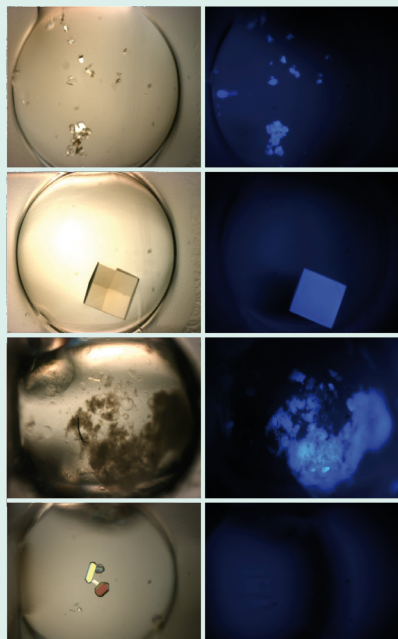




XtalLight™ 100 IDENTIFICATION OF BIOMOLECULAR CRYSTALS

Intrinsic Protein Fluorescence Imaging



bright light

UV

XtalLight 100 is a light source for combination with your lab microscope to identify biomolecular crystals by intrinsic fluorescence (100/100C) or trace label fluorescence (100C).

INTRINSIC FLUORESCENCE IMAGING

XtalLight 100 and XtalLight 100C allows intrinsic fluorescence imaging of protein crystals by illuminating with a broad UV spectrum ≥ 280 nm, for efficient fluorescence excitation of tryptophane, reducing the influence of the used covering material and quenching effects.

TRACE FLUORESCENCE IMAGING

XtalLight 100C is equipped with a coloured light source, providing a trace fluorescence imaging option, a widely used technique for the identification and comparison of biological materials.

SPEEDING UP YOUR STRUCTURE DETERMINATION PROCESS

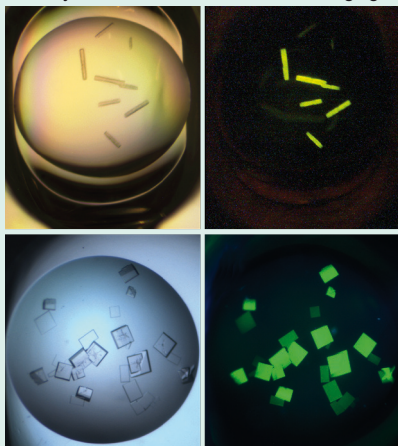
The XtalLight 100(C) can be connected to a standard microscope with a CCD camera. In combination with our imaging package you have a manually or remotely operated plate imager to identify your biomolecule crystals.

The XtalLight 100(C) can be easily attached to the automated imaging system SpectroLight 600 or a broad variety of available microscopes.

MINIMUM RISK FOR YOUR CRYSTALS DURING INSPECTION

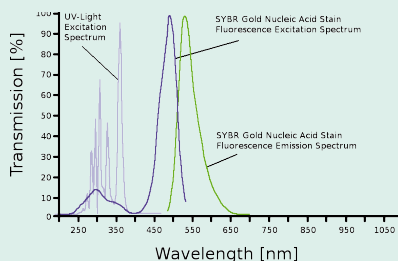
Remotely operated shutters and a trigger signal for the CCD camera allow short UV exposure times to protect crystals against photochemical damage.

Carboxyrhodamine Trace Fluorescence Imaging

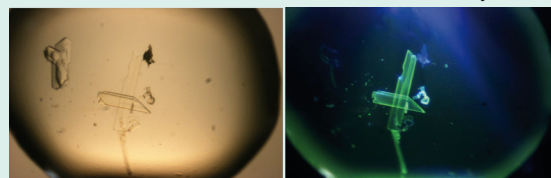


bright light

green light



Fluorescence of SYBR® GOLD Nucleic Acid Stained RNA Crystals



UV light source	<p>Mercury arc lamp with 120 W</p> <ul style="list-style-type: none"> ✓ Lamp life time > 2,000 h ✓ Motorized shutter and intensity control
Green light source	<p>Green LED (515 - 535 nm), 150 lm</p> <ul style="list-style-type: none"> ✓ LED life time > 50,000 h ✓ Motorised intensity control <input type="checkbox"/> other wavelengths available (optional)
Filter	<p>Motorized filter change up to three positions:</p> <ul style="list-style-type: none"> ✓ Pos 1: Shortpass 385 nm ✓ Pos 2: Shortpass 325 nm <input type="checkbox"/> Pos 3: other wavelength (optional)
Control	<p>Control of UV/green light intensity, filter setting and shutter</p> <ul style="list-style-type: none"> ✓ Manually ✓ Software control from PC over ethernet <li style="padding-left: 20px;">XtalLight 100C remote software runs on <input type="checkbox"/> Linux <input type="checkbox"/> Windows <input type="checkbox"/> MAC
Light guides	<p>Light guide for UV light 1.5 mm core diameter</p> <ul style="list-style-type: none"> ✓ Length 1.5 m <input type="checkbox"/> Customized length (optional) <p>Light guide for green light 1.5 mm core diameter</p> <ul style="list-style-type: none"> ✓ Length 1.5 m <input type="checkbox"/> Customized length (optional)
UV/green light optics	<p>Focussing optics for directing UV/green light onto the sample</p> <ul style="list-style-type: none"> ✓ Focal length 20 mm with built-in blocking filter
Hardware	<p>Table-top case</p> <ul style="list-style-type: none"> ✓ Portable unit ✓ 400 mm x 300 mm x 200 mm (LxWxH) ✓ Weight: approx. 12 kg ✓ Power consumption: 90 to 264 V, 200 W
Imaging package (optional)	<p>Computer</p> <ul style="list-style-type: none"> ✓ Mini PC attached to monitor ✓ Monitor 22 inch for full camera image display ✓ Operation system: Linux <p>Colour CCD camera</p> <p>Camera for adaptation to a microscope</p> <ul style="list-style-type: none"> ✓ 1600 x 1200 pixels <p>Imaging SW</p> <ul style="list-style-type: none"> ✓ Live display of camera image ✓ Control of camera settings for UV and coloured light ✓ Easy acquisition of UV images, green light images and combinations ✓ Storage and retrieval of images in a data base ✓ Short UV exposure times to protect crystals against damage
Positioning and protection	<ul style="list-style-type: none"> ✓ Manual Stage for positioning of optics <input type="checkbox"/> Manual Stage for positioning of UV protection shield (optional)
Adaptable microscopes	<p>Adaptable to several microscopes depending on working distance and set-up</p>
Suitable plates and sealing films	<p>Crystallization plates with low intrinsic fluorescence (low birefringence) and UV suitable sealing films</p>

