

# TECHNO Chemi

CHEMILUMINESCENCE &  
FLUORESCENCE IMAGING

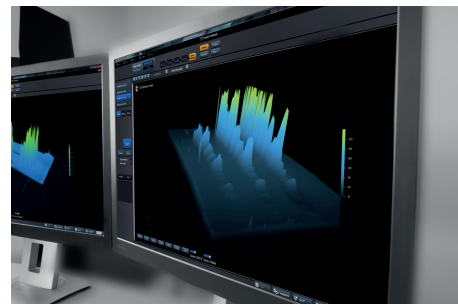
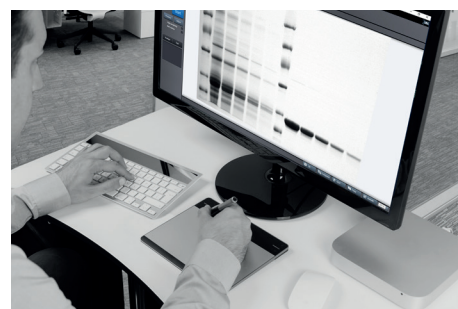


WESTERN BLOT & GEL DOCUMENTATION IMAGING

 **VILBER**  
Smart Imaging



The TECHNO Chemi's protocol driven image acquisition is as quick as it is intuitive: adjust your exposure, save, print or quantify.



The TECHNO Chemi delivers more significant quantitative data compared to other imagers.

**For chemiluminescence, the time to get the image is dramatically reduced and precious antibody can be saved.**

## RELIABLE DATA FOR QUANTIFICATION PRECISE AND ACCURATE

The TECHNO Chemi is ideal for quantification grade imaging. Chemiluminescent Western blot data poses distinct challenges in producing quantifiable, reproducible data. These problems stem from a low-dynamic range of detection and the difficulty in accurately determining the limit of detection. The TECHNO Chemi eliminates all these issues thanks to its High Sensitivity Reading (HSR) camera technology which delivers reliable dynamic range, linearity and sensitivity for the lowest limit of detection. With the HSR, the TECHNO Chemi reduces the various sources of noise to the lowest floor level and the signal can stand out from the surrounding background.

**For fluorescence, photobleaching and phototoxicity are reduced.**

The TECHNO Chemi provides consistent and reproducible data, independently of the chemiluminescence time course. The chemiluminescence intensity/time profile consists of an initial rise period up to a prolonged emission at a pseudo-plateau level and a decline. The TECHNO Chemi Automatic imaging mode compensates the time course of the chemiluminescence reaction by adjusting the exposure time while maintaining the larger possible image dynamic.

## CUSTOM MADE V.070 LENS UNRIVALLED SENSITIVITY

The TECHNO Chemi custom made V.070 lens combines sensitivity and optical performance for very faint light conditions. The optical system includes ultra-low

dispersion components to enhance the sensitivity, and aspheric elements to deliver consistently sharp images.

The V.070 lens has a focusing distance of only 20cm for the best sensitivity, clarity and image quality.

The main function of a camera lens is to collect light. The lens aperture represents its capability to collect as much light as possible in a given period. Its sensitivity is usually expressed by a range of f-stops. The smaller the f-stop number, the larger the aperture. A lower f-number denotes a greater aperture opening, which allows more light to reach the CCD sensor. The aperture of the V.070 lens is f/0.70, providing faster imaging and better sensitivity compared to all other imagers.

## DESIGN FOR SIMPLICITY ONE CLICK TO THE IMAGE

The TECHNO Chemi has been designed for maximum ease of use. From its simple installation to its intuitive user interface, this system is plug-and-play. The TECHNO Chemi software is the easiest software to take an image. Place your blot on the tray, select your application, click on Start and automatically the system auto-exposes your blot image, your marker image and combines the two together.

The TECHNO Chemi includes our unique Apps Studio approach to imaging. The Apps Studio is a library which contains 40 different protocols for your blot, gel and other bioluminescence samples. The protocol oriented Apps Studio ensures reproducibility and one click acquisition for the best ease of use.

# TECHNO Chemi



## SUPERIOR QUANTITATIVE RESULTS

Ultimate linearity for precise protein quantification over the full dynamic range.



## HIGH SENSITIVITY READING (HSR) TECHNOLOGY

Ultra-low noise imaging thanks to a dual camera amplifier architecture.



## CUSTOM MADE LENS

TECHNO Chemi custom made lens for enhanced sensitivity and sharpness.



## SUPER SENSITIVITY

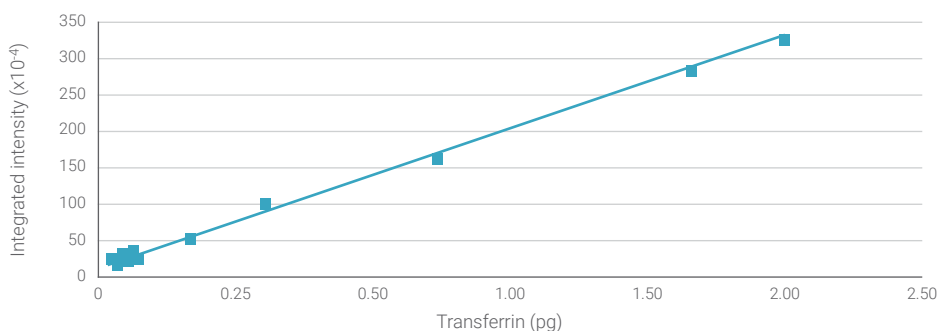
Time to get the image is drastically reduced and precious antibody can be saved.

## QUANTITATIVE WESTERN BLOTTING

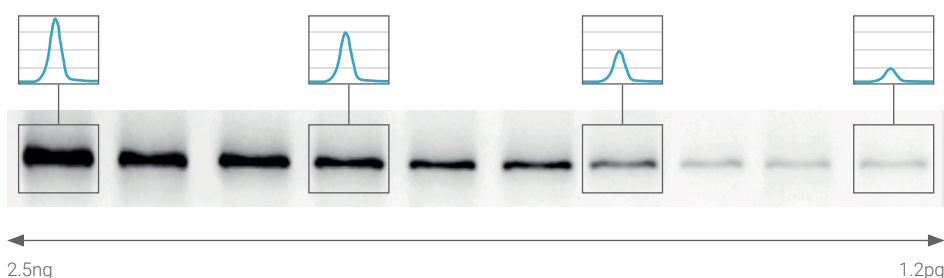
**Sensitivity is a key feature to detect a protein expressed at low levels. Broad linear dynamic range is necessary to compare weak and strong signals in the same image.**

The TECHNO Chemi has a limit of detection in the picogram level. The system achieves the best signal to noise ratio for the lowest limits of detection. The TECHNO Chemi is extremely linear over its wide dynamics and can easily detect large intensity difference between bright and faint bands before reaching saturation. The broad linear dynamic range enables relative quantification of target proteins with confidence.

### BROADEST LINEARITY



### PICOGRAM LEVEL OF DETECTION & WIDE DYNAMIC RANGE



## Smart Inside

- Auto-exposure and auto-focus
- Automatic light illumination control
- Protocol driven image acquisition
- Automatic chemiluminescence and pre-stained MW marker images overlay
- Fully motorized lens and filter wheel

## The Best Sensitivity

- 4 positions motorized filter wheel
- Better sensitivity than a film
- One click to get the image
- Sensitive, multimode image capture and analysis
- CFR21 Part 11 ready
- Intuitive user interface and advanced software



## Ideal For Quantification

- Reproducible and comparable quantification data
- ImageMaster™ technology to obtain the optimum image for quantification
- Scientific TIFF file or proprietary file format
- Clarity™ technology for razor sharp band revelation without affecting data integrity

## Long Lasting High Quality

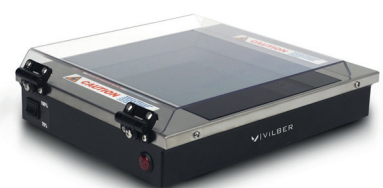
- Stainless steel, aluminium and steel darkroom for the best robustness
- Proven camera robustness
- White light LED for thousands of hours of use
- Complete capability to replace a Dark Room
- UV safety switch

## High-end pull-out UV Transilluminator

High-end pull-out UV transilluminator

We provides first-class UV transilluminators for documentation and preparation:

- Long Lifetime Filter - Unlimited life expectancy for 312 & 365nm.
- Stainless Steel Frame.
- Long lifetime and no rust.
- Adjustable Dual Intensity - Ideal to switch from short gel visualization to longer preparative work.
- UV Master Technology - Highly concentrated UV radiations.



## CAMERA & OPTICS

TECHNO Chemi 6X Touch with the eVo-6 camera – resolution oriented camera ideal for publication

eVo-6 camera:

- Unrivalled motorized custom made lens f/0.70
- 16-bit Scientific grade CCD camera
- Grade 0, zero defect
- Extended resolution: 20 megapixels
- Native resolution: 2838×2224 (6.3MP)
- -55° C maximum cooling differential from ambient
- -30°C absolute and regulated cooling via three stages Peltier thermoelectric cooler
- High Sensitivity reading (HSR) technology
- USB-3 connection

## EASE OF USE

One-Click-to-the-Image™

Intuitive interface and advanced software

Auto-exposure

Auto-focus

Auto-lighting

## HARDWARE

Smart Darkroom technology:

- Motorised optical lens 50 mm
- Motorised 4 positions filter wheel with UV/IR interference filter (1 empty for chemi luminescence and 3 for filters)
- Software control of the lighting
- Automatic visible lighting adjustment
- Gel viewing area 20x20cm
- 22 inch touch screen with stylus pen
- i5 Processor with >500GB Hard Drive
- 3x USB ports with direct connection to printer
- 1x Network interface
- Electrical Specification: 220 – 230 Volts, 50Hz.
- Steel and stainless steel darkroom for long lasting robustness.
- Light-tight darkroom
- Wide access door with UV safety shut-off
- Built-in slide-out tray for 302nm UV transilluminator.
- Epi Led white light imaging
- Upgradable hardware and flexibility to add filters
- Two years warranty

## SOFTWARE

- Free software for image acquisition with full GLP compliance.
- Intuitive interface: settings, capture, save and printing from one screen
- Choice between automatic or manual image acquisition
- Possibility to capture series of images using preset or user defined exposure times
- Exposure time from 10 milliseconds to 120 minutes
- Automatic chemiluminescence and pre-stained MW marker images overlay without compromising the underlying chemiluminescence densitometry data
- Dark and biased master files to compensate for the camera noise during image acquisition
- Tiff, JPEG, PNG, GIF or BMP image file formats
- Advanced software for analyzing chemiluminescence Western blot, DNA/RNA & protein gels and chemiluminescence nucleic acid blot images.
- Molecular weight calculation, band quantification, colony counting, Rf distance calculation, text annotation and image edition and enhancement included.
- Software able to calculate the relative and absolute quantity of the unknown protein samples
- Software able to calculate automatically the sample purity based on band and lane intensity
- Lane profile densitometry with lane and band identification
- Molecular weight of DNA/RNA/Protein using installed or custom MW markers

## TECHNOLOGY & INNOVATION

- Apps Studio™
- 3D Dynamics Scan™
- SuperResolution™
- High Sensitivity Reading (HSR) technology™
- PadBox™
- ImageMaster™ assistant
- Clarity™





#### **HEADQUARTERS**

Vilber Lourmat

ZAC de Lamirault

Collegien

F-77601 Marne-la-Vallee cedex 3

France

Phone : +33 (0) 1 60 06 07 71

[info@vilber.com](mailto:info@vilber.com)

#### **GERMANY**

Vilber Lourmat

Deutschland GmbH

Wielandstrasse 2

D-88436 Eberhardzell

Deutschland

Phone : + 49 (0) 7355 931 380

[info@vilber.de](mailto:info@vilber.de)

#### **CHINA**

Vilber China

Room 127 Building A

N° 111 Yuquangying

Fengtai District – Beijing

China

Phone : + 86 1361 1131 545

[info@vilber.cn](mailto:info@vilber.cn)