

# Magic 1D & Magic Chemi



## New Benchmark of Molecular Image Software Package

Magic software package was developed under the division of the Wealtec imaging family group. It is a professional and powerful 1D package that provides the most user friendly interface, advance imaging, value added functions, and analysis tools for manipulating under multi-lingual mode. Different packages cater for different hardware configurations, Magic 1D, Magic Chemi, Magic PLUS, Dolphin 1D, and Band Tool.

All above software packages possess the traceable image enhancement functions which include: color/ brightness/ contrast adjustment, image profiling or blending, background defining, annotations on the image or masked layer, 3D color display, X-axis comparison, smiling gels correction, conversion, interpolate, Deconvolution, Super Resolution, flipping, rotation and distance measurement. Deconvolution carry out contrast restoration enhance the sharpness. All features provide the researcher with the highest clarity image. 1D software support all common file formats in field such as PCX, TGA, DFN(GEL), PNG, IMG, TIFF, BMP, JPG, GIF, etc. All data can copy/paste or export into Excel or Txt, Word, PDF, and notepad file. Images captured using 1D software, DFN file, will be save with all information including exposure time, capture methods, color adjustment, etc.

Dolphin 1D provides the gel imaging capture function coupled with four analysis categories, including MW/Mass determination, colony counting, microtiter plate analysis, and spot density analysis, mainly for Dolphin series imaging systems. Band Tool is only for MW/Mass determination as a standard package of KETA S system.

KETA series imaging system is controlled by Magic software. Packages vary for different functions, Magic 1D for gel documentation KETA G, Magic Chemi dedicated to chemiluminescent detection for KETA C. Magic PLUS is the package of both Magic 1D and Magic Chemi for KETA M.

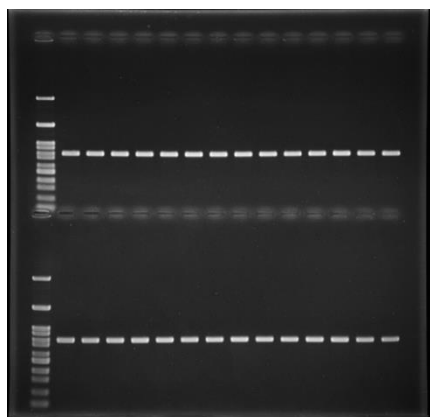
# Magic 1D

This software is integrated with the genius capture mode (GCM) function which allows user to preset and save capture parameter and to recall by one click. Adapted with the Smart Tray Technique, sample place in a dark environment, capturing condition and parameters can be recalled automatically by one click. The GCM function will get reliable result automatically. Image can auto saved by every exposure. The built-in darkroom calibration, camera shading correction, distortion correction, flat frame correction, brightness / contrast adjust, image profiling, blending, background subtraction, provides whole visual area imaging at the same level. In addition, four analysis functions molecular weight and mass determination, colony counting, microtiter plate assay, and spot density calculation also included.

Magic 1D has already given all the tools you need for gel documentation. Users can reverse the black and white gel image and adjust the imaging parameter such as gain, gamma, brightness and contrast on the go.

## Genius Capture Mode

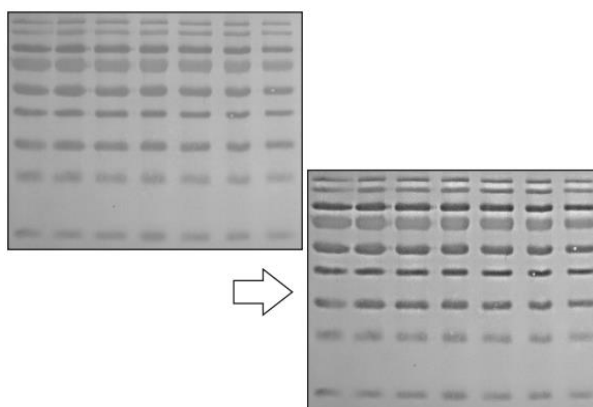
Preset optimum capture method include Iris, Focus, Zoom, Gain, Gamma, and Brightness, etc. All parameters can be restored by one click.



EtBr stained DNA agarose gel

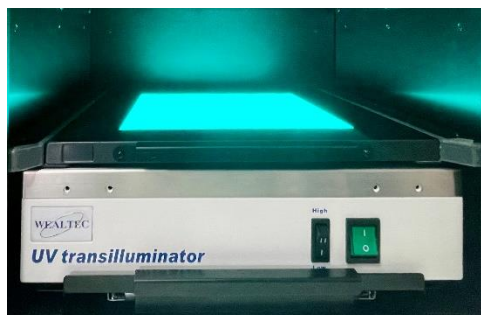
## Deconvolution

Blurry image can be processed through deconvolution function to enhance the signal contrast and sharpness.



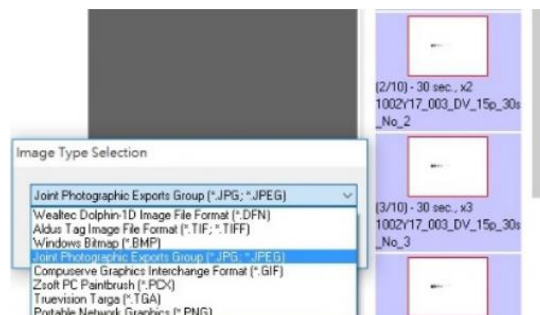
## Coded Sample Tray

Auto optimum camera capture parameter while insert coded sample tray.



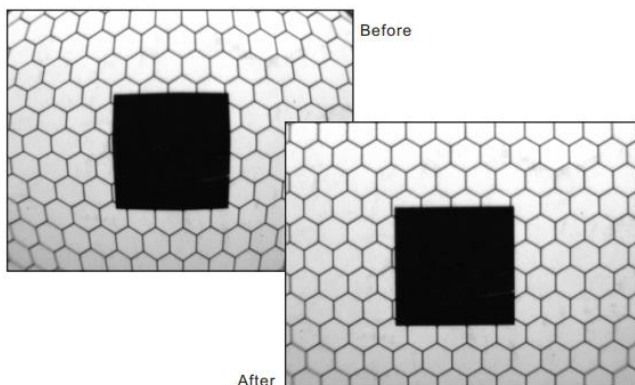
## Batch Data Export

Auto-saved during image capture process and exported to seven file formats at once.



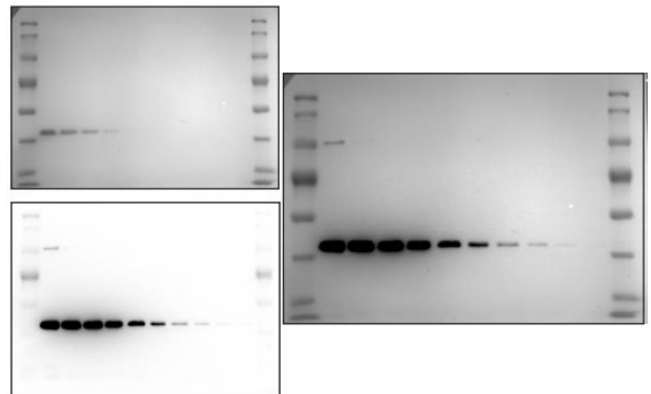
## Distortion Correction

To correct optics radial distortion by Distortion Correction function.



## Image Blending

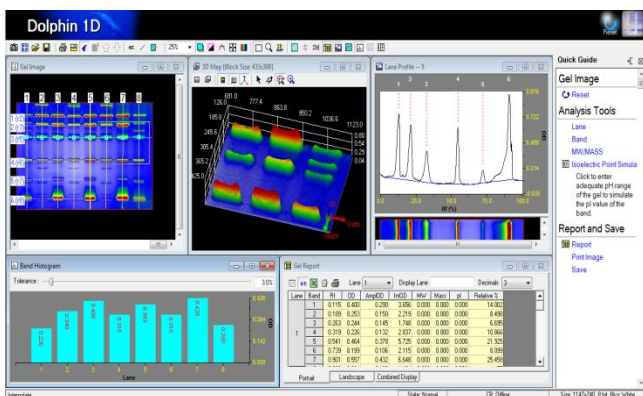
Merge of two images provides quick comparison of sample with marker pattern



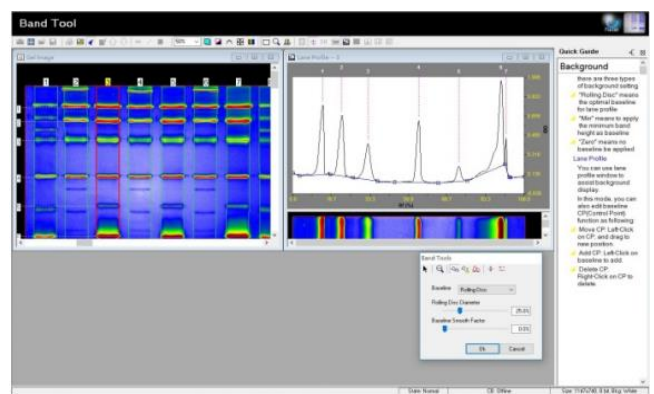
## Dolphin 1D / Band Tool

Dolphin 1D package dedicated for Dolphin series imaging besides to live, preview, freeze viewing functions. Comprise molecular weight calculation, mass determination, colony counting, microtiter plate assay, and spot density calculation functions. Band Tool software provides specific for MW/Mass determination. Any image file formats can be loaded for analysis.

### Dolphin 1D



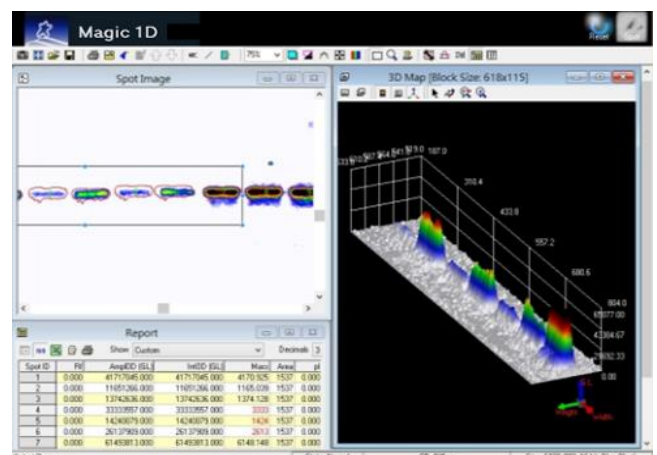
### Band Tool



## Powerful Analysis Functions

### Spot Density Calculation

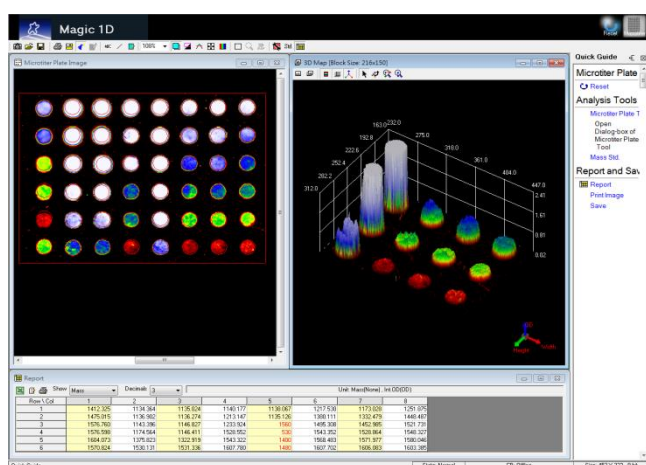
Spot densitometry analysis is for analyzing 2D gel and Western Blot image. Its irregular spot shape selection and similar spot marking function enables fast spot marking process. Using typical protein standards, the unknown sample can be calculated within seconds.





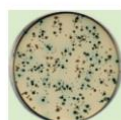
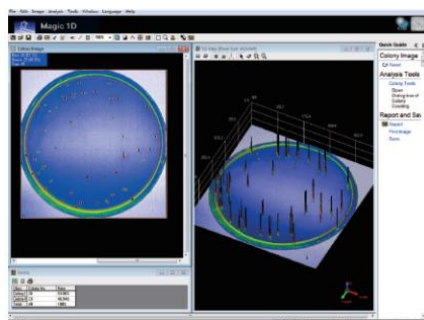
## Microtiter Plate Imaging

Densitometry analysis for comparing four images with microplate, rectangle array, dot / slot blots. Calibrated with standard sample as reference provides the user with the most reliable data output. Auto-detected or customized circle, rectangle, or slot shape, and block numbers with adjustable size, can be analyzed with negative control, minimum profile, edge subtract, selection area subtract of background subtraction method offer the best calibration result and information of all samples.



## Colony Counting

Auto-counting of the colonies with smart color and auto-split distinguish through absorption intensity to provide researchers an easy way to observe their sample results on Petri-dishes. Counting parameters can be adjusted by lever or numeric setting with Region of Interest, sensitivity, and colony size.



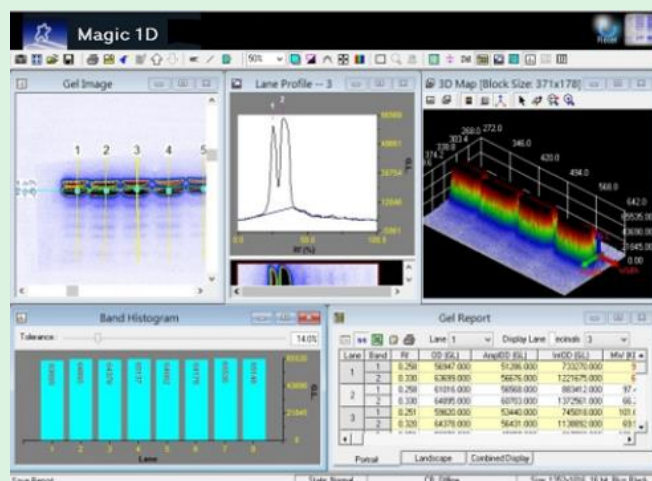
Colony petri-dish

## MW and Mass Determination

Gel image with 3D color display provides a clear visual comparison between each lane and band. Based on densitometry calibration, as refer to more than two standard samples' MW, mass and concentration, absolute / relative / average profile of specific lane or band can be auto-detected and calculated within one click.

Additional auto/ manual background subtraction with manual baseline subtract, rectangle / strip subtract, edge subtract, rolling ball, rubber band, minimum profiling subtraction, Normalization are all applicable.

Parameters can be adjusted with automatic detection, noise reduction, minimum peak, max peak of lane or gel, signal band, fixed width and percentage of peak can be set for more accurate analysis. Individual lane and band tools allowed user for add, delete, move, resize, bend, and range define.



# Magic Chemi

The brand-new Magic Chemi design has layout all the needs for an imaging system. Capture acquires your blot images along with the marker and sample images. Explore navigates the images in the back-up folders that automatically save all your images. Edit modifies your image for better presentation or adds objects for better illustration purpose. The Analyze simplifies analysis procedures and generates a quantitation report along with your sample.

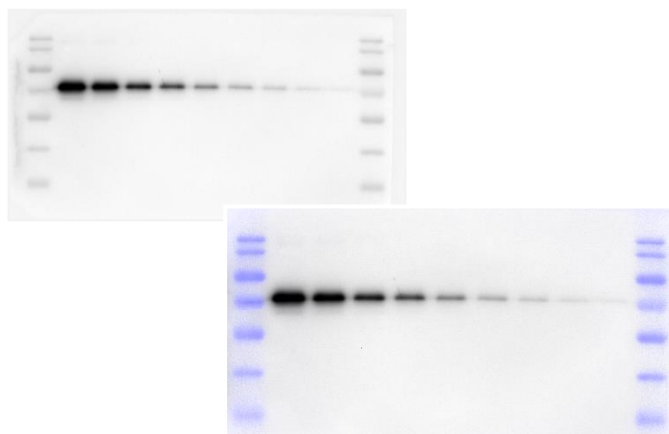
For the analysis function\*, Magic Chemi offers a wide variety of analysis tools and methods. Area Density allows users to define the region of interest in an image and quantifies the pixel intensity information. 1D Gel allows users to define the lane and band in an image and quantify the molecular weight information as well as pixel intensity information.

\*For Magic Chemi Basic version, the Analyze function is not included in the software package.

\*For Magic Chemi Junior version, the Analyze function and Auto / Auto Quant Capture functions are not included.

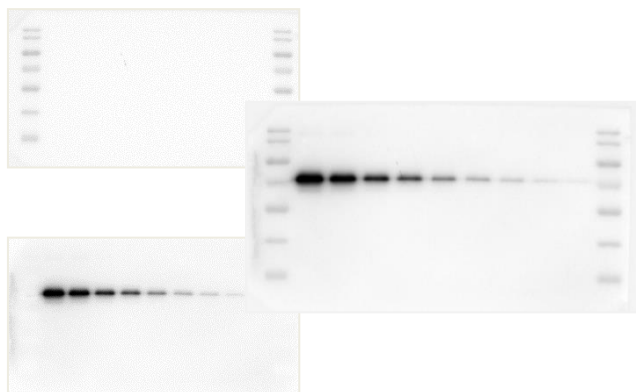
## Marker Coloring

Apply the color of your choice to the marker image.



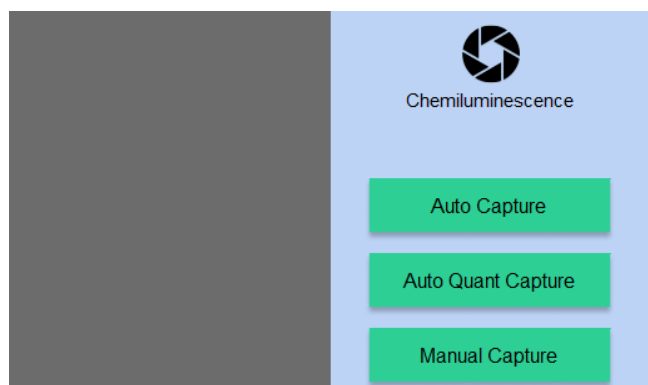
## Marker Blending

Automatically blend the marker image with the sample image and generates a combine image.



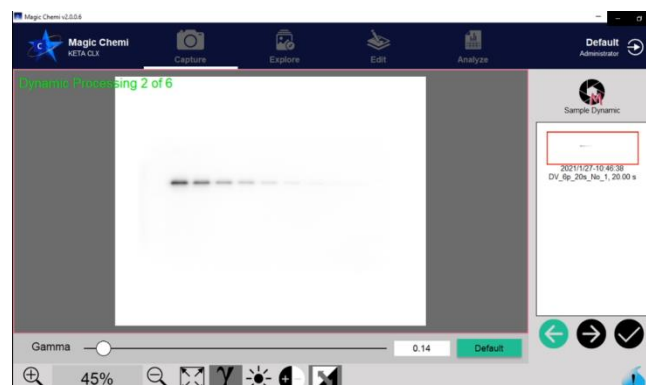
## Capture Mode Selection

Select Auto or Auto Quant Capture or Manual Capture to access more sample exposure method to capture your sample.



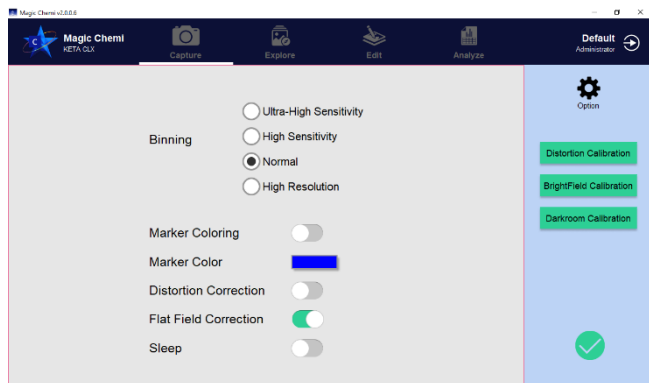
## Image Display Adjustment

Control the parameters for the image displayed in the software. Default presents the best image quality for your sample.



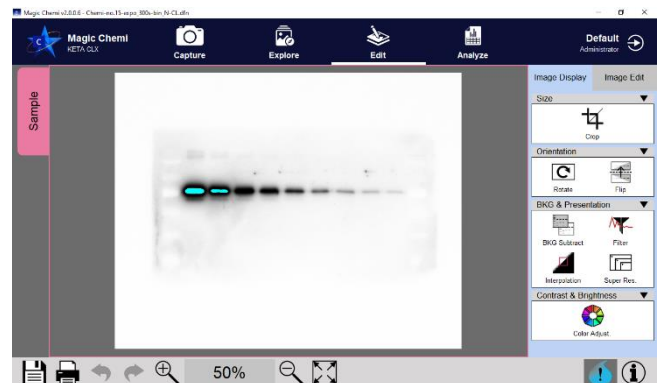
## Imaging Binning

Enhance signal intensity by combining the adjacent pixels. Four binning methods are provided here in the Option menu.



## Saturation Warning

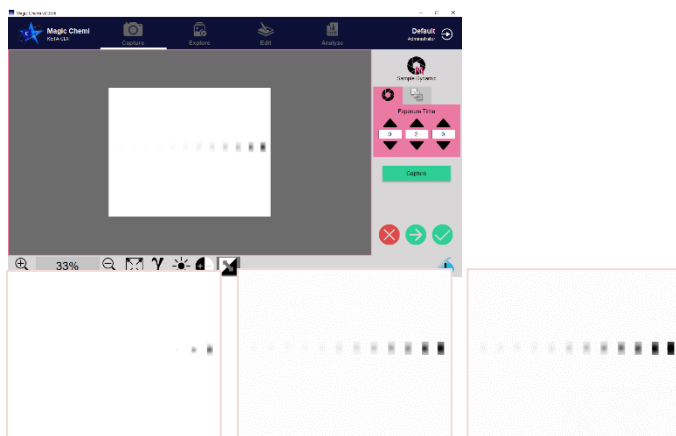
Display the saturated pixel on the image for quantitative analysis.



## Sample Exposure Method

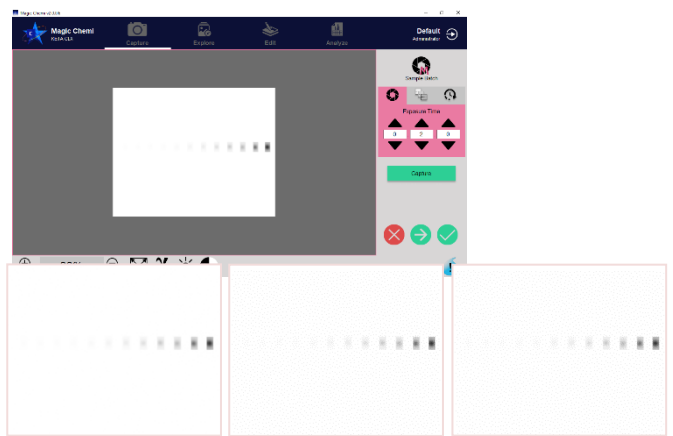
### Dynamic

Capture a set of images and accumulates the signal after one another.



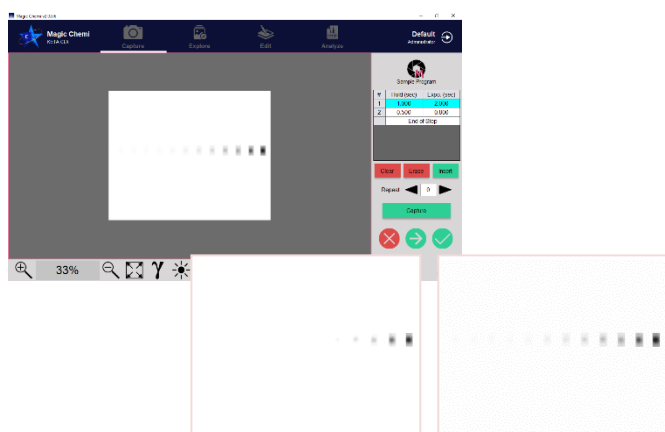
### Batch

Capture a set of images without accumulating the signal.



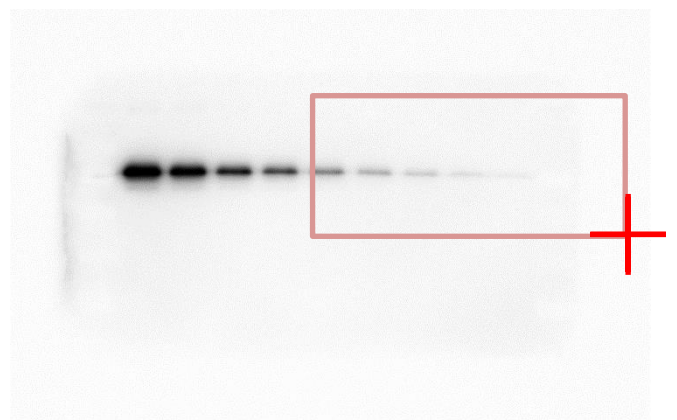
### Program

Capture a set of images with the hold time setting and exposure setting for each image. The signal is accumulated.



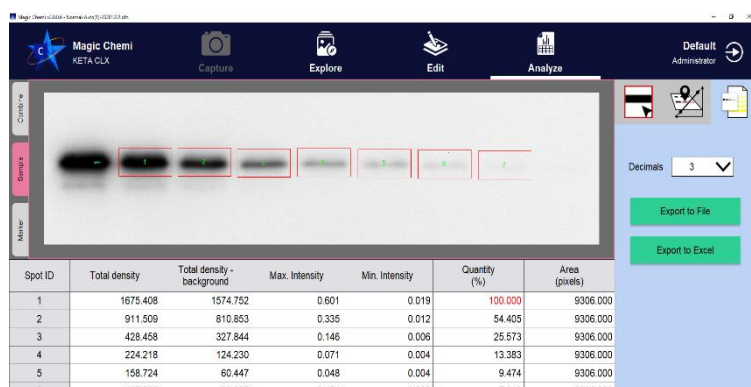
### Region of Interest (ROI)

Define a region of interest and use Auto Exposure to estimate a more accurate exposure time for the region.



## Personalized Data Print-Out

Print image data along with its image information and analysis report



Institute: Wealtec Bioscience Co., Ltd.  
Laboratory: Research and Development

Creator:  
Print date: 2021/01/29 10:12:18

WEALTEC KETA CLX Chemiluminescent Imaging System

### Imaging System Information

System: KETA CLX Software: Magic Chemi  
Serial Number: RC-2012L03C2.1 Software Version: 2.0.0.4

### Image Information

File Name: Normal-Auto(1)-20201222.dhn  
Image Depth: 16-bit Operator:  
Pixel Count: 521,381 Capture Date: 2020/12/22 8:55:14  
Image Display: Inverted Image Size (pixels): 1477 x 353  
Capture Method: Exposure Method: Auto Exposure  
Blurring: Normal Exposure Time: 62.640 sec  
File Location: C:\Users\lynn\Desktop\Demo Archive\RD Good W962\_Seq\_2\kulation

Image Name: Normal-Auto(1)-20201222



### Area Density Analysis Report

Spot ID	Total density	Total density - background	Max. intensity	Min. intensity	Quantity (%)	Area (pixels)
1	1675.408	1574.752	0.601	0.019	100.000	9306
2	911.509	810.853	0.335	0.012	54.405	9306
3	428.458	327.844	0.146	0.006	25.573	9306
4	224.218	124.230	0.071	0.004	13.383	9306
5	158.724	60.447	0.048	0.004	9.474	9306
6	117.592	23.057	0.154	0.003	7.019	9306
7	92.648	5.494	0.021	0.001	5.530	9306

## Ordering Information

Catalog No.	Description
1153001	Magic 1D gel analysis software for KETA G series, single user only
1153002	Magic 1D gel analysis software for KETA G series, three user keys
1153005	Magic Chemi software package for KETA C series, single user key only
1153006	Magic Chemi software package for KETA C series, three user keys
1153008	Magic PLUS for KETA M series, single user only
1153009	Magic PLUS for KETA M series, three user keys
1153010	Magic PLUS GLP/GMP software, single user key
1153011	Prodigy SameSpots 2D software package (manual alignment)
1153012	Progenesis SameSpots 2D software package (auto alignment)
1153013	Fingerprinting, RFLP, VNTR dendrogram package
1153021	Magic Chemi Basic upgrade to Magic Chemi Standard software package (For KETA C only)
1153022	Magic Chemi Junior upgrade to Magic Chemi Basic (for KETA C junior only)
1144001	Dolphin-1D software

\*Computer requirement: CPU 2.6 GHz, RAM 1.0G, MS Windows 10 English version, at least 4 USB ports for imaging systems or above.

# Software Functionality

Instrument		KETA S	Dolphin Doc-Plus	KETA GLX	KETA C Jr.	KETA C	KETA CLX	KETA MLX
Software		Band Tool	Dolphin 1D	Magic 1D	Magic Chemi			Magic Plus
Edition		Standard	Standard	Standard	Junior	Basic	Standard	Standard
Action	Functions/tools							
Capture	Lens Control	-	Manual	Software	Manual	Manual	Manual	Software
	Genius Capture Mode	-	-	•	•	•	•	•
	Smart Tray	-	-	-	-	-	-	•
	Binning	High Resolution	-	-	•	•	•	•
		Normal	-	•	•	•	•	•
		High Sensitivity	-	-	-	•	•	•
		Ultra-High Sensitivity	-	-	-	•	•	•
	Manual Capture	-	•	•	•	•	•	•
	Manual Exposure Methods (Dynamic, Batch, Program)	-	-	-	•	•	•	•
	Blend Marker	-	-	-	•	•	•	•
	Marker Coloring	-	-	-	•	•	•	•
	Pixel Saturation Display	-	•	•	•	•	•	•
	Auto Capture/Auto Exposure	•	•	•	-	•	•	•
	Auto Quant Capture/Auto Quant Exposure	-	-	-	-	•	•	•
Explore	Explore image in backup folders	-	•	•	•	•	•	•
	Compare images	-	•	•	•	•	•	•
Edit	Image Display (crop, rotate, display adjust, etc.)	•	•	•	•	•	•	•
	Image Edit (text, line, distance measure, etc.)	•	•	•	•	•	•	•
Analyze	1D Gel (MW/Mass Determination)	•	•	•	-	-	•	•
	Area Density (Spot Density Calculation)	-	•	•	-	-	•	•
	Colony Counting	-	•	•	-	-	-	•
	Microtiter Plate Assay	-	•	•	-	-	-	•
	Data Export	•	•	•	-	-	-	•
Security	Report Printout	-	-	-	-	-	•	•
	User Management (User Login)	-	-	-	-	•	•	•

Wealtec Corp.  
1885 Meadowvale Way,  
Sparks, NV 89431, USA  
Tel: +1-775-351-2066 Fax: +1-775-351-2077  
E-Mail: sales@wealtec.com

Wealtec Bioscience Co., Ltd.  
27F., No.29-1, Sec. 2, Zhongzheng E. Rd.,  
Danshui Dist., New Taipei City 251, Taiwan  
Tel: +886-2-8809-8587 Fax: +886-2-8809-8589  
Web-site: <http://www.wealtec.com>

