

# VILBER

MORE THAN IMAGES



## NEWTON FT-30

FLUORESCENCE AND BIOLUMINESCENCE  
FOR IN VIVO, EX VIVO AND IN VITRO IMAGING

# ABSOLUTE DESIGN

"AN INSTINCT FOR TRUTH" - LOUIS PASTEUR



## ABSOLUTE CALIBRATION

Absolute NIST Traceable Calibration Imaging is based on traceable references provided by the National Institute of Standards and Technology (NIST). It allows precise quantification of specific biomolecules, such as proteins for absolute accuracy, reproducibility, and standardization.

## ABSOLUTE QUANTIFICATION

Absolute quantification allows researchers to compare and integrate data from different studies or laboratories. Unlike relative quantification, which compares the amount of an analyte between two or more samples, absolute quantification provides a precise value for the amount of substance in the sample, expressed in absolute units, such as radiance (ph/s/cm<sup>2</sup>/sr).

## ABSOLUTE EFFICIENCY

Easily manipulate and arrange samples thanks to the system's wide door opening. Once placed in the machine, the system evaluates the required camera positioning automatically according to the nature and size of the sample.



## ABSOLUTE VERSATILITY

Are you used to working on computer-based systems and looking for a versatile instrument ? The Newton FT-30 is made for you. Depending on your needs and applications you can easily customize your system. The Newton FT-30 is customizable and upgradeable. Choose from 8 Spectra LED excitation sources from 400nm to 800nm for limitless fluorescent imaging.

## ABSOLUTE DURABILITY

The Newton FT-30 is a powerful and robust imaging system made of aluminium and stainless steel. Its design has been optimized by our R&D team to offer the most compact imager capable of capturing high resolution images.

# ABSOLUTE PERFORMANCE

## FOR UNRIVALLED DETECTION

Designed to exceed your expectations, the Newton FT-30, equipped with deep analysis, is the first compact imager capable of absolute quantification. This high-end system dedicated to all your fluorescence and bioluminescence applications combines unrivalled sensitivity and automatic analysis to offer you the greatest level of performance.

Discover a world of extreme precision and technical innovations for experiments with limitless potential.

### BREAK DETECTION BOUNDARIES

The Newton FT-30 ultra sensitive  $f/0.70$  lens is optimized for faint light conditions as low as the picogram level. The system achieves an unrivalled signal to noise ratio with its absolute cooling temperature of  $-90^{\circ}\text{C}$  for detection as low as a single cell.

### CHOOSE PREMIUM OPTICS

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  $f/0.70$  aperture of our lens provides faster imaging and increased sensitivity compared to all other imagers in the market. Our system is also equipped with a deeply cooled CCD scientific camera which allows you to get rid of background noise.

### DISCOVER THE POWER OF MULTISPECTRAL IMAGING

Multispectral imaging in molecular imaging involves capturing images at multiple wavelengths to extract comprehensive information from a sample. It enhances the accuracy, versatility, and efficiency of the imaging process, making it a valuable tool for your research.

### OBTAIN IMMEDIATE RESULTS

As we push the boundaries of detection, we significantly reduce acquisition time so that you can work faster.

Ultrasensitive detection capability facilitates the use of shorter excitation exposure. The Newton FT-30 protocol driven image acquisition is as quick as it is intuitive: adjust your exposure, save, print or quantify.

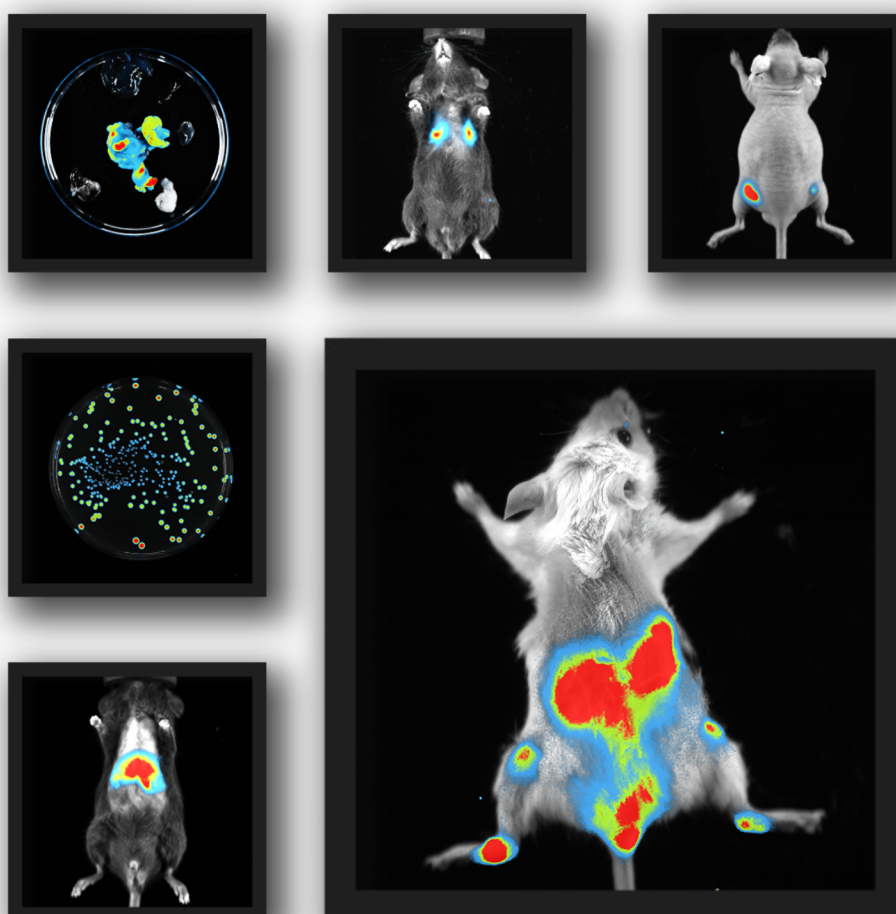


### LUCIFERASE EXPRESSION

visualize various bioluminescent reporters, like firefly luciferase and other fluorescent molecular reagents in visible and NIR-I windows

### UNIQUE FEATURES

- 3-mice breather
- Macro mode 6x6cm and black antireflection surface
- Heating stage, Off / 37°C and optional anesthesia & induction box



### ALL YOU NEED IN ONE SYSTEM

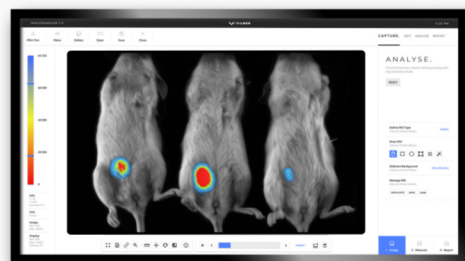
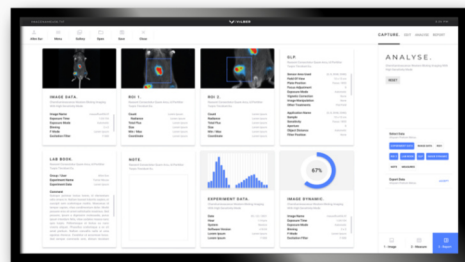
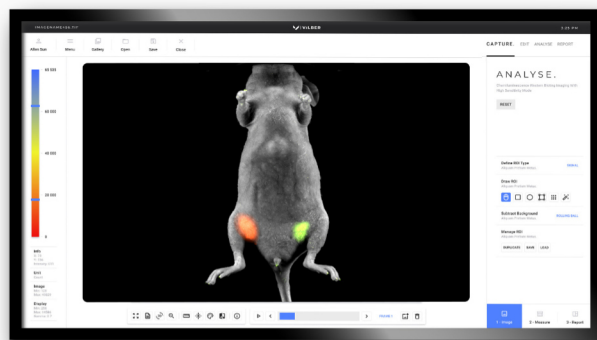
Tumor and infection monitoring | Cell migration tracking | Molecules to nanoparticles targeting | Vasculature and microcirculation visualization | Biodistribution and pharmacokinetics studies

# ABSOLUTE ANALYSIS

FOR VALUABLE INFORMATION

Enjoy efficient, deep analysis. Our highly sensitive system easily transforms light into quantitative data upon user command. Rest assured the integrity of data is maintained by allowing the user to direct analysis. The visualization of your results combines the calculations made by the system and the image taken so that you can easily communicate your results. With its unique combination of multispectral imaging and unmixing technologies, KUANT makes your life easier and resolves your autofluorescence challenges.

Get more accurate detection thanks to our powerful N.M.F. (non-negative matrix factorization) algorithm.





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## CAMERA OPTICS

- Unrivalled custom made lens f/0.70
- Scientific grade 16-bit CCD camera
- Grade 0, zero defect
- Image resolution: 10 megapixels
- Native resolution: 2160x2160
- -90° C cooling with 4 Peltier Stages

## DETECTION

- Bioluminescence, Chemiluminescence
- Fluorescence with 8 channels:
  - Exc./em.: C-440nm - F-500nm
  - Exc./em.: C-480nm - F-550nm
  - Exc./em.: C-540nm - F-600nm
  - Exc./em.: C-580nm - F-650nm
  - Exc./em.: C-640nm - F-700nm
  - Exc./em.: C-680nm - F-750nm
  - Exc./em.: C-740nm - F-800nm
  - Exc./em.: C-780nm - F-850nm

## SOFTWARE

License free software for image acquisition with full GLP compliance

- Absolute quantification
- 3D Dynamic Scan
- Autofluorescence correction
- Kinetic imaging

## HARDWARE

- Intelligent darkroom concept
- Fully-automatic system
- Motorized optical lens
- Z-axis motorized camera (automatic zooming and recognition of the sample position)
- Motorized 10 positions filter wheel
- Software control of the lighting
- Automatic visible lighting adjustment

## CONTACT US FOR A DEMO

[INFO@VILBER.COM](mailto:INFO@VILBER.COM)

We are proud to be a leading life science company which designs and manufactures state of the art imaging systems for all your fluorescence, chemiluminescence and bioluminescence applications. Our commitment is to accelerate your research via a highly reliable and simplified imaging process.

Innovation is our priority to offer you the best performance in terms of optical sensitivity and analysis. Our technologies incorporate the latest developments in user interface and product design, as well as photonic innovations. Today, our engineering company deeply penetrated the imaging sector with over 60,000 users worldwide, including several Nobel Prize winners.

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