UV Products



Measurement equipments

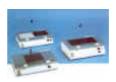


TLC Darkrooms



Lamp





Fluorescent Tables



Bio-Profil®



Crosslinker



Irradiating Systems

ALYS Labware, Lausanne

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GERMICIDAL LAMPS (VL-G)



Our germicidal lamps play an important part in the prophylactical measures taken in all kinds of sectors, from medicine to industry in general

Our lamps consist of an anodized aluminium box, both attractive and shock resistant. They hold 1, 2 or 3 "low pressure" tubes of 4, 6, 8, 15, 20, 30 or 40W.

These germicidal lamps emit 254nm UV radiation, well known for their efficiency in the destruction of bacteria, moulds, yeasts and viruses.

Applications

Medicine: Operation and resuscitation wards – Newborn and premature infant wards – Confinement wards – Room of the contagious – Dressing wards – Laboratories – Linen rooms

Industry: Research centers – White rooms – Food factories - Electronics

LAMPS WITHOUT FILTER (BL and BLB)



Our efficient and carefully designed lamps without filter are equipped with 1, 2 or 3 low pressure tubes of 4, 6, 8, 15, 20, 30 or 40W

The lamps with tubes type BL (Black Light) give a 365nm UV radiation with visible light.

The lamps with tubes type BLB (Black Light Blue) emit a 365nm UV radiation without visible light (self-filtering tube)

Applications

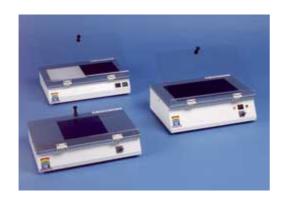
Lamps type BL (Black Light) 365nm: Polymer curing – Dermatology – Cosmetology - Pharmacology Lamps type BLB (Black Light Blue) 365nm: Quality control – Invisible coding and marking

- Counterfeit bill detection Fluorescence photography Food and textile contamination
- Dermatology Aflatoxin detection Rodent contamination detection Photoresist
 exposure Non destructive testing Archaeology Re-admission control

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FLUORESCENT TABLES



VILBER LOURMAT provides a wide range of filter sizes and wavelengths to cover all applications.

Our tables offer maximum intensity for analytical gels and feature the following advantages depending on the different models.

UV intensity selector with 2 positions

- 100% analysis
- 70% for preparation

Long life time filters

All VILBER LOURMAT tables are equipped with a long life time filter:

- UNLIMITED life in 312 and 365nm
- 5000 hours in 254nm

UV safety screen

Every VILBER LOURMAT UV table comes equipped with a clear protective screen which provides a total protection against exposure to harmful UV rays.

Air cooling fan

which prevents any damage to gels through overheating

Stainless steel frame

for an easy and lasting maintenance of the table surface

Reflection quality

Thanks to the special optical quality reflector

Compact UV tables (8W tube)

The efficient answer for the lab working with all kinds of gels where space is scarce. The compact UV table is available in 2 versions:

. TCP Single intensity

. **TCX** Dual intensity (100%-70%)

Features

- wavelength: 254, 312 or 365nm

- filter sizes : 150 x 150mm

200 x 200mm 210 x 260mm

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- 8W tubes
- UV safety screen

Multiband UV tables (15W tube)

This new innovative model is uniquely designed with two different wavelengths offering the scientist the choice of the most suitable wavelength (365/254nm – 365/312nm – 312/254nm)

Features

- Dual intensity selector (100%-70%)
- Filter sizes : 200 x 200mm

200 x 350mm

- UV safety screen
- 2 x 6 15W tube
- Air cooling fan

Standard UV tables (15W tube)

2 models available

TFX model available in 254 and 312nm only

Features

- Dual intensity selector 100-70%
- Filter sizes: 200 x 200mm

200 x 350mm

200 x 400mm

- 6 x 15W tube
- UV safety screen
- Air cooling fan

TFP model only available in 365nm (TLC or forensic)

Features

- Filter sizes : 200 x 200mm

200 x 350mm

- 6 x 15W 365nm tube
- UV safety screen

UV/WL tables (8W tube)

The UV/WL table is a dual purpose table featuring two 200 x 200mm illumination areas. One area, a 254, 312 or 365nm UV source (DNA/RNA visualization). The second area is a white light source (viewing or photography of protein gels, autoradiograms or microtiter plates)

Features

- 200 x 200mm UV filter
- 200 x 200mm white filter
- 6 x 8W UV tube (254, 312 or 365nm)
- 4 x 8W white light tube
- UV safety screen

White Light table

Specially designed to satisfy most analytical requirements and visualization of protein gels, microtitration plates and autoradiograms

Features

- Diffuser 200 x 350mm in "PLATED OPAL" glass
- 2 x 15W tube 6500K
- 2 x 6W tube 6500K
- Intensity selector (100%-70%)
- Stainless steel frame
- Polish optic reflector
- Air cooling fan

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COMBI-LIGHT



The COMBI-LIGHT is the ideal system for Biochemistry laboratories working on electrophoresis gels, chromatograms or both.

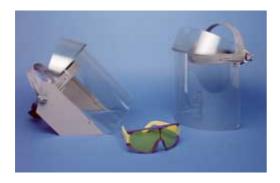
Composed of one fluorescent table with six 15W tubes monitored by a dual intensity switch and with two versatile sidearm units, the **COMBI-LIGHT** is perfect for various aplications such as: TLC analysis, viewing DNA agarose gels, or visualizing nucleic acids on gels using UV shadowing. Each sidearm contains a shortwave and longwave UV tube for viewing TLC plates and a white light tube for focusing the camera and taking photos of samples under visible light.

The fluorescent table is equipped with a dual intensity switch: 100% for analytical mode / 70 % fro preparation mode. The lowest position enables you to work without damaging the DNA. The two sidearms are equipped with independant switches for each tube. The **COMBI-LIGHT** set thus enables any combination of UV lighting (transmitted or reflected mode) in the three wavelengths 254, 312 and 365 nm.

Features : the **COMBI-LIGHT** is composed of : UV Fluorescent Table including : Dual intensity switch, Long-Life time filter 6 x 15W tubes 254, 3312, or 365 nm, special reflector with high reflexion, stainless steel frame, air cooling fan.2 sidearms, equipped each with : 1 x 8W 254 nm tube ; 1 x 8W 365nm tube ; 1 x 8W white light tube

Each tube is activated by an independant switch. The **COMBI-LIGHT** can also be equipped with a **WHITE-LIGHT TABLE** for visualization of protein gels.

SAFETY EQUIPMENTS



Safety is important when using any UV source (254, 312 and 365nm), especially shortwave and mid-range UV. Both are dangerous for the eyes and skin, so, users should take several minimum precautions and protect themselves against UV radiation by wearing glasses or face shields.

Sensitive persons or persons under medical treatment should wear glasses or face shield to protect themselves against longwaves 365nm (UV-A).

VILBER LOURMAT's safety equipment provides adequate eyes and face protection and eliminate the risk of eyes or skin damage.

100% UV PROTECTION

LP-70 Glasses

Lightweight, comfortable and efficient, our LP-70 glasses provide total protection for the eyes.

MP-80 Face Shield

Recommended for analysis when using powerful UV sources, the MP-80 face shield entirely protects the operator's face.

MP-800 Face Shield

This face shield has the same characteristics as the MP-80 model, plus two lateral protections for the operator's ears.

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BIO-LINK BLX



The BIO-LINK is a polyvalent UV 254 nm irradiation system mainly dedicated for the linking of nucleic acids to membranes.

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Time saving

To fix nucleic acids to membranes, the traditional method consists of baking the membranes for two hours at 80° C in a vacuum oven. **BIO-LINK** requires only a few seconds UV 254 nm irradiation.

Improvement of the hybridization signal:

The signal resulting from UV irradiation is 5 to 10 times higher than traditional baking.

Reproducibility

BIO-LINK BLX is equipped with a UV energy programming system (in joules/cm2) with a time integrator which constantly monitors the UV light emission. The irradiation stops automatically when the energy received matches the programmed energy. Therefore, irradiation cycles are perfectly reproducible regardless of the Uv source intensity and variation in time; **Applications** in addition to the nucleic acid binding to membrane, the **BIO-LINK BLX** includes numerous other applications such as: nicking of DNA in agarose gels, partial restriction endonuclease digestion by formation of thymine dimers. Rec A mutation screening Elimination of PCR contamination. The **BIO-LINK BLX** is also useful for other application such as: UV sterilization, UV curing of Polymers.

The **BIO-LINK BLX** is also available in 312nm and 365nm.

Features UV wavelength: 254, 312, 365 nm,

UV source: 5 tubes of 8W,

Multiple set functions 9 preset UV energy exposures, manual setting of UV energy exposure, manual setting of UV time exposure. **Maximum UV energy exposure**: 2 measurement range: from 0 to 9.999 joules / from 0 to 99.99 joules. **Maximum UV time exposure**: 999.9 minutes. No loss of information if breaking-off circuit. Storage of the last UV setting (energy and time), internal safety interlock, large LED readout, tactile membrane keypad, UV blocking viewing window, large UV exposure chamber in stainless steel, dual safety fuses, Removable power cord.

External dimensions

Height: 30.5 cm; Depth: 36 cm; Width: 35 cm.

Chamber dimensions Height; 14.5 cm; Depth: 33 cm; Width: 26cm

Weight: 10 kg 500

TLC DARKROOMS

Compact, lightweight, versatile and efficient, our UV DARKROOMS are ideal for all applications requiring high-contrast fluorescence analysis. A selection of models meet a multitude of industrial and scientific applications in 365, 312 and 254nm or combined.

The **CN-6 DARKROOM** is designed to admitone or two UV lamps type VL-6 (6W) in the three wavelengths: 254, 312, 365nm or combined (see lamps with filter).

The CN-6 Darkroom is supplied without lamps and allows different lighting possibilities according to user choice.

Application

UV examination in chromatography (paper or TLC). Any fluorescent analysis and industrial inspection. Education.

Description

The darkroom and its black curtain
The viewing port
UV absorbption filter
Two receivers designed to house the lamp type VL-6.



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The **CN-15 DARKROOM**, a genuine professional unit, provides an effective and useful working capacity and a UV power intensity unequalled in this field.

Application

Reading af chromatogram (paper or TLC)
Fluorescent analysis in Chemistry
Biology - Geology and Mineralogy.

The 365 nm is also used for industrial and electronic quality control.

Features

UV intensity: the CN-15 works with 4x15 W tubes.

Versatility : the CN-15 offers any combination of UV sources, simultaneous or not, between the 254, 312 and 365 nm or the choice of only one wavelength.

Easy operating: a control switch for each wavelength.

Economic: no need to buy a complete module when a new wavelength is required - just change the tubes.

Description

Housing in strong and light weight thermoformed ABS.

Wight light.

Viewving port with removable holder allowing the adaptation of a monochrome CCD camera (see PHOTO-CHROM).

UV absorber filter.

Removable

MEASUREMENT EQUIPMENTS



RADIOMETERS

Designed for an accurate and direct measurement of UV radiation, our RADIOMETERS are equipped with a silicon photo-electric cell without any conversion into visible light.

RMX-3W RADIOMETER WITH MICROPROCESSOR.

UV RADIOMETER controlled by microprocessor allows to program and measure UV radiation dosage according to two parameters: **Time** (mn/sec) or **Energy** (J/cm2).

Applications :Photosensitivity-Phototherapy-Industrial insulation. The unit is composed of : 1 case with a front plate grouping all the control and programming elements.3INTERCHANGEABLE SENSORS.

RMX-3W RADIOMETER CX-254 Sensor for measuring 254 nm.**CX-312** Sensor for measuring 312 nm .**CX-365** Sensor for measuring 365 nm..

ELECTRONIC CASE Display : 4 x 40 LCD.

Analog output: 0 to 4 V for 0 to 400mW/cm2

Measurement of : Uv intensity in mW/cm2 from 0 to 400 mW/cm2. Energy : 0 to 99999 joules/cm2. Time : 0 sec to 99 hours .

SENSORS Silicon photo-electric cell ,interference filter, diffuser in quartz , protective quartz disk of the cell filter.

VLX RADIOMETER:

RADIOMETER composed of one electronic case with one sensor for the measurement of the UV intensity in mW/cm2.**VLX-254** radiometer for 254 nm. **VLX-312** radiometer for 312 nm .**VLX-365** radiometer for 365 nm.

ELECTRONIC CASE « Hold « function, 3 automatic measure ranges : 1^{st} range : 0.000 to 1.999 mW/cm2 . 2^{nd} range : 2.00 to 19.99 mW/cm2 . 3 rd range : 20.0 to 200 mW/cm2. Display : $3\frac{1}{2}$ LCD. Analog output : 0 to 2 V for 00.00 to 200 mW/cm2.

SENSORS Silicon photo-electric cell ,Interference filter , Diffuser in quartz, protective quartz disk of the cell filter.

UVR-365 RADIOMETER : for good accurate measurement in 365 nm (Quality control in Industry). **SENSOR** Silicon photo-electric cell , Pass –band filter non sensitive to infrared, protective quartz disk of the cell filter

VLX-3W RADIOMETER WITH MICROPROCESSOR

For measurement requiring high accuracy (Research-Electronics)

RADIOMETER controlled by microprocessor with three INTERCHANGEABLE SENSORS.

VLX-3W Radiometer : CX-254 Sensor for measuring 254 nm.**CX-312** Sensor for measuring 312 nm. **CX-365** Sensor for measuring 365 nm.

ELECTRONIC CASE; display; 4 x 16LCD, « Hold » function, Analog output: 0 to 3.5V for 0 to 350 mW/cm2. Measurement of: UV intensity in mw/cm2. Energy: 0 sec to 99 hours. Storage of the mini and maxi intensities.

SENSORS Silicon photo-electric cell, Interference filter, diffuser in quartz, protective quartz disk of the cell filter.

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BIO-PROFIL



BIO-PROFIL /BIO-1D/BIO-2D/BIO-GENE A HIGH PERFORMANCE TOOL

BIO-PROFIL offers scientists a new generation of 32 bits software, Windows 95,NT and Windows 98 compatible, able to satisfy the most stringent requirements in the area of quantitative and qualitative analysis of electrophoresis gels, transparent or not, as EB stained gels, proteins gels, autoradiograms, blots, dot blots etc....

BIO-PROFIL is composed of : CAMERA Monochrome CCD camera with integration time. Resolution : 752 (H) x 582 (V) = 437.664 pixels. High sensitivity. Zoom : 12.5 x 75/1.8 with extra-lens1D. Filter : F-590 interference filter UV/IR. INTERFACE BOARD WITH ACQUISITION SOFTWARE BIO-CAPT MW Acquisition data interface 8 bits. Resolution : 437.664 pixels. ANALYSIS SOFTWARE

BIO-PROFIL offers 3 different software: BIO-1D /BIO-2D /BIO-GENE

BIO-1D software features new functions like: irregular background processing, full band volume quantification, distortion correction, MW calculation according to several standard lanes, dot or slot blots automatic analysis, comparison of matching bands through lanes, reports as likelihood matrix or distance, dendrograms, GLP Files...

Also available: BIO-GENE software specially designed for the identification and comparison throughout a data base;

BIO-2D software for a comprehensive analysis of two dimension gels.

DARKROOMS ENCLOSURE, compact and rigid, they make possible to work in daylight in a small space while protecting the user from irradiation.

BIO-PROFIL can be fitted with three different darkrooms: CN-08 for our TCP and TCX tables. CN-TFX for our TFX UV tables. CN-UV/WL for our TFP-UV/WL tables. A large aperture enables easy access for the gels and easy maintenance of the filter.

MONOCHROME VIDEO PRINTER: gray level: 256, interface: video composite (BNC)

BIO-1D SOFTWARE Quantification of volume, quantification with any analysis window. Background subtraction. Insertion, detection of peaks. Calculation of intensity, area ,volume of peaks or spots (recognition of spot contours). Spot quantification based either on a spot reference or a sum of spots or a calculation of a master curve: linear, logarithmic, polynomial or experimental. Display of results in the form of bar chart, curves, profiles. Optical density or volumes ratios. Profile comparison by superposition. Automatic analysis of dot and slot blots. Microtitration plate analysis. Colony counting.

BIO-GENE SOFTWARE Database functions: flexible database: 10 levels of 999 sublevels. Visualization of stored results. Unlimited calculation of homology matrix. Dendrogram calculation up to 255 samples simultaneously. Identification: search out through the database according to a defined percentage of homology.

Comparison within the database, between stored samples (rectangular matrix). Comparison within the database, between the db and the image. Creation and storage of masters of bands. Calculation and manual or automatic matching according to this master. Multiprobe analysis: creation of presence/absence files (0.1)

BIO-2D calculation background subtraction by deconvolution. Contour recognition by local contrast method. Manual definition (using mouse) of certain spots if necessary. Volume, gravity center, maximum intensity, height, circularity for each detected spot. Calculation of MW and isoelectric point for each spot according to the scales

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defined by user (display of marker curve). Adjustment of distortions between several images (triangulation). Readjustment of intensity levels by using one or more control spots. Screen display of matching and non matching spots. Visualization of spots movements.

Database functions flexible database: 10 levels of 999 sublevels. Storage of all detected spots of the image. Comparison between image stored in the database and currently analyzed images.

BIO-1D/ BIO-GENE calculation of electrophoresis distances automatic calculation of MW or calculation with automatic lane separation on the same gel. Correction of band and front distortion (smiling). MW or sizes marker edition. Automatic and manual marker assignment. Recalculation of band position according to « n» identical standard lanes. Automatic display of detected bands with their position in bp, Da, RF, according to the standard migration curve. Calculation of similarity percentage between selected lanes on the same gel: Nei and Li (DICE), Jaccard coefficients. Matching criteria (confidence interval): percentage defined by the user. Transcription of matching results according to one master: presence/absence of bands. Reference lane edition. Result display: lanes edition, matrix and dendrogram.

BIO-1D/BIO-GENE/BIO-2D Tools Formats: TIFF,BMP,Vli,TGA,PCX,WPG,MAC,JPEG,GIF. Positive or negative image. Cut/copy and paste functions. Incrustation of text and symbols into the image. rotation, vertical, horizontal mirrors. Contrast enhancement with histogram dilatation. Print designer (« wysiwyg » self-made report based on data of the analysis.

Results: Windows compatibility print-out. Results files ASCII (TXT) or Excel compatible (BDF), Graphic files (histograms, curves): Bitmap files, images files: TIFF, BMP, etc.. Good Laboratory Practice: GLP files (method, parameters treatment archived with the image).

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BIOSPECTRA

BIO-SPECTRA has been designed for UV irradiation of laboratory animals in order to perform the following different test:



Test of photosensitization (phototoxicity and photoallergy)

Test of photoprotection for determination of protection coefficient of sun creams and other compounds

UV carcinogenicity study on a nude mouse and therefore on the preventive effect of a cosmetic cream SBC (Sun Burn Cells) kinetic on a nude mouse exposed to UV-B irradiation

BIO-SPECTRA can also be controlled by a computer and can program the UV irradiation dosage in ENERGY (Joules/cm²)

This system ensures an absolute reproducibility of the tests whatever the light intensity variations of the lamps may be.

It can also log all the information relevant to the test operation:

Energy programmed

Energy received

UV intensity variation

Variation in temperature

At the end of the test, the operator can have the test report printed with:

Energy curves

UV intensity curves

Temperature curves

Main features

Excellent homogeneity of the irradiated area

The irradiated area (900 x 80mm) is sufficient to treat up to 10 Guinea-Pigs type Albinos Dunkin-Hartley simulta-neously

The temperature at the animal level does not exceed 30°C (86°F) for a room temperature of 20°C (68°F) which makes this UV generator suitable for Biological testing

The automatic and continuous control of the UV irradiation by the computer ensures perfect reproducibility of the tests

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