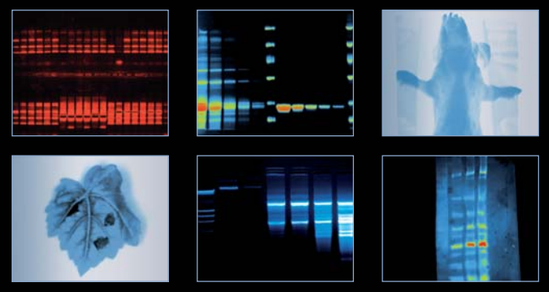
Data produced by the Fusion FX7 are directly compatible with the broad range of image analysis software developed by VILBER. Transform your 1D image into 3D results with our Bio-1D and the Bio-Gene software.



> KEY FEATURES

- The ultimate chemiluminescence imaging system
- Last generation of cooled CCD sensor
- Image Master assistant to easily get the optimum image
- Ultimate sensitivity
- 70% quantum efficiency at 450nm for unparalleled sensitivity
- Power without compromise
- 4.2 megapixels imaging
- Pure image integrity and access to the raw data
- Large sample size and ingenious tray system
- Free software for image acquisition & analysis

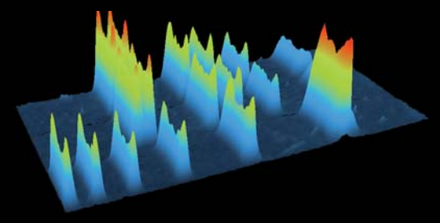
> PHOTO GALLERY



> APPLICATIONS

- **CHEMILUMINESCENCE DETECTION**

ECL™, ECL Plus™, ECL Advance™, ECL Plex™
CDP Star™, Super Signal™, CSPD™



> TESTIMONIALS

I have been astonished by our Fusion FX7. Our system is fully motorised and just one click is necessary for image acquisition.

The protocol-driven image acquisition process delivers incredible results and versatility. This really helps to cover a multitude of applications.

The sensitivity is simply top class and our images are ideal for quantification.

VILBER

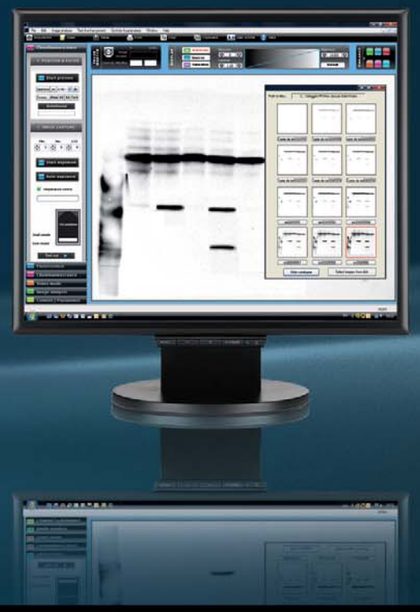
FUSION FX5

Power and versatility

The Fusion FX5 is an image acquisition system for the capture of chemiluminescent and fluorescent gel images.

The 2 megapixels cooled scientific CCD camera acquires high sensitivity and high-resolution images for multiple applications. Our unique darkroom accommodates a transilluminator for fluorescence applications and a separate tray for Western-blot imaging.

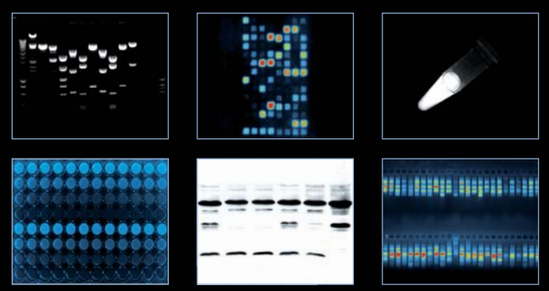
Together with Bio-Profil software, Fusion FX5 forms a versatile and powerful system for quantification and documentation.



> KEY FEATURES

- Unparalleled sensitivity
- One instrument for chemiluminescence and fluorescence
- Latest generation of cooled CCD sensor
- 2 Megapixels imaging / FireWire® interface
- Pure image integrity and access to the raw data
- Lens feedback controls
- Exclusive VILBER's UV Master™ technology
- Image Master assistant to easily get the optimum image
- Convenient versatile darkroom with multi-positions filter slide
- Compatible with the Super-Bright transilluminator technology

> PHOTO GALLERY



> APPLICATIONS

- **CHEMILUMINESCENCE DETECTION**
  ECL™, ECL Plus™, ECL Advance™, ECL Plex™, CDP Star™, Qdot™, Super Signal™, CSPD™
- **NUCLEIC ACID DETECTION**
  Ethidium bromide, SYBR™ Green, SYBR™ Gold, Texas Red™ Gel Star™
- **PROTEIN DETECTION**
  Coomassie blue, Sypro™ Ruby, Sypro™ Orange, Sypro™ Red, Silver Star™ , Fluorescein, Qdot™
- **OTHER**
  Petri dish imaging
  Microplate imaging
  Autoradiograph imaging

> TESTIMONIALS

"The FUSION FX5 delivers very high performance for a large number of applications. This is an incredibly versatile system.

Together with the StarLight module for red, blue and green, we use it for applications such as GFP, SYBR Green, Western-blot, Luciferase and standard gel documentation. This is really the all-in-one necessary in our lab."

VILBER

FUSION SL

Performance at a budget

SPECIFICATIONS

	FUSION FX7	FUSION FX5	FUSION SL
Camera and optics	Monochrome scientific grade CCD camera Real time and integration time Grade 0, zero defect Progressive scan – Low dark current 4.2 megapixels 2048 H x2048 V Cooling: -67°C to operating temperature (-42°C absolute & regulated) Motorised f:095 lens with autofocus and lens feedback control	Monochrome scientific grade CCD camera Real time and integration time Grade 0, zero defect Progressive scan – Low dark current 2 megapixels 1600 H x1200 V Cooling: -50°C to operating temperature (-25°C absolute & regulated) Motorised f:095 lens with autofocus and lens feedback control	Two models: > Fusion SL4 4.2 megapixels 2048 H x2048 V Cooling: -67°C to operating temperature (-42°C absolute & regulated) > Fusion SL2 2 megapixels 1600 H x1200 V Cooling: -50°C to operating temperature (-25°C absolute & regulated) Manual or motorised lens options
Pixel depth	True 16-bit, 65 536 grey levels	True 16-bit, 65 536 grey levels	True 16-bit, 65 536 grey levels
Sensitivity	Ultimate camera sensitivity Ideal for ECL™, ECL Plus™, ECL Advance™, CDP Star™, ECL Advance™, Super Signal™, CSPD™ and for fluorescence applications	Very high sensitivity Ideal for ECL™, ECL Plus™, ECL Advance™, CDP Star™, ECL Advance™, Super Signal™, CSPD™ and for fluorescence applications	Ideal for ECL™, ECL Plus™, ECL Advance™, CDP Star™, ECL Advance™,Super Signal™, CSPD™ and for fluorescence applications
Software	Fusion systems are supplied with the Fusion-Capt software for image enhancement and basic image analysis The Fusion images are compatible with Bio-1D and Bio-Gene software for quantification: transform your 1D gel into 3D results		

CONFIGURATIONS

Darkroom	Fully automatic system with motorised lens, motorised filter wheel, & automatic lighting controlled by software. True protocol-driven image acquisition. Includes a slide-out build-in transilluminator & UV security switch Multiposition filter wheel Separate tray for Western-blot imaging. Upgradable to StarLight module Uniform white light or UV light epi-illumination sources Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available	Fully automatic system with motorised lens, motorised filter wheel, & automatic lighting controlled by software. True protocol-driven image acquisition. Includes a slide-out build-in transilluminator & UV security switch Multiposition filter wheel Separate tray for Western-blot imaging. Upgradable to StarLight module Uniform white light or UV light epi-illumination sources Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available	Separate tray for Western-blot imaging. Optional transilluminator Manual filter wheel Upgradable to StarLight module Uniform white light or UV light epi-illumination sources

> KEYS FEATURES

- Cost effective solution
- One instrument for chemiluminescence and fluorescence
- State of the art optics and CCD camera / USB2 interface
- Exquisite sensitivity / 2 or 4.2 megapixels
- Fantastic ease of use
- Image Master assistant feature to easily get the optimum image
- Pure image integrity and access to the raw data
- Unique VILBER filters for precise imaging & superior results
- Upgradeable system for enhanced versatility
- Exclusive VILBER's UV Master™ technology

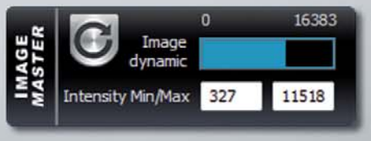
> APPLICATIONS

- **CHEMILUMINESCENCE DETECTION**
  ECL™, ECL Plus™, ECL Advance™, ECL Plex™, CDP Star™, Qdot™, Super Signal™, CSPD™
- **NUCLEIC ACID DETECTION**
  Ethidium bromide, SYBR™ Green, SYBR™ Gold, Texas Red™ Gel Star™
- **PROTEIN DETECTION**
  Coomassie blue, Sypro™ Ruby, Sypro™ Orange, Sypro™ Red, Silver Star™, Fluorescein, Qdot™
- **OTHER**
  Petri dish imaging
  Microplate imaging
  Autoradiograph imaging

FLUORESCENCE

IMAGE MASTER

Our exclusive Image Master assistant helps you to obtain the optimum image at a glance. For instance, it automatically monitors the maximum and the minimum intensity obtained on the image, indicates its dynamic and warns you about pixel saturation. Image Master is simply perfect for quantification and publication. It helps you to keep the control on the image, making sure your image is always appropriate whatever its use.



FREE SOFTWARE

All our systems are supplied with complimentary software to perform analysis such as molecular weight, band quantification, colony counting and distance calculation. It also includes image enhancement features to enable editing of comments, inversion, contrast / brightness adjustment as well as colorimetry.
Designed by molecular biologists, our software are intuitive and very easy to use: just few clicks are necessary to obtain sophisticated results. Please refer to page 39 for a complete list of functions.

LEADING CLASS TECHNOLOGIES

VILBER is committed to deliver state of the art technology. From microprocessor-controlled transilluminator to scientific grade CCD camera and optics, our systems are designed with sophistication in mind to deliver the highest imaging results. Nevertheless, our aim is to make the systems simple and intuitive. Our experts have molecular biology background to deliver the understanding and the ease of use you need in your lab. So, turn on and have fun.

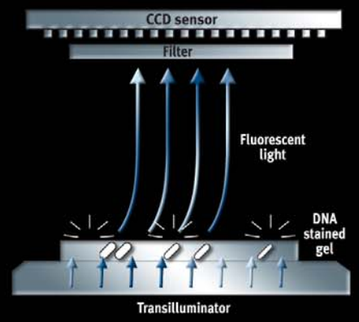
> HOW FLUORESCENCE WORKS

Fluorescence results from a process that occurs under certain conditions in molecules known as fluophores, or fluorescent dyes.

The fluophore absorbs the UV light coming from the transilluminator, reaching a higher energy state. By returning to its former state, it emits fluorescent light.

The emission wavelength is always higher than the excitation wavelength (UV light). The aim of the gel documentation system is to separate the emitted light from the excitation light in order to obtain an optimum gel image.

> FLUORESCENCE IMAGING



> UV MASTER TECHNOLOGY

VILBER is the UV fluorescence expert since 1951. Our own UV lamps emit highly concentrated UV radiation. This output is reinforced with the use of our exclusive Ondulex® reflector, especially polished to reflect the maximum of the light to the outside.

Combined with our innovative range of special UV filters, our unique fluorescence sources dramatically improve the quality of gel visualization and documentation and create unrivalled multi fluorescence application capabilities.

VILBER

INFINITY

Ultimate

- 2 megapixels – unrivalled resolution
- 16-bit – exquisite pixel depth
- 1-inch CCD sensor
- Exclusive Image Master assistant to get the optimum image
- Optimum system for quantification and documentation
- Intuitive image acquisition
- Free user-friendly software

> APPLICATIONS

- **NUCLEIC ACID DETECTION**

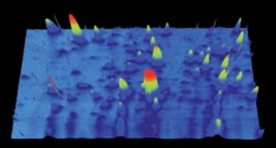
  Ethidium bromide, SYBR™ Green, SYBR™ Gold, Texas Red™, Gel Star™

- **PROTEIN DETECTION**

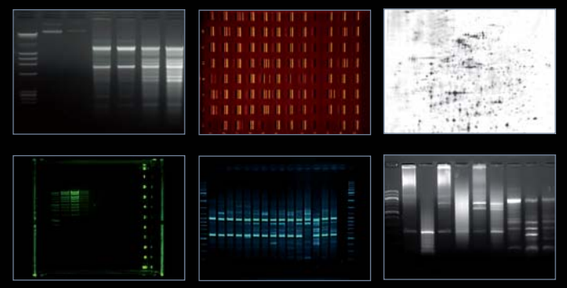
  Coomassie blue, Sypro™ Ruby, Sypro™ Orange, Sypro™ Red, Silver Star™, Fluorescein

- **OTHER**

  Petri dish imaging
  Microplate imaging
  Autoradiograph imaging



> PHOTO GALLERY



> REFERENCE LIST

- Boehringer Ingelheim (Biberach, Germany)
- Institut Curie (Paris, France)
- Jinan University (Guangzhou, China)
- Austin Research Institute (Melbourne, Australia)
- Max Planck Institut / Molecular Physiology (Dortmund, Germany)

> TESTIMONIALS

"Infinity is a first class system for the quantification of our 1D gels. The system is very flexible and we use it in combination with a Super-Bright transilluminator for the imaging of different dyes such as SYBR Green™ and Sypro Ruby™ for 2D gel.

Talking about quantification, we realised the importance of the resolution and of the pixel depth. Undoubtedly, we are delighted with the fantastic results we obtain."

ULTIMATE SENSITIVITY FOR FLUORESCENCE

INFINITY is dedicated to fluorescence imaging. The **scientific grade CCD** camera has been specifically designed for fluorescence detection.

The great care given to the optics enhances its capabilities. Even the most demanding samples are easily captured and analyzed.

ULTIMATE PIXEL DEPTH

INFINITY has an ultimate 16-bit pixel depth, which produces 65 536 grey levels, to be compared with 4 096 from 12-bit systems.

The 16-bit pixel depth delivers high accuracy for quantification and can easily detect large intensity difference between bright and faint bands.

ULTIMATE RESOLUTION

INFINITY has unparalleled resolution. The 1-inch CCD sensor has a resolution of 2 megapixels. This is more than **50% better compared to competitor's** systems. This means 50% more quantitative data, 50% more accurate imaging and analysis.

VILBER

INFINITY

Ultimate

SPECIFICATIONS

	INFINITY 3000	INFINITY 1000
Camera	Monochrome scientific grade CCD camera Real time and integration time **1 inch** CCD sensor	Monochrome scientific grade CCD camera Real time and integration time **1 inch** CCD sensor
Pixel depth	4.8 orders of magnitude **16-bit**, 65 536 grey levels. 3 user-controlled pixel depth modes : 16-bit, 12-bit, 8-bit	4.8 orders of magnitude **16-bit**, 65 536 grey levels. 3 user-controlled pixel depth modes : 16-bit, 12-bit, 8-bit
Resolution	**2 megapixels** 1 600H x 1 200 V pixels Pixel size 7.4 µm x 7.4 µm 3 binning modes: 2x2; 3x3; 4x4	**2 megapixels** 1 600H x 1 200 V pixels Pixel size 7.4 µm x 7.4 µm 3 binning modes: 2x2; 3x3; 4x4
Grade	Ultra high sensitivity for fluorescence Scientific grade camera Chip quality: Grade 0, zero defect	Ultra high sensitivity for fluorescence Scientific grade camera Chip quality: Grade 0, zero defect
Camera device	Progressive scan FireWire®/IEEE 1394 interface	Progressive scan FireWire®/IEEE 1394 interface
Zoom	Scientific grade zoom lens Manual or motorized configurations	Scientific grade zoom lens Manual or motorized configurations
Software	**INFINITY** is supplied with the Infinity-Capt software for image enhancement and basic image analysis. The **INFINITY** images are compatible with Bio-1D and Bio-Gene software for quantification: transform your 1D gel into 3D results.	

> VERSATILE & UPGRADEABLE

In standard, the Infinity systems are ideal for a wide range of fluorescence applications. You can also customize your own system or upgrade later, thanks to different options to add versatility and imaging experiments:

- Super-Bright technology for enhanced imaging
- PC controlled motorized scientific zoom lens
- UV to white light conversion screen for white light samples such as protein gels or autoradiographs
- UV to blue light conversion screen for dyes such as GFP II™, SYBR Green™ or Sypro Orange™.
- Filtered UV epi-illumination modules
- Bio-1D advanced image analysis software

> COMPLIMENTARY SOFTWARE

- **IMAGE ACQUISITION**
  Real time and integration time modes
  …
- **IMAGE ENHANCEMENT**
  Editing of comments and symbols
  …
- **IMAGE ANALYSIS**
  Molecular weight calculation
  …

Complete list of features page 39

CONFIGURATIONS

Darkroom	**CN-3000 darkroom** Includes a slide-out build-in transilluminator & UV security switch Multiposition filter slide Upgradable to StarLight module Uniform white light or UV light epi-illumination sources Single or dual wavelength transilluminator available Filter size : 20x20cm or 21x26cm Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available	**CN-1000 darkroom** Includes a slide-out build-in transilluminator & UV security switch Multiposition filter slide Overhead white light by fluorescent tubes Single or dual wavelength transilluminator available Filter size : 20x20cm or 21x26cm Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available

VILBER

QUANTUM ST4

Industry standard

> APPLICATIONS

- **NUCLEIC ACID DETECTION**

  Ethidium bromide, SYBR™ Green, SYBR™ Gold, Texas red™, Gel Star™

- **PROTEIN DETECTION**

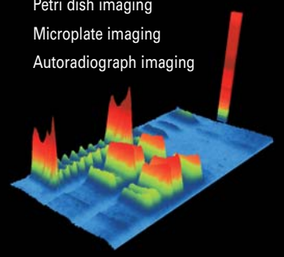
  Coomassie blue, Sypro™ Ruby, Sypro™ Orange, Sypro™ Red, Silver Star™, Fluorescein

- **OTHER**

  Petri dish imaging

  Microplate imaging

  Autoradiograph imaging



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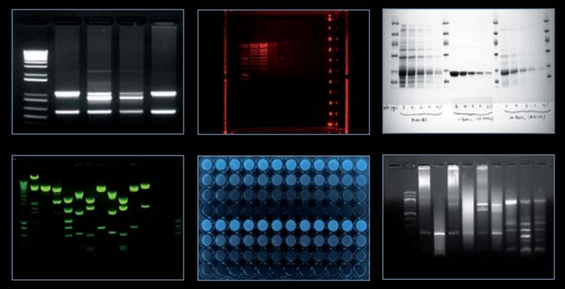


> KEY FEATURES

- PC based system for publication and analysis grade imaging
- Scientific Sony chip CCD camera
- 1.4 megapixels resolution / USB2 interface
- 16-bit – exquisite pixel depth
- Highly sensitive scientific CCD camera and optics
- Manual or motorized zoom lens / Multi-position filter slide
- Free software for image acquisition & analysis

> TESTIMONIALS

Our QUANTUM ST4 system offers everything we need: excellent results, user friendly image acquisition and free software for all the users. We appreciate the darkroom UV epi-illumination as well as the filter slide for imaging of different dyes.

The roll-out transilluminator is very convenient for gel cutting and the door UV security switch is a great protection.

FAST, ACCURATE AND EASY IMAGE ACQUISITION

QUANTUM-CAPT is the complimentary software supplied with the QUANTUM ST4 system. It includes a powerful and easy-to-use image acquisition module. An automatic pixel saturation warning and a display of the image dynamic enhance the image acquisition. They ensure optimum quality of the final image, which can then be instantly printed or saved for further analysis or publication.

QUICK AND SIMPLE ANALYSIS

In addition to image acquisition, QUANTUM-CAPT software offers multiple analysis features. It includes three main analysis components: molecular weight, band quantification, colony counting.

COMPLETE AND FLEXIBLE IMAGE ENHANCEMENT

The image enhancement module enables editing of comments, image inversion, contrast and brightness adjustment, as well as the use of pseudo colors for colorimetric samples.

VILBER

QUANTUM ST4

Industry standard

SPECIFICATIONS

	QUANTUM ST4 3000	QUANTUM ST4 1000
Camera and optics	Scientific Sony chip CCD camera Real time and integration time Grade 0, zero defect Progressive scan – Low dark current HAD (Hole Accumulation Diode) sensor Continuous variable-speed shutter USB2 interface Scientific grade zoom lens. Japanese optics Manual or motorised configurations Autofocus for the motorised configuration	Scientific Sony chip CCD camera Real time and integration time Grade 0, zero defect Progressive scan – Low dark current HAD (Hole Accumulation Diode) sensor Continuous variable-speed shutter USB2 interface Scientific grade zoom lens. Japanese optics Manual or motorised configurations Autofocus for the motorised configuration
Resolution	1,4 megapixels – Sony chip 1360 (H) x1024 (V)	1,4 megapixels – Sony chip 1360 (H) x1024 (V)
Pixel depth	True 16-bit, 65 536 grey levels	True 16-bit, 65 536 grey levels
Sensitivity	High sensitivity for DNA/protein fluorescence detection All images saved with a GLP (Good Laboratory Practice) file	High sensitivity for DNA/protein fluorescence detection All images saved with a GLP (Good Laboratory Practice) file
Software	Quantum ST4 is supplied with the Quantum-Capt software image enhancement and basic image analysis The Quantum ST4 images are compatible with Bio-1D and Bio-Gene software for quantification: transform your 1D gel into 3D results	

> VERSATILE & UPGRADEABLE

In standard, the QUANTUM ST4 systems are ideal for a wide range of fluorescence applications. You can also customize your own system or upgrade later thanks to different options to add versatility and imaging experiments:

- Super-Bright UV filter technology for multi-applications gel imaging
- StarLight RGB LED epi-illumination module for bioluminescence, in-vivo and fluorescence on membrane
- Filtered UV epi-illumination modules
- PC controlled motorized scientific zoom lens
- UV to white light conversion screen for white light samples such as protein gels or autoradiographs
- UV to blue light conversion screen for dyes such as GFP II™, SYBR Green™ or Sypro Orange™.
- Large variety of interchangeable filters or Universal configuration
- Bio-1D advanced image analysis software

> COMPLIMENTARY SOFTWARE

- **IMAGE ACQUISITION**
  Real time and integration time modes
  …
- **IMAGE ENHANCEMENT**
  Editing of comments and symbols
  …
- **IMAGE ANALYSIS**
  Molecular weight calculation
  …

Complete list of features page 39

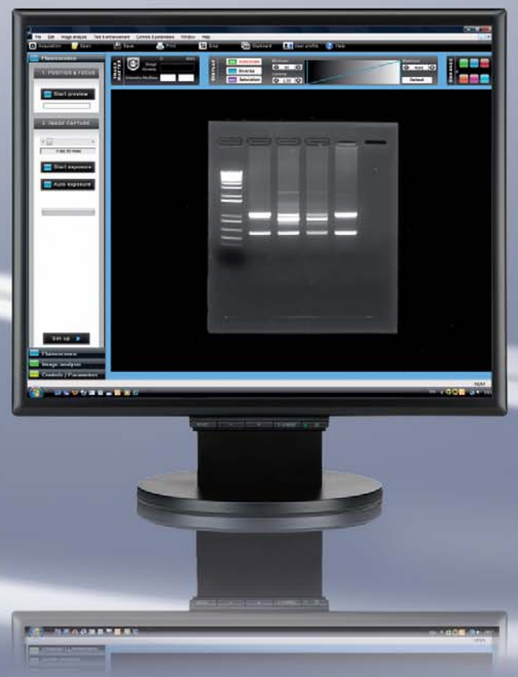
CONFIGURATIONS

Darkroom	**CN-3000 darkroom** Includes a slide-out build-in transilluminator & UV security switch Multiposition filter slide Upgradable to StarLight module Uniform white light or UV light epi-illumination sources Single or dual wavelength transilluminator available Filter size : 20x20cm or 21x26cm Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available	**CN-1000 darkroom** Includes a slide-out build-in transilluminator & UV security switch Multiposition filter slide Overhead white light by fluorescent tubes Single or dual wavelength transilluminator available Filter size : 20x20cm or 21x26cm Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available

VILBER

BIO-PRINT *mega*

Performance at a budget



SPECIFICATIONS

	BIO-PRINT 3000	BIO-PRINT 1000
Camera and optics	Scientific CCD camera Real time and integration time Grade 0, zero defect Progressive scan – Low dark current Continuous variable-speed shutter USB2 interface Scientific grade zoom lens. Japanese optics Manual or motorised configurations. Autofocus for the motorised configuration	Scientific CCD camera Real time and integration time Grade 0, zero defect Progressive scan – Low dark current Continuous variable-speed shutter USB2 interface Scientific grade zoom lens. Japanese optics Manual or motorised configurations Autofocus for the motorised configuration
Resolution	1 megapixel	1 megapixel
Pixel depth	12-bit, 4 096 grey levels	12-bit, 4 096 grey levels
Sensitivity	High sensitivity for DNA/protein fluorescence detection All images saved with a GLP (Good Laboratory Practice) file	High sensitivity for DNA/protein fluorescence detection All images saved with a GLP (Good Laboratory Practice) file
Software	Bio-Print is supplied with the Bio-Capt software image enhancement and basic image analysis The Bio-Print images are compatible with Bio-1D and Bio-Gene software for quantification: transform your 1D gel into 3D results	

> KEY FEATURES

- Cost effective solution
- PC based system for easy archiving and analysis
- Ideal for routine documentation
- Scientific CCD camera and optics
- Free Bio-Capt software for image acquisition & analysis
- Optional motorized zoom
- All the controls to get the optimum image
- Pixel saturation warning
- Pure image integrity & GLP compliance
- Compact metalwork's darkroom builds for robustness

> APPLICATIONS

- **NUCLEIC ACID DETECTION**
  Ethidium bromide, SYBR™ Green, SYBR™ Gold, Texas red™, Gel Star™
- **PROTEIN DETECTION**
  Coomassie blue, Sypro™ Ruby, Sypro™ Orange, Sypro™ Red, Silver Star™, Fluorescein
- **OTHER**
  Petri dish imaging
  Microplate imaging
  Autoradiograph imaging

CONFIGURATIONS

Darkroom	**CN-3000 darkroom** Includes a slide-out build-in transilluminator & UV security switch Multiposition filter slide Upgradable to StarLight module Uniform white light or UV light epi-illumination sources Single or dual wavelength transilluminator available Filter size : 20x20cm or 21x26cm Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available	**CN-1000 darkroom** Includes a slide-out build-in transilluminator & UV security switch Multiposition filter slide Overhead white light by fluorescent tubes Single or dual wavelength transilluminator available Filter size : 20x20cm or 21x26cm Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available

VILBER

E-BOX VX2

Stand-alone legend

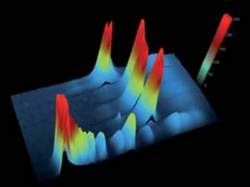
E-BOX VX2 is a complete stand-alone system with fantastic ease of use & ease to clean. The system combines a highly sensitive CCD camera, a USB key media drive, network capability and 12-bit imaging.

Image acquisition is enhanced with a display of the image dynamic and an automatic pixel saturation warning. These ensure optimum quality of the final image, which can then be instantly printed or saved for analysis.

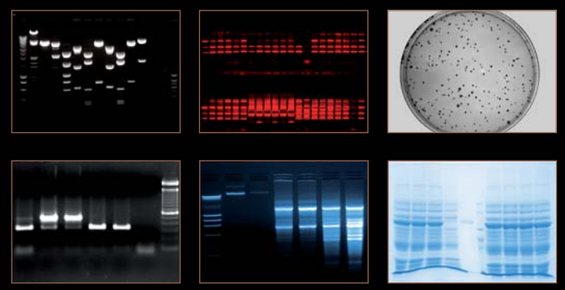
The exquisite precision and resolution deliver reliable results for both quantification and publication.

> APPLICATIONS

- **NUCLEIC ACID DETECTION**
  Ethidium bromide,
  SYBR™ Green, SYBR™ Gold,
  Texas red™, Gel Star™
- **PROTEIN DETECTION**
  Coomassie blue,
  Sypro™ Orange,
  Silver Star™, Fluorescein
- **OTHER**
  Petri dish imaging
  Microplate imaging
  Autoradiograph imaging



> PHOTO GALLERY



> REFERENCE LIST

- European Neuroscience Institute (Göttingen, Germany)
- Biozentrum (Basel, Switzerland)
- Ecole Normale supérieur (Lyon, France)
- Ospedale Policlinico (Pavia, Italy)
- DKFZ (German Cancer Research Centre) (Heidelberg, Germany)

> TESTIMONIALS

"We were impressed by the incredibly ingenious E-Box features. Our system performs almost everything a PC based gel doc can do. The image quality is simply astonishing with the 12-bit imaging. With the network capabilities, ethidium bromide remains in the lab. We can simply download the image from the comfort of our office."

1.4 MEGAPIXELS - SONY CHIP

E-BOX VX2 is a stand-alone image acquisition system dedicated to the capture of fluorescence gel images. Based on a 1.4 megapixels Sony chip scientific CCD camera, it offers exquisite precision and resolution.

The 12-bit E-BOX VX2 produces images with 4 096 grey levels. E-BOX can achieve the imaging of large intensity difference and can detect easily very bright and very faint bands. This high dynamic range delivers high accuracy for both quantification and documentation.

USB DRIVE

USB keys are professional grade memory devices designed for the most demanding imaging applications. The USB keys allow for quick and easy transfer of images between the E-BOX and the PC or Mac through the USB port. With the speed of a memory chip and better portability than any other media drive, the USB keys offer greater storage than many other media cards. They are available in a variety of capacities, so you are sure to find the right size to fit your needs.

NETWORK CAPABILITIES

Connect your E-BOX VX2 to your network and download your gel image from the comfort of your office. The E-BOX has an unique IP address which allows you to connect the system to your LAN network for downloading.

The image acquisition is performed at your bench and the image is saved in the internal memory of the E-BOX. Then, from your office, you can easily download the image using the E-Capt software.

> FANTASTIC EASE OF USE

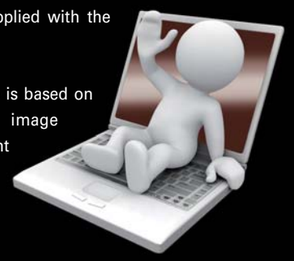
E-Box has a fantastic ease of use. The system is ergonomically designed with a simple and easy-to-clean keyboard.

The image acquisition process is as quick as intuitive: adjust your exposure, freeze save or print. The user-interface has rich features and guides you into the advanced functions such as image format selection or deleting an image.

> FREE E-CAPT SOFTWARE

E-Capt is the free software supplied with the E-BOX VX2 systems.

This very user-friendly software is based on five main components: image enhancement, molecular weight calculation, band quantification, distance calculation (RF) and colony counting.



VILBER

E-BOX VX2

Stand-alone legend

SPECIFICATIONS

	E-BOX VX2
Camera and optics	Scientific Sony chip CCD camera Real time and integration time Grade 0, zero defect Progressive scan – Low dark current HAD (Hole Accumulation Diode) sensor Continuous variable-speed shutter USB2 interface Scientific grade zoom lens. Japanese optics
Resolution	1.400.000 pixels – Sony chip 1360 (H) x1024 (V)
Pixel depth	True 12-bit, 4 096 grey levels
Sensitivity	High sensitivity for DNA/protein fluorescence detection All images saved with a GLP (Good Laboratory Practice) file
Output	8" inch TFT grade LCD display Images saving to USB key or to the internal memory IP address for LAN network connection Compatible with Windows© driver printers 4 USB ports
Software	E-Box is supplied with the complimentary E-Capt software for image downloading, image enhancement and basic image analysis. The E-Box images are compatible with Bio-1D and Bio-Gene software for quantification: transform your 1D gel into 3D results

CONFIGURATIONS

Darkroom	VX2 darkroom with build-in roll-out transilluminator UV security switch 3 positions filter slide Overhead white light by fluorescent tubes Single or dual wavelength transilluminator available Filter size : 20x20cm Optional Super-Bright UV filter technology UV to white light or UV to blue light conversion screen available

VILBER

DOC-PRINT 2

SPECIFICATIONS	DOC-PRINT 1000	DOC-PRINT HOOD - DP-CF-011.C
Camera	Monochrome scientific grade CCD camera Chip quality: Grade 0 (0 defect) Real time and integration time	Monochrome scientific grade CCD camera Chip quality: Grade 0 (0 defect) Real time and integration time
Pixel depth	8-bit, 256 grey levels	8-bit, 256 grey levels
Resolution	752 (H) x 582 (V) = 437 664 pixels	752 (H) x 582 (V) = 437 664 pixels
Sensitivity	High sensitivity for DNA/Protein fluorescence	High sensitivity for DNA/Protein fluorescence
Applications	Nucleic Acid Detection : Ethidium Bromide, Sybr™ Green Protein Detection : Coomassie Blue, Silver Star™	Nucleic Acid Detection : Ethidium Bromide, Sybr™ Green Protein Detection : Coomassie Blue, Silver Star™
Zoom	Scientific grade zoom lens	Scientific grade zoom lens
Output	Compact Flash® media drive. Monochrome video printer (BNC connection)	Compact Flash® media drive. Monochrome video printer (BNC connection)
Software	Doc-Print II is supplied with the Photo-Capt software for basic image analysis	

> KEY FEATURES

- No computer required
- Cost effective solution for image documentation
- Tremendous ease of use
- Extra large built-in LCD display for gel image preview
- Compact Flash® media drive
- Scientific grade optics and camera
- Pure image integrity & GLP compliant
- Hood or darkroom configuration
- Hood version upgradeable to darkroom configuration
- Works with virtually any transilluminators

> EASY AND FUN

Doc-Print II is a stand-alone imaging system dedicated to basic gel documentation. Thanks to its built-in Compact Flash® media drive, the images can be saved on a Compact Flash® or printed on a thermal printer for instant hard-copy images. Doc-Print II combines simplicity and economy for laboratories with budget in mind.

CONFIGURATIONS

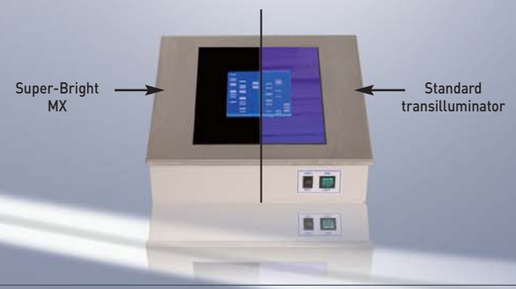
Darkroom	**CN-1000 darkroom** Includes a slide-out build-in transilluminator & UV security switch Multi-positions filter slide	**Hood** ABS hood
Epi-illumination	Overhead white light for gel positioning	
Transluminator	312nm – 8-watt. Available filter size: 21x26 or 20x20 cm Dual wavelength transilluminator available Optional Super-Bright technology	Fits on any VILBER transilluminators Dual wavelength transilluminator available Optional Super-Bright technology

ACCESSORIES

STARLIGHT

The StarLight module is a highly innovative solution designed to add a wide range of imaging applications to your system. Thanks to its two articulated RGB LED epi-illumination arms, the StarLight can be used for the imaging of proteomic samples, fluorescence blots, Qdot™, GFP™, in-vivo samples. StarLight is designed for the FUSION FX7, FX5 & SL as well as for the CN-3000 darkroom.

SUPER-BRIGHT



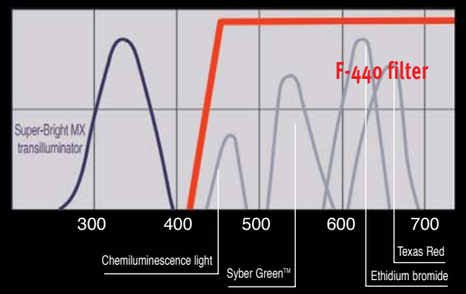
The Super-Bright MX UV transilluminator is a fluorescent breakthrough. It has an exclusive innovative UV technology which dramatically improves the quality of gel visualization and documentation. The Super-Bright MX stops all the visible light and makes the transilluminator ideal for both SYBR Green™ and ethidium bromide. The signal could even be 25% better compared to a standard transilluminator. The Super-Bright MX is also microprocessor controlled for enhanced imaging and reduced heat to protect the gel.

EMISSION FILTERS

All our systems are supplied with an unique interferential filter designed and manufactured exclusively for VILBER .

This filter cuts-off all the UV and the infrared light generated by the transilluminator and fits most of the searchers requirements for DNA fluorescence and ethidium bromide imaging. We also propose a large range of dedicated filters working with specific dyes: SYBR Green™, GFP™, Qdot™, Cy3™. Please consult us for further details.

UNIVERSAL CONFIGURATION



Thanks to the Universal configuration, only one camera filter is sufficient for almost all fluorescent and visible applications.

The Universal configuration works with any kind of fluorescent dyes with emission starting from 450 nm such as SYBR Green™, Sypro Orange™, or Texas Red™. It avoids the harassment and the cost of using several filters.

The Universal configuration is based on our Super-Bright MX transilluminator and our unique F-440 camera filter.

DARKROOMS

CN-3000

- Includes a slide-out build-in transilluminator, filter slide and UV security switch.
- Epi-illumination: uniform white light or UV light source
- 6 x 8-watt microprocessor controlled transilluminator/ Reduced heat to protect your sample
- Maximum field of view: 21 x 26 cm/Super-Bright technology available
- Upgradable to StarLight module
- Optional camera cover for motorized zoom configuration

CN-1000

- Includes a slide-out build-in transilluminator, filter slide and UV security switch.
- Epi-illumination: overhead white light for gel positioning
- Powerful 6 x 8-watt microprocessor controlled transilluminator/ Reduced heat to protect your sample
- Maximum field of view: 21 x 26 cm / Super-Bright technology available
- Optional camera cover for motorized zoom configuration

HOOD

- Doc-Print system only
- ABS hood
- Fits on any VILBER transilluminators
- Reduced heat to protect your sample
- Maximum field of view: 20 x 20 cm
- Super-Bright technology available

VILBER

BIO-1D

Turn your 1D gel into 3D results

Bio-1D is a sophisticated and intuitive analysis software designed for virtually any fluorescence or chemiluminescence sample. Thanks to our unique Detector™ automatic detection feature, just few clicks are necessary to get your results.

The software combines the power of a comprehensive set of analytical tools and automatic functions in an incredibly easy to use environment. It includes 8 different analysis modules from molecular weight calculation to volume quantification, through microtitration and GFP quantification.

The analysis can be saved as a template and re-used for further analysis to facilitate routine analysis. All result tables and graphics can be printed or exported in a Windows® compatible format. The image enhancement module prepares your image for publication thanks to a large choice of filters.

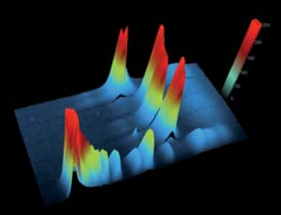
Software

Analyse

Publish

> SOFTWARE MODULES

- Molecular weight
- Volume quantification for 1D
- Microtitration plate analysis
- Array analysis
- Free form object analysis
- Colony counting
- Image enhancement
- Result publishing



> SCREENSHOTS

> REFERENCE LIST

- Genoscope Center (Evry, France)
- Australian Neuromuscular Research Institute (Perth, Australia)
- Reimin Hospital of Wuhan University (Wuhan, China)
- Institut für Biologie, Humboldt-Universität zu Berlin (Berlin, Germany)

> TESTIMONIALS

The Bio-1D software is the most advanced and user friendly 1D software I get to know. I have been astonished by the simplicity of the Next button approach, which helps us to concentrate on the results and not on the analysis process. I enjoy the precision and the features of the analysis. I use the Bio-1D results in our publications as I can easily copy and paste the sophisticate graphics, charts and tables to virtually any Windows compatible software.

VILBER

BIO-GENE

The advanced answer for 1D-lane data-basing

Bio-Gene is a powerful software package for the comparison of 1D lanes from multiple gel samples.

Based on a flexible database and a very intuitive interface, Bio-Gene allows the fast and accurate search of lane homologies. The lane data are stored in a built-in database. This allows direct comparison of lanes data, without an image calibration process. The database is a powerful tool for organising, storing and retrieving your image data in a very easy to use environment.

Bio-Gene can be used for any 1-D fluorescence or chemiluminescence samples.

Detect

Analyse

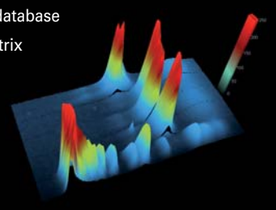
Software

Store and sort

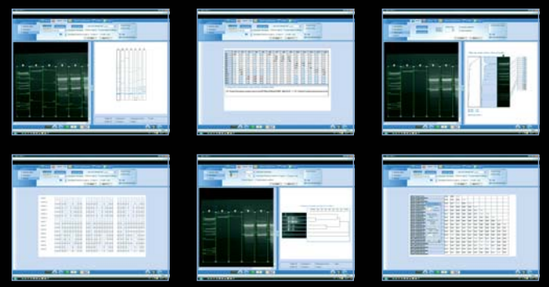
Publish

> SOFTWARE MODULES

- Molecular weight
- Identification of a lane from a database
- Band matching rectangular matrix
- Matrix / Dendrogram
- Multiprobe analysis
- Database management
- Image enhancement
- Result publishing



> SCREENSHOTS

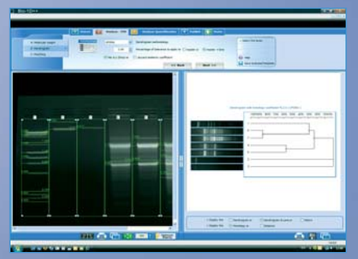


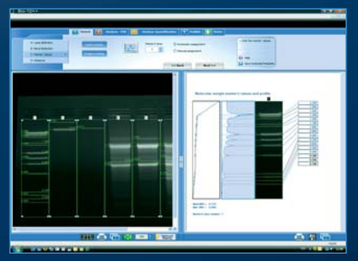
> REFERENCE LIST

- Institute for Genetics and Bioinformatics / University of New England (Armidale, Australia)
- Xishuangbanna Tropical Botanical Garden, (Chinese Academy of Sciences, Menglun, China)
- INRA - Institut National de Recherche Agronomique (Clermont Ferrand, France)
- Department of Biology, Izmir Institute of Technology (Izmir, Turkey)

> TESTIMONIALS

"The Bio-Gene software helps us to compare hundred of samples at a glance. The cluster analysis is based on sophisticated and flexible algorithms. Just few clicks are necessary to get the results and to edit a report.
The database is easily controlled through a very intuitive interface. We are always just few clicks from the results."





VILBER

BIO-1D++

Bio-1D++ = Bio-1D + Bio-Gene

Bio-1D++ combines all the features of Bio-1D and Bio-Gene. This integrated software package offers the very best of 1-D gel analysis. The quantitative results are based on state of the art algorithms controlled through a very user-friendly interface.

Bio-1D++ can be used for any 1-D fluorescent or chemiluminescent sample.

Detect

Analyse

Store and sort

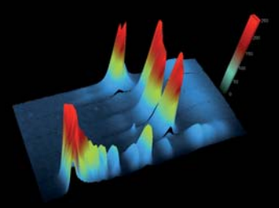
Publish

> KEY FEATURES

- Transform your 1D gel into 3D results with our unique 3D Power system™
- Detect automatically the lanes and the bands with the one click Detector™ feature
- Exclusive Next™ tutorial mode for an incredible ease of use
- Work with different kind of samples such as DNA, RNA, protein, polynucleotide, Petri dish, microtitration plates, plants and in-vivo images
- Ease your analysis by using the same template for the analysis of different images
- Use state of the art analysis algorithms

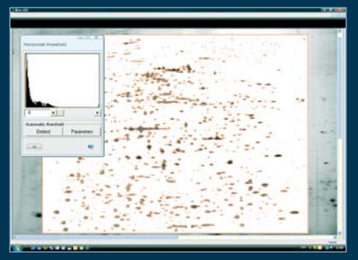
> SOFTWARE MODULE

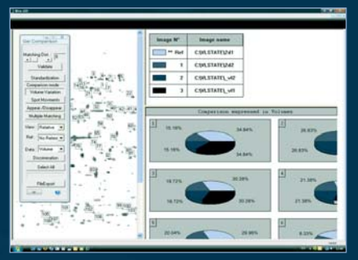
- Molecular weight / Volume quantification for 1D sample
- Band matching rectangular matrix
- Matrix / Dendrogram / Multiprobe analysis
- Database management
- Microtitration plate analysis
- Array analysis
- Free form object analysis
- Colony counting
- Image enhancement
- Results publishing



SPECIFICATIONS

	BIO-1D	BIO-GENE	BIO-1D ++
Volume quantification (optical density)			
• Transform your 1D gel into 3D results	+		+
• Select one out of several background subtraction methods (ie: horizontal, valley to valley, rolling ball, ...)	+		+
• Calculate the spot volume, height and area and compare the profiles by superposition	+		+
• Use a quantification threshold to distinguish the bands from the smears on the lane	+		+
• Calculate the volumes using a reference, an average, or the sum of spots (100%)	+		+
• Calculate the volume by interpolation, using a calibration curve	+		+
• Modify the heading unit (%, ng,...)	+		+
• Export your result to Excel™	+		+
Molecular weight calculation (electrophoretic distance)			
• Transform your 1D gel into 3D results	+	+	+
• Detect automatically the gel's band and lane	+	+	+
• Control the detection parameters or adjust manually the detection	+	+	+
• Realign the band position for gels using several marker lanes	+	+	+
• Correct the band and front distortion (smiling effect)	+	+	+
• Correct the marker's value assignment using the marker migration curve	+	+	+
• Calculate the molecular weight, the pH or the RF values	+	+	+
• Calculate and display dendrogram using Nei & Li (Dice) or Jaccard similarity coefficients	+	+	+
• Recalculate the volume using a master or a calibration curve	+	+	+
• Export your result to Excel™	+	+	+
Volume quantification using a free form or a grid for microtitration plate			
• Transform your 1D gel into 3D results	+		+
• Define your area of interest using the flexible predefined grid or a free form	+		+
• Calculate the volume, the height and the area and compare	+		+
the volume of one or several spots to a reference	+		+
• Recalculate the volume by interpolation with a calibration curve	+		+
• Export your result to Excel™	+		+
Colony counting			
• *One-click mode for automatic counting and total-control mode for manual counting*	+		+
• *Colony characterization (volume, area, perimeter, gravity, compacity, eccentricity...)*	+		+
• *Exclusion folder which define contaminated areas in which no colony will be counted*	+		+
• *Overlay display of the colony number/Full GLP compliance/Export your data to Excel™*	+		+
Flexible database management			
• Store unlimited number of samples and create/edit a master lane		+	+
• Store each lane with its band Molecular weight, R.F. or fragment size values		+	+
• Identify each sample with a specific name and a reference for the initial image		+	+
• Protect your data with a password for each user		+	+
Identification of a lane from a database			
• Select the reference lane and the lanes to be compared		+	+
• Define a confidence interval for the band matching		+	+
• Export your result to Excel™		+	+
Matrix / Dendrogram			
• Gather the clusters and display the list of patterns		+	+
• Select one dendrogram calculation method such as UPGMA, single linkage, complete linkage,			
average linkage, centroid, median or ward.		+	+
• Define a similarity coefficient (Nei and Li or Jaccard) and a confidence interval		+	+
Multiprobe analysis			
• Extract lanes from a specific database and select the lanes to be compared		+	+
• Select a lane of reference		+	+
• Export your data to Excel™		+	+
Creation of a band matching rectangular matrix			
• Create a group of lanes and define a similarity coefficient (Nei and Li or Jaccard)		+	+
• Display the results in a matrix format using a confidence interval		+	+
• Export your data to Excel™		+	+
Image enhancement			
• Modify the image format to TIFF, BMP, GIF, MAC, PICT, WPG, PCX, TGA, or JPEG	+	+	+
• Zoom in or out / Add comments or symbols	+	+	+
• Rotate the image using a defined angle or a vertical/horizontal axis of symmetry (as seen in a mirror)	+	+	+
• Invert the image to obtain a negative or a positive display	+	+	+
• Replace grey levels by pseudo-colours	+	+	+





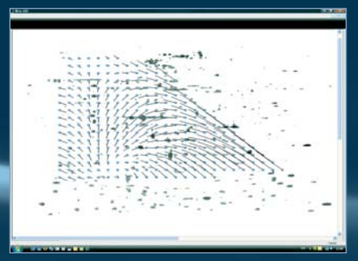
VILBER

BIO-2D

A new dimension for your 2D sample

Bio-2D is a unique software for the analysis of 2-D gels. Fast and accurate analysis are just a few clicks away. Bio-2D associates the power of a build-in database and a comprehensive set of analytical tools. The database search engine provides immediate matching results, controlled by customisable parameters.

Bio-2D is the perfect solution to complete your Vilber 1D package.



Detect

Store

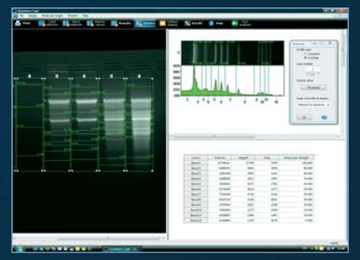
Characterized

> SPECIFICATIONS

Detection and scale adjustment
- Subtract the background by deconvolution approach
- Recognize the contour by local contrast method
- Display volume, gravity centre, maximum intensity, height, circularity and eccentricity for each detected spot

Database and comparison
- Store unlimited number of samples in a flexible data-base
- Store each image with its M.W. / pI information
- Compare the currently analyzed image with the database's images
- Protect your data with a password for each user
- Identify each sample with a specific name and a reference for the initial image
- Adjust the distortion between several images (triangulation)
- Display matching and non matching spots
- Visualize the spot movement
- Recalibrate the gels to take into account the differences of staining or exposure time
- Protect your data with a password for each user

Molecular weight and pI point calculation
- Calculate M.W. and Isolectric point for each spot according to the scales defined by the user
- Define values for M.W. / pI markers
- Display the marker curve



VILBER

THE CAPT SERIES

Fast, accurate and easy to use solution

All our systems are supplied with a complimentary software to perform analysis such as molecular weight, band quantification, colony counting and distance calculation. It also includes image enhancement features to enable editing of comments, inversion, contrast / brightness adjustment as well as colorimetry.

Designed by molecular biologists, our softwares are intuitive and very easy to use: just few clicks are necessary to obtain sophisticated results.

Fast

Accurate

Easy to use

> SPECIFICATIONS

Image acquisition
(Infinity-Capt for the Infinity system, Quantum-Capt for the Quantum ST4 system, Bio-Capt for the Bio-Print system)
- Real time mode
- GLP compliance
- Positive or negative image acquisition
- Grid display for easy horizontal and vertical gel positioning
- Pixel by pixel saturation warning display while acquiring the image
- Gray-scale monitoring while acquiring the image
- User's personal configuration file for easy saving and loading of his/her personal image acquisition parameters
- Printing on a thermal video printer or on the default desktop printer

Analysis
(All previous .Capt software and E-Capt for E-Box system, Photo-Capt for the Doc-Print system)
- Lane profile display
- Molecular weight or pH (IEF) value calculation
- Marker's migration curve display and adjustment
- Volume, height and area calculation
- Colony counting

Image enhancement
(All .Capt software)
- Editing of comments and symbols
- Date, time or image name stamping
- Image inversion
- Brightness and contrast adjustment
- 90-degree clockwise rotation
- GLP compliance
- Horizontal or vertical mirroring
- Automatic band detection

VILBER is the leading European provider of molecular imaging systems, analysis software and UV fluorescence equipment. Founded over 50 years ago to serve the research, VILBER has pioneered the post electrophoresis market and introduced breakthrough products such as stand alone gel-documentation, Bio-1D imaging software, Super-Bright UV technology, dedicated chemiluminescence imaging system and 3D approach to 1D gel analysis.

Through a network of owned subsidiary offices and local distributors located in over 60 countries around the world, VILBER offers a broad range of products:

- Gel documentation systems
- Chemiluminescence imaging systems
- Image analysis software
- UV instruments for molecular biology such as transilluminators, crosslinkers and UV lamps.

For more information about VILBER, visit our website at **www.vilber.com**

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