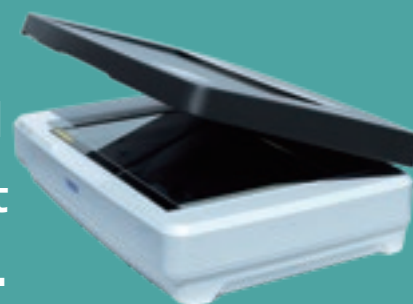


Fluorescence imaging system for protein and DNA electrophoretic gels.

The uniformity of light realized by the scanner makes it perfect for quantitative measurements.

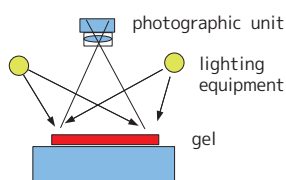
Fluorescent reagents: SYPRO ruby, flamingo, SYBR gold, SYBR green, FITC, EtBr



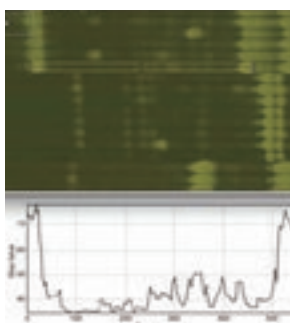
### GELSCAN-3 Features

- No darkroom required. The same unit can be used for both fluorescent and visible gels.
- Wet gel can be placed directly on the scanner.
- No focusing or exposure adjustment is required. Uniformity of light and repeatability make the scanner ideal for use in quantitation.
- Values directly proportional to fluorescence intensity can be obtained in 16 bits (65536 gradations.)
- Max scan size is 310 × 437 mm. Several large gels can be scanned at the same time.

#### 1. Epi-illumination method

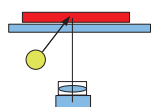


The wet gel is scanned from above. Scattered light due to surface irregularities in the gel becomes background noise.

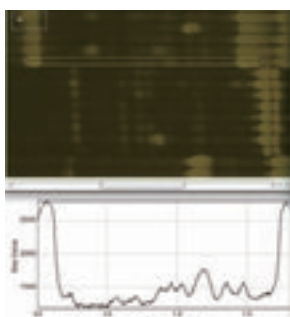


8 bit JPEG / Digital camera image

#### 2. GELSCAN method



Gel adhered to platen glass is scanned from below. The result is a smooth image without scattering.



16 bit TIFF / GELSCAN image

### Reagents supported by each model

For fluorescent gels	201801A1
For fluorescent and visible gels	201801A2
For visible gels	201801A3

Model	201801A1	201801A2	201801A3
Drip-proof	✓	✓	✓
SYPRO Ruby	✓	✓	
Flamingo	✓	✓	
EtBr	✓	✓	
SYBR Green	✓	✓	
FITC	✓	✓	
CBB		✓	✓
Silver staining		✓	✓

※If you would like to try out a scanner before buying one, please avail of our rental service.

### Specifications

Light source	White LED array / Blue LED array ( $\lambda_{\text{peak}} = 468 \text{ nm}$ )
Sensor	CCD line sensors
Scan size	For fluorescent gels / For fluorescent and visible gels 309 × 424 mm (309 × 406 mm in visualization) For visible gels 310 × 437 mm (309 × 420 mm in visualization)
Optical resolution	2400 ppi (11 $\mu\text{m}$ )
Bit depth	RGB each 16 bit IN / 16 bit OUT
Interface	Hi-Speed USB
Detection sensitivity	Protein: 1 [ng / band] DNA: 1 [pmol / band]
Scanning time	75 seconds (8 cm mini gel electrophoresis, at 300 ppi)
Drip-proof	Wet gel can be placed directly on the platen glass.
Scanner dimensions	W656 × D458 × H190 mm
Weight	20 kg
Power consumption	65 W
Power source	AC 100–240 V, 50/60 Hz
Software	iMeasureScan Std

## Application examples

### ● Two-dimensional electrophoretic images of proteins

Fluorescent reagents: SYPRO Ruby, Flamingo

Comparison between GELSCAN and molecular imager FX Pro from BIO-RAD.

Exhibit: "JHUP02008 P-39, An evaluation of the performance of the latest version of the flat-bed fluorescence scanner"

Documents provided by Towa Environment Science Co., Ltd.



- A comparison between 2D electrophoretic images and images produced using ImageMaster (GE) Bio-Rad Molecular Imager FX Pro (Left) / GELSCAN (Right)

area 1



area 2



### ● Improvement of plant varieties

fluorescent reagent: SYBR gold

Documents provided by the Department of Biological Resources Management,

The University of Shiga Prefecture

DNA polyacrylamide gel: electrophoretic images



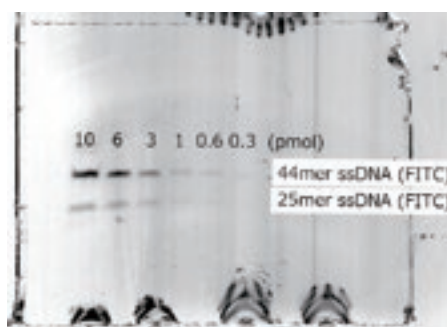
- Gel size : Two 25 cm x 12 cm sheets can be scanned at the same time.

### ● Confirmation of ssDNA

Confirmation of ssDNA

fluorescent reagent: FITC

Documents provided by Institute of Industrial Science, The University of Tokyo



## Q&A

Can the excitation wavelength of fluorescence be changed?

Excitation / fluorescence wavelengths can be customized. Please ask for further information at the time of purchase.

What is the difference between the model (201801A3) for use with visible gels and other image scanners available on the market?

It is drip-proof.  
Wet gel can be placed directly on the platen glass.

Does the variation in luminescence intensity between the 108 LED chips affect the fluorescent image of the gel?

Images are not affected by differences in the intensity of fluorescence.  
The images are corrected automatically because "shading correction" is performed for each scan.

Does the degradation in the light intensity after the LEDs have been on for an extended period of time degrade the value of the resulting image?

No.  
"Shading Correction" is performed for each scan. Moreover, the "exposure time" of the sensor is automatically adjusted according to the light intensity of the light source. This maintains the S/N ratio of the resulting image.



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