



gel documentation

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gel documentation

Now upgraded with a new 10 megapixel digital camera*, with improved high-sensitivity CCD sensor and the latest image processor to guarantee superb resolution, the microDOC is the researcher's choice for a simple ultra-compact gel documentation system that meets constraints in both budget and space within the laboratory. A large 8" TFT screen enables images, including agarose and fluorescent gels, colorimetric gels, autoradiography film and

blotting membrane, to be captured in colour, clearly and easily. The system is computer-free and supplied with a 4GB storage card and 55mm ethidium bromide filter as standard, while an optional SYBR filter is also available. Files are saved onto the 4GB storage card in RAW, TIFF-RGB and JPEG formats and may be transferred to computer for analysis with the highly recommended TotalLab™ 1D software (pg 66).

- 10 Megapixel digital camera with improved high-sensitivity CCD sensor and processor*
- Image visualised within a large 8" TFT colour monitor
- Light weight compact hood with easy access door and built-in inner lights
- Safety switches disconnect the UV source when the easy access door is opened
- Computer-free operation
- Available on its own with camera and darkroom, or as a complete gel documentation system with transilluminator, either with or without software
- Transilluminators supplied in single and dual wavelength formats - see page 67
- Optional TotalLab™ 1D analysis software and wireless memory card

Technical Specifications	
Camera:	
Type	1/1.7 type CCD sensor with DIGIC processor
Zoom	5x optical / 4x digital
Effective Pixels	10.0 megapixels
Max. Aperture	f/2.8 (W) - f/4.5 (H)
Shutter Speed	15 - 1/4000s. (total range)
Filters	+3 Close up and EtBr; optional SYBR green
Storage Media	4GB memory card; optional Wi-Fi memory card
Computer Interface	Hi-Speed USB (Mini-B compatible)
Video Out	NTSC/PAL
Darkroom:	
Multi-Power Source	For camera, inner white LED, TFT screen
Inner White Light	2x3W LED
Safety Device	Safety door switch
Weight & Dimensions	6.1kg; 29x22x32cm
Voltage Rating	110~220V
Screen:	
Type	8" TFT
Resolution	600x800 Pixels
Brightness	350 cd/mm2
Constant Ratio	300 : 1
Display Mode	NTSC / PAL / SECAM mode, auto switching

printer

The Mitsubishi P93 is a high speed, high resolution thermal printer that is perfectly suited to printing images directly from the microDOC. Connected to the microDOC by a BNC cable, the Mitsubishi P93 prints 325dpi images, up to 133 x 99mm in size. Thermal printer paper is also available.

wireless transfer

An optional memory card with Wi-Fi technology may be used within the microDOC camera to facilitate instantaneous wireless transfer of images to a designated computer or network drive with the software installed. Set-up requires a broadband internet connection and a DHCP-enabled wireless router. Minimum system requirements for software installation are Windows XP (Service Pack 3).

microDOC BASIC

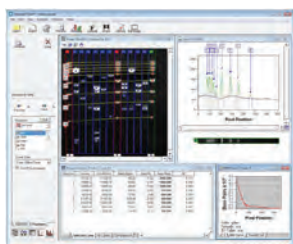
The microDOC BASIC is a simple low-cost system comprising a lift-off dark room hood and 10.0 megapixel digital camera, through which the gel is viewed directly. This system can be supplied with optional TotalLab™ 1D Analysis Software and any one of the 21x21cm transilluminators listed on page 67.

Ordering Information		
Gel Documentation Systems	System only	Including TotalLab 1D Analysis Software
Compact Gel documentation system	CSL-MICRODOC	CSL-MICRODOC1D
microDOC System with UV Transilluminator (UVT312)	CSL-MDOCUV312	CSL-MDOCUV3121D
microDOC System with UV Transilluminator (UVT254)	CSL-MDOCUV254	CSL-MDOCUV2541D
microDOC System with UV Transilluminator (UVT365)	CSL-MDOCUV365	CSL-MDOCUV3651D
microDOC System with UV Transilluminator (UVT254/312)	CSL-MDOCUV254/312	CSL-MDOCUV254/3121D
microDOC System with UV Transilluminator (UVT254/365)	CSL-MDOCUV254/365	CSL-MDOCUV254/3651D
microDOC System with UV Transilluminator (UVT312/365)	CSL-MDOCUV312/365	CSL-MDOCUV312/3651D
microDOC Basic System with lift-off dark room hood and camera only	CSL-MDOCBASIC	CSL-MDOCBASIC1D
Accessories		
Mitsubishi Thermal Printer for use with Microdoc - 110 - 240V	CSL-PRINT	
Microdoc ethidium bromide filter	CSL-MDOCEB	
Microdoc SYBR filter	CSL-MDOCSBRG	
Replacement printer paper	CSL-PRTPAP	
UV to white light conversion screen for transilluminator	CSL-UVSCRN	
White light box for Micro doc	CSL-MDOCWLB	
Optional 4GB wireless memory card	CSL-MDOC-WIFI	

For 110 VAC version, please add '-\$' as a suffix to the appropriate code – e.g. CSL-MICRODOC1D-\$

gel analysis software

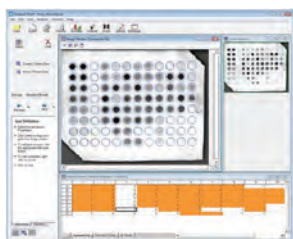
TotalLab and Phoretix



TotalLab 1D

TotalLab and Phoretix gel analysis software options are available for quantitative gel analysis following gel documentation. Each software option offers the highest level of automation currently available and guides the user step by step through the analysis process. A user-friendly interface is split into four parts allowing the user to view within a single screen every aspect of gel quantitation, including the gel image, lane and band profiles, analysis data and the help menu.

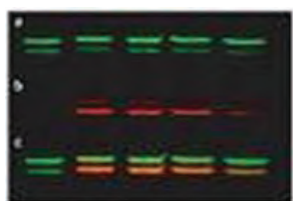
TotalLab is used primarily for 1D gel quantitation and is suitable for all users regardless of their experience. More advanced Phoretix software, which also includes a free copy of TotalLab Quant, is recommended for laboratories performing in-depth lane relationship studies. Details of each software option are as follows:



TotalLab Quant – Array Analysis

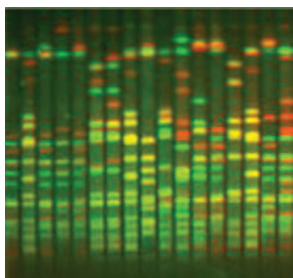
TotalLab 1D Module which is the 1D gel analysis module of TotalLab Quant (please see below), is the software supplied exclusively with all microDOC1D models (p. 65). TotalLab 1D features a user-friendly interface and help menu that provide a simple, guided workflow for fast and accurate quantitation and calibration of 1D gels and western blots. Main benefits include:

- The capacity to review each step within the automated workflow analysis, and manually intervene or edit if desired
- Highly developed algorithms which accurately detect lanes and bands even on distorted gel images
- A range of visualisation tools that facilitate further examination of lane and band data to verify results, including band calibration from Molecular Size standard lanes and accurate quantitation derived from known band volumes
- Full user control over the visualisation tools and the data displayed, allowing only the important data fields and images of choice to be selected for final output
- Multiplex analysis



TotalLab 1D / Quant – Western Blot

TotalLab Quant includes TotalLab1D plus three modules for array analysis; colony counting and 2D spot measurement; and general feature-based image analysis. The array analysis module can automatically detect up to 1536 wells or arrays spots, and may also be used to quantify dot and slot blots. Array analysis and Toolbox modules also include multiplex analysis functionalities.



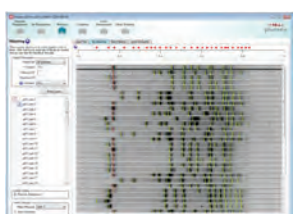
TotalLab 1D / Quant – Multiplex Analysis

Phoretix 1D is more advanced analysis software used primarily for band-pattern matching within individual DGGE, SSCP and RFLP gels that are important for cultivar experiments, evolutionary biology and population genetics. Phoretix 1D has a powerful band matching feature, which is flexible and easy to use, while visual tools show the results of matching and identify similarities within an individual gel, including lane clustering via dendrograms. A copy of TotalLab Quant is included with Phoretix 1D.

Phoretix 1D Pro shares the same analysis features as Phoretix 1D, but with added database storage to provide the ideal solution for generating and manipulating large lane-comparison datasets from multiple gels. Benefits include:

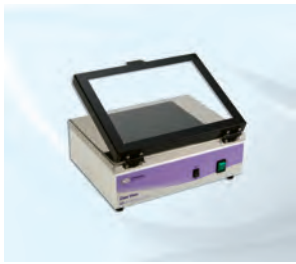
- Long-term archiving and storage of data from multiple gels
- Comparison of each lane with any other lane within the database, with the results presented as dendrograms or tables that show all band and lane similarities, thereby enabling identification of lane relationships across many different experiments
- Classification and identification of unknown sample against a defined library of known references that can be easily shared between co-workers and labs making collaboration on large projects easier

Technical Specification	TotalLab 1D	TotalLab Quant	Phoretix 1D	Phoretix 1D Pro
Compatible with 21CFR part 11 compliance module	✓	✓	✓	
Automatic detection of lanes and bands	✓	✓	✓	✓
Automatic background subtraction	✓	✓	✓	✓
Image manipulation tools	✓	✓	✓	✓
Lane templates	✓	✓	✓	✓
Analysis protocols for batch processing			✓	✓
Molecular weight calibration	✓	✓	✓	✓
Quantity calibration & normalisation	✓	✓	✓	✓
Profile deconvolution	✓	✓	✓	✓
Rf calibration			✓	✓
Band picking			✓	✓
Band pattern matching – single gel			✓	✓
Band pattern matching – lanes across multiple gels				✓
Band pattern queries				✓
Dendrogram – single gel			✓	✓
Dendrogram – lanes from multiple gels				✓
Data archive and search facility				✓
Classification and identification tools				✓
Reports	✓	✓	✓	✓
Array analysis module		✓	✓	✓
Colony counting module		✓	✓	✓
Toolbox for general analysis		✓	✓	✓



Phoretix 1D Pro

Ordering Information	
TotalLab 1D	TotalLab 1D analysis module for agarose and PAGE gels; available only with the purchase of MicroDOC1D models (p.65)
TotalLab Quant	TotalLab 1D analysis module plus array analysis, colony counting & toolbox modules
Phoretix 1D	Phoretix 1D software for gel quantitation, calibration and band pattern matching studies within a single gel
Phoretix 1D Pro	Phoretix 1D software for gel quantitation, calibration and band pattern matching studies between multiple gels



uv transilluminators

Available in single and dual wavelength formats, in 21x21cm and 21x26cm sizes, our transilluminators are supplied either as standalone units or with the microDOC, as part of a fully integrated gel documentation system. With a large surface area, each transilluminator serves as the perfect workstation for viewing and working with fluorescently-stained protein and nucleic acid gels.

Standard features include a high/low intensity safety switch and an efficient starter that allows each of the six 8-Watt UV tubes to energise quickly without flickering, while special filter glass minimises unwanted background light. All of these features maximise contrast and sensitivity, allowing even the faintest fluorescent gels to be viewed. Two dual wavelength models offer added flexibility and convenience.

- Three wavelength options: 254/312/365 nm – two Dual wavelength models
- Long life filter
- High efficiency reflector
- Hi/Lo intensity switch
- Fast start up

Technical Specifications	
Filter sizes	21 x 21cm, 21 x 26cm
Light source:	8W x 6 tubes
UV resistant plastic cover:	33 x 25cm (w x d)
Unit Dimensions (W x L x H)	34 x 29.5 x 10cm

Ordering Information	
CSLUVTS254	UV Transilluminator, small, 21 x 21 cm, 254 nm
CSLUVTS312	UV Transilluminator, small, 21 x 21 cm, 312 nm
CSLUVTS365	UV Transilluminator, small, 21 x 21 cm, 365nm
CSLUVTSDUO	UV Transilluminator, small, 21 x 21 cm, 254/365 nm
CSLUVTSDUO312	UV Transilluminator, small, 21 x 21 cm, 254/312 nm
CSLUVTSDUO365	UV transilluminator, small, 21 x 21 cm, 312/365nm
CSLUVT254L	UV Transilluminator, large, 21 x 26 cm, 254 nm
CSLUVT312L	UV Transilluminator, large, 21 x 26 cm, 312 nm
CSLUVT365L	UV Transilluminator, large, 21 x 26 cm, 365 nm
CSLUVTDUOL	UV Transilluminator, small, 21 x 26 cm, 254/365 nm
CSLUVTDUO312L	UV Transilluminator, small, 21 x 26 cm, 254/312 nm
Replacement Parts and Accessories	
CSL-Txxx	8W UV bulb (xxx = 254nm, 312nm or 365nm)
CSL-ST4/20	Starter for 4/20W UV Tubes
CSL-UVPS22	UV Transparent Cutting Platform 22 x22cm
CSL-UVPS27	UV Transparent Cutting Platform 22 x27cm

For 110 V AC, please add '-S' as a suffix to the appropriate code



microSCAN 2-D and 1-D A4 gel scanner

The microSCAN is a low-cost documentation system for scanning colorimetric 1-D and 2-D gels, as well as blots and TLC plates. The microSCAN's control software allows rapid generation of high quality images that may then be imported into recommended TotalLab Quant and Phoretix 1D software (pg 66) for analysis. Users may choose between transmittance and reflectance modes in colour and greyscale, and can select their required resolution. The microSCAN can generate high resolution images at 2400 dpi, while its variable colour scanning functionality is sensitive enough to detect the faintest protein spots in gels stained with Coomassie Blue, silver and other colorimetric stains. As a sealed unit with a maximum 20.9x28.5cm scanning area, the microSCAN is also suitable for wet protein gels, particularly those run in the omniPAGE Mini and Midi, and Maxi and WAVE vertical systems (pg 22-47).

- For detection of colorimetric protein gels, blots and TLC plates
- Sealed unit suitable for wet gels
- User has full control over resolution, compression and scan speed, providing complete flexibility in choosing between high speed or high quality image acquisition
- Transmittance and reflectance modes for different imaging applications, whereas colour channel separation allows accurate detection of all colorimetric dyes
- Create and store acquisition methods for different applications to ensure scan-to-scan reproducibility; greyscale wedge for system calibration and calibration reporting
- Ideal for post-electrophoresis scanning of omniPAGE Mini, Midi, Maxi and WAVE gels

Technical Specification			
System	High Quality 1-D and 2-D A4 scanner with transmittance and reflectance modes	Spectral Range	430-745nm
Max. Gel Imaging Size	20.9x28.5cm (reflectance) 19.7x23.7cm (transmittance)	Interface	USB 2.0, Firewire
Optical Resolution	2400dpi	Dimensions (w x d x h)	30.8x53x15.3cm
Resolution	16-bit greyscale; 48-bit colour	Weight	6.6Kg
Scan Optical Density Range	3.8 OD	Power	110-240VAC

Ordering Information	
CSL-MSCAN	microSCAN complete documentation system for 1-D and 2-D colorimetric gels – 240VAC*
CSL-MSCAN\$	microSCAN complete documentation system for 1-D and 2-D colorimetric gels – 110VAC*
	*Each system includes Epson scanner with transparency unit; power supply and USB cable; control software and greyscale wedge for system calibration



uv crosslinker

The UVlink UV crosslinker is especially designed for binding nucleic acids to membranes. A membrane keypad facilitates manual or preset control of the desired UV dosage and exposure time, while a highly accurate microprocessor-controlled photo-feedback system maintains uniform output from each of the crosslinker's five 8-Watt UV bulbs. Other features comprise safety interlock switches to prevent accidental UV leakage during operation, a clearly visible LED, plus a large interior chamber and small footprint area. The crosslinker may be used in a variety of applications, such as colony or plaque lifts, UV sterilisation and gene mapping or DNA damage studies.

- Programmable microprocessor control
- Automatic monitoring of UV energy
- Small footprint with large interior
- Conspicuous front panel LED, with non-UV transmissible front door connected to safety interlock switches

Technical Specifications	
UV Source	5x8W UV Bulbs, 254, 302 or 365nm
Exposure Time	0 – 999.9 minutes
Energy Ranges	0 – 99.99 J or 0 – 9.999 J
Internal Dimensions	26x33x14.5cm (w x d x h)
Footprint	35x36cm

Ordering Information					
CL-508.G	Shortwave crosslinker, 254nm	CL-508.M	Midrange crosslinker, 302nm	CL-508.BL	Longwave crosslinker, 365nm