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 1DX, Magic MP, Magic Blot, Magic Blot C, 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 1DX for gel documentation KETA GLX II, Magic Blot C dedicated to chemiluminescent detection for KETA M and KETA ME, Magic Blot dedicated to chemiluminescent and fluorescent detection for KETA ML, Magic MP is the package of both Magic 1DX and Magic Blot functions for KETA MLX II.

Magic 1DX Package

This software is integrated with the genius capture mode (GCM) function which allows user to preset and save capture parameter to recall by one click. Adapted with the Smart Tray Technique, when push in sample tray into darkroom, capturing mode will switch to correct capturing mode automatically, the exposure parameters can be recalled or edit. by one click. The GCM function will get reliable result. Image will be auto saved by every exposure at three independent files. The built-in darkroom calibration, camera shading correction, distortion correction, flat frame correction, brightness / contrast, image profiling, blending, background subtraction, provides whole visual area imaging at the same level. In addition,1D analyze functions molecular weight and mass determination, colony counting, microtiter plate assay, and spot density calculation also included.

Magic 1DX 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.
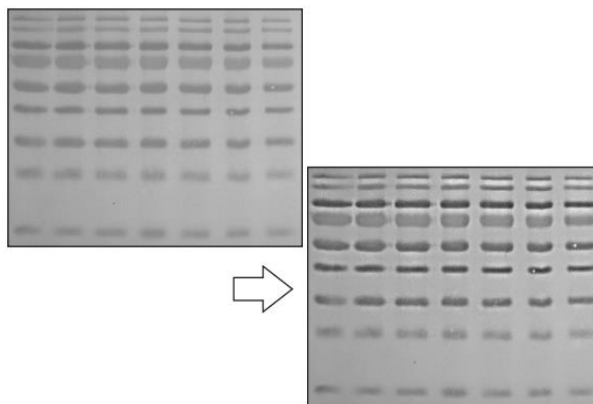
Genius Capture Mode

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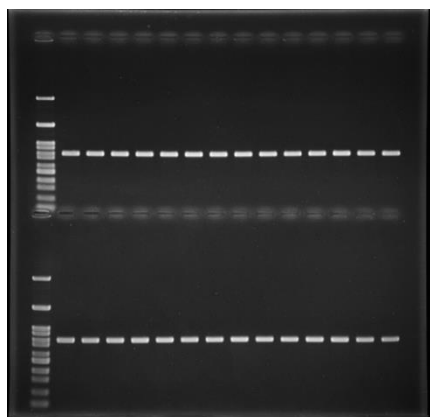
EtBr stained DNA agarose gel

Deconvolution

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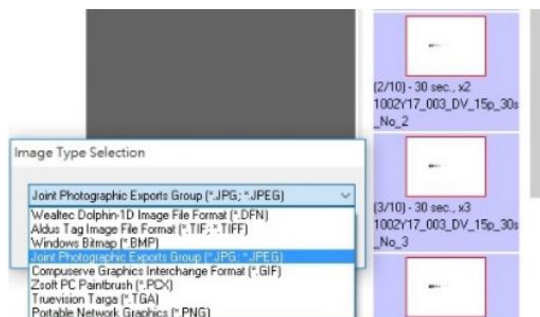

Coded Sample Tray

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

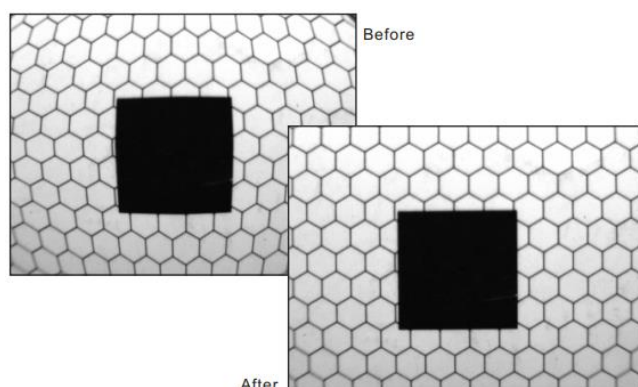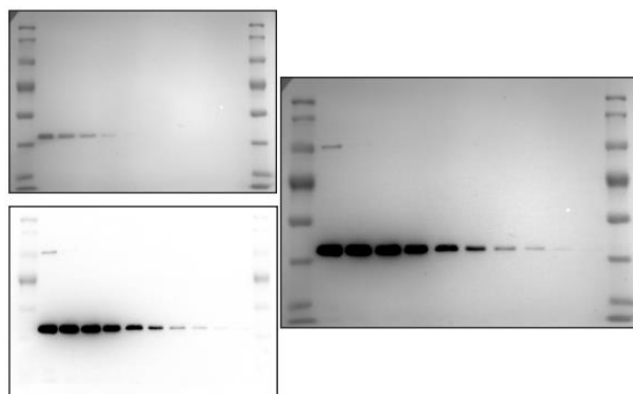To correct optics radial distortion by Distortion Correction function.

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
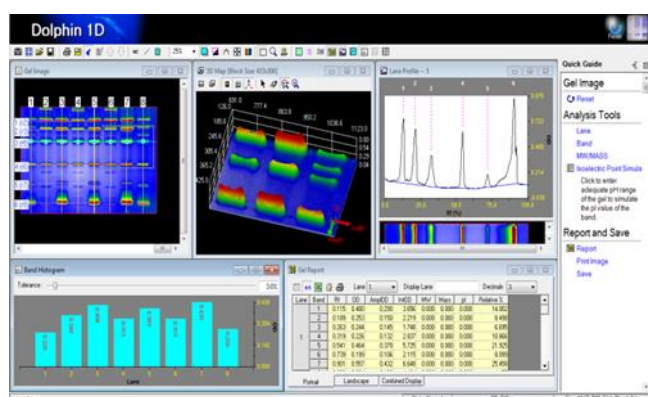
Band Tool

Powerful Analysis Functions

Spot Density Calculation

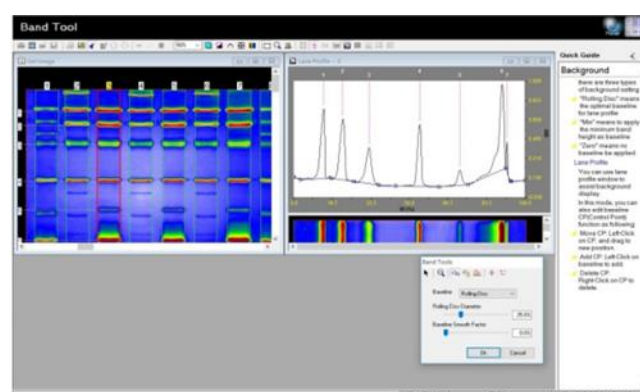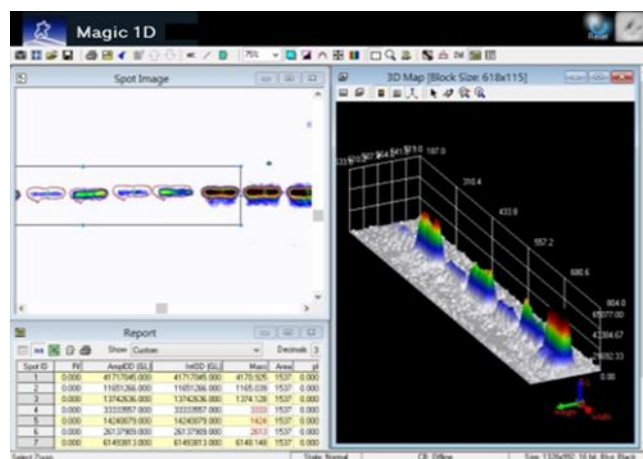Spot densitometry analysis is for analyzing 2D gel and Western Blot image. Its irregular spot shape selection and similar spot marking function enables fast spot marking process. Using typical protein standards, the unknown sample can be calculated within seconds.
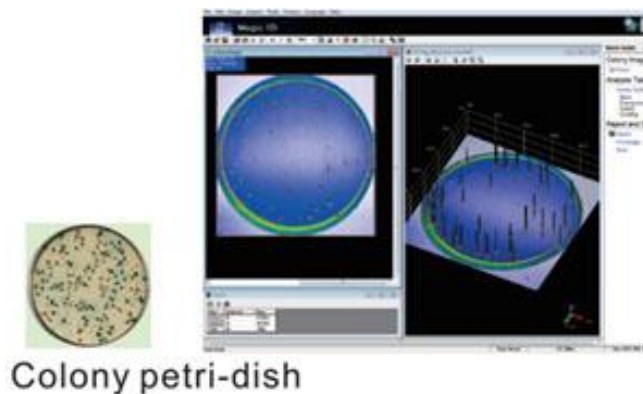

Microtiter Plate Imaging

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.
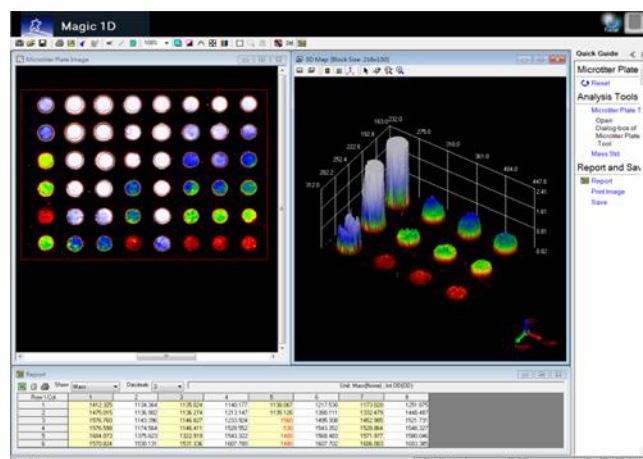
Colony Counting

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.

Magic Software Package

The brand-new Magic package 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 package 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.

*Magic Blot C dedicate on Chemiluminescence and analyze 1D function and Auto / Auto Quant Capture are all included.

*Magic Blot with both Chemiluminescence /Fluorescent, 1 D analyze function and Auto / Auto Quant Capture are all included.

Marker Coloring
Apply the color of your choice to the marker image.
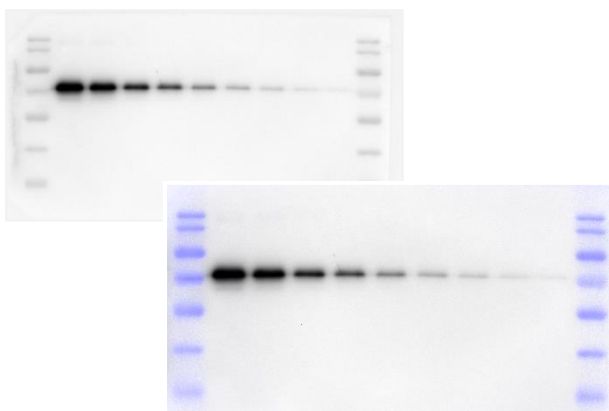
Marker Blending
Automatically blend the marker image with the sample image and generates a combine image.
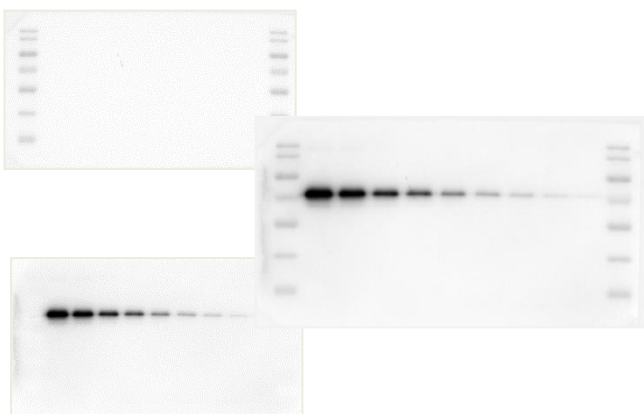
Capture Mode Selection
Select Auto or Auto Quant Capture or Manual Capture to access more sample exposure method to capture your sample.
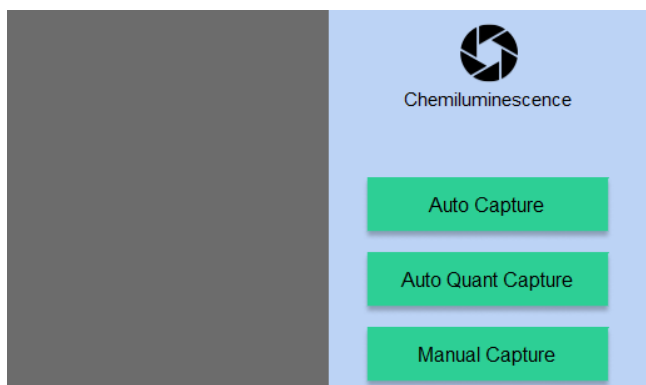
Image Display Adjustment
Control the parameters for the image displayed in the software. Default presents the best image quality for your sample.
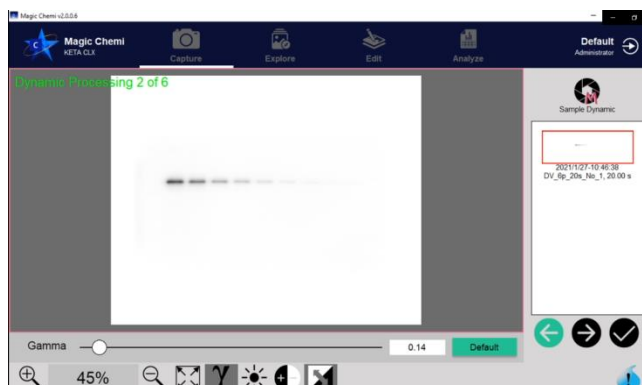
Imaging Binning

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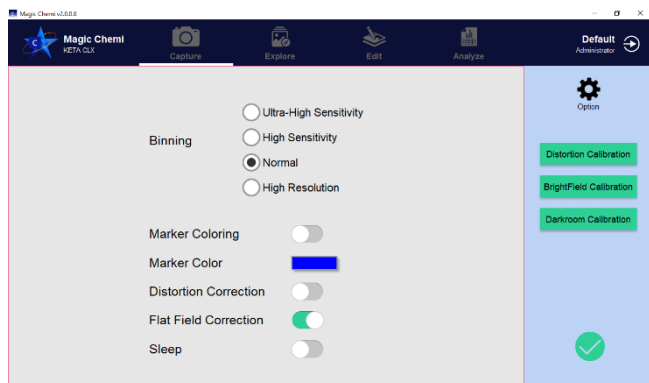
Saturation Warning

Display the saturated pixel on the image for quantitative analysis.
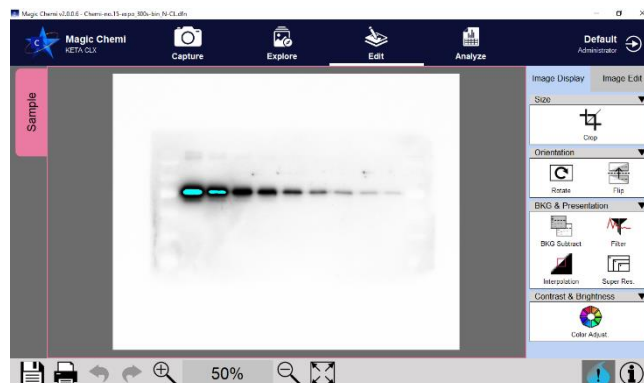
Sample Exposure Method

Dynamic

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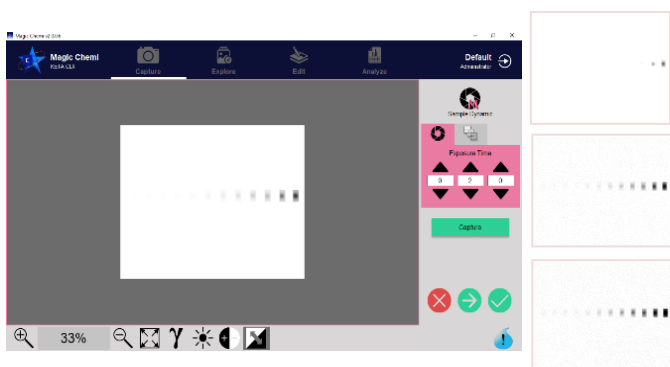
Batch

Capture a set of images without accumulating the signal.
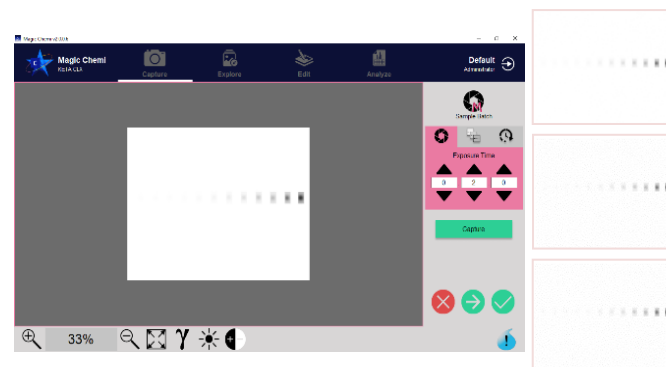
Program

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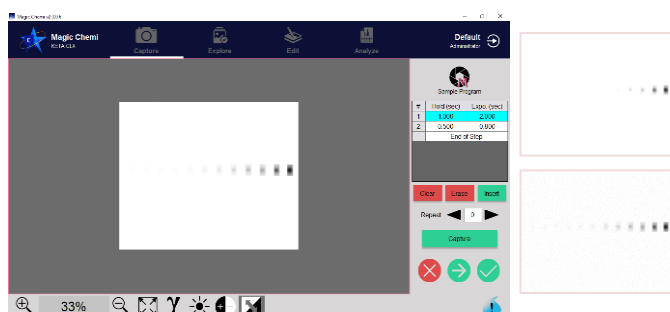
Region of Interest (ROI)

Define a region of interest and use Auto Exposure to estimate a more accurate exposure time for the region.
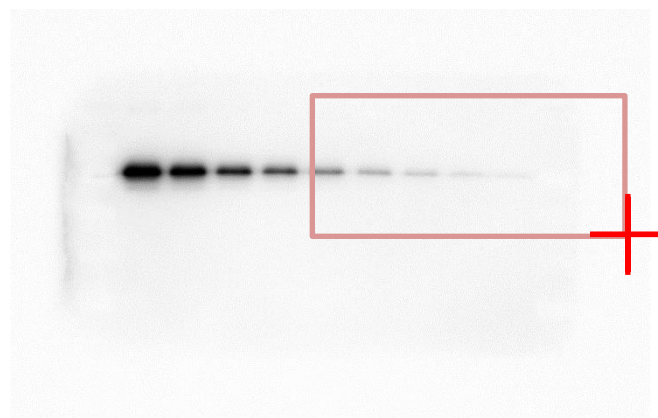
Personalized Data Print-Out

Print image data along with its image information and analysis report

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

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	IKC2012L03C2.1	Software Version	2.0.0.4

Image Information

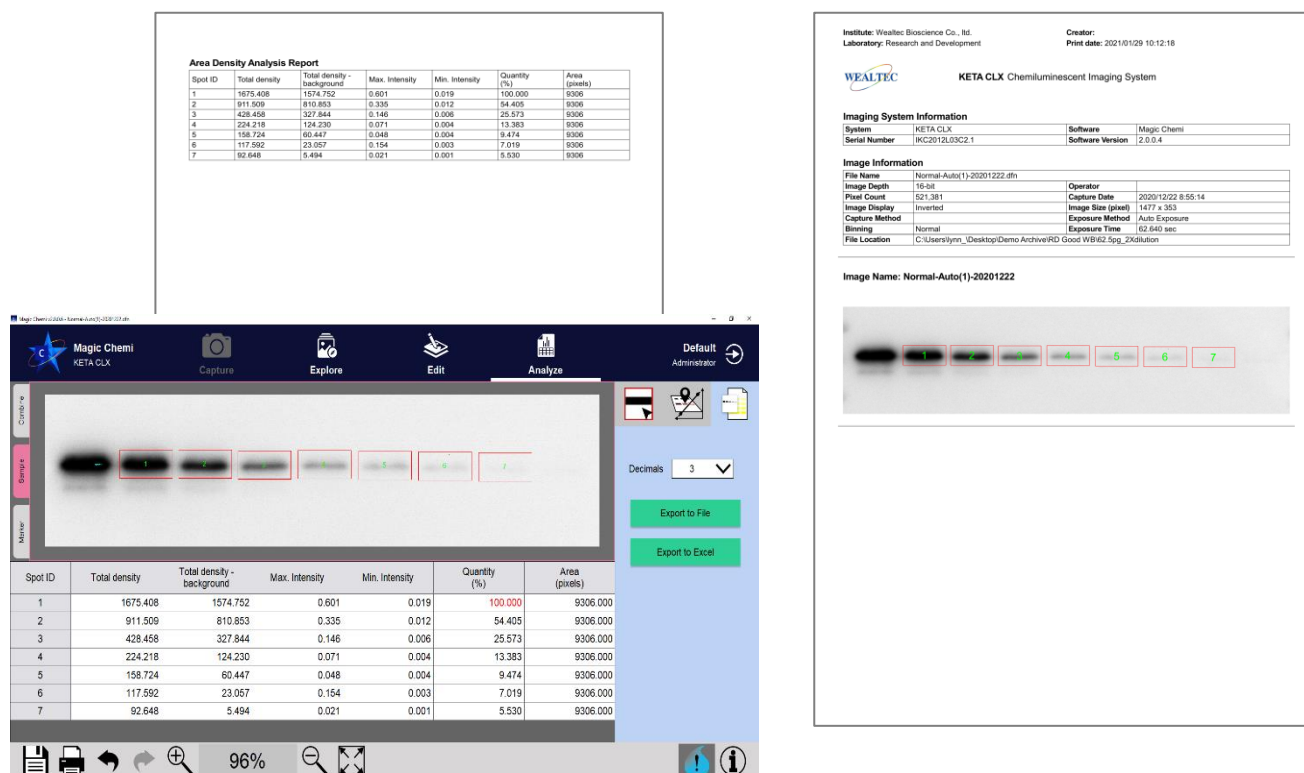| File Name	Normal-Auto(1)-20201222.dfn		
Image Depth	16-bit	Operator	
Pixel Count	521,381	Capture Date	2020/12/22 8:55:14
Image Display	Inverted	Image Size (pixel)	1477 x 353
Capture Method		Exposure Method	Auto Exposure
Binning	Normal	Exposure Time	62.640 sec
File Location	C:\Users\lynn_\Desktop\Demo Archive\RD Good WB\62.5pg_2Xdilution		

Image Name: Normal-Auto(1)-20201222

Magic Chemi — KETA CLX software screenshot

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	9306.000
2	911.509	810.853	0.335	0.012	54.405	9306.000
3	428.458	327.844	0.146	0.006	25.573	9306.000
4	224.218	124.230	0.071	0.004	13.383	9306.000
5	158.724	60.447	0.048	0.004	9.474	9306.000
6	117.592	23.057	0.154	0.003	7.019	9306.000
7	92.648	5.494	0.021	0.001	5.530	9306.000

Decimals: 3   Export to File   Export to Excel   96%

Ordering Information

Catalog No.	Description
1144001	Dolphin 1D software for Dolphin Doc Plus
1147101	Band Tool software for KETA S
1153021	Magic 1DX gel analysis software for KETA GLX II, single user key only
1153022	Magic 1DX gel analysis software for KETA GLX II, three user keys
1153003	Magic 1DX GLP/GMP gel analysis software, single user key only
1153035	Magic Blot C software for KETA M/KETA ME, single user key only
1153036	Magic Blot C software for KETA M/KETA ME, three user keys
1153037	Magic Blot software for KETA ML, single user key only
1153038	Magic Blot software for KETA ML, three user keys
1155011	Upgrade package KETA M to ML includes Epi light, software package and filter set.
1153039	Magic MP software for KETA MLX II, single user key only
1153040	Magic MP software for KETA MLX II, three user keys
1153009	Magic MP GLP/GMP gel analysis software, single user key only
1153011	Prodigy SameSpots 2D software package (manual alignment)
1153012	Progenesis SameSpots 2D software package (auto alignment)
1153013	Fingerprinting,RFLP, VNTR dendrogram package

*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

Model	KETA ME	KETA M	KETA ML	KETA MLX II
Software	Magic Bloc C	Magic Blot C	Magic Blot	Magic MP
manual lens adjustment	●	●	●	●
auto-focus Lens Adjust	option	●	●	●
12" LCD Display & Control	●	●	●	●
capture Mode auto-switch	●	●	●	●
Darkroom calibration	●	●	●	●
Operator Tracking	N/A	●	●	●
Image auto-save	●	●	●	●
Result record searching	●	●	●	●
Auto capture exposure	●	●	●	●
Auto quant exposure	●	●	●	●
Dyna View exposure	●	●	●	●
Batch Capture	●	●	●	●
Programing exposure	●	●	●	●
Chemiluminescence	●	●	●	●
Fluorescence	N/A	option	●	●
Image enhancement	●	●	●	●
1D capability	●	●	●	●
Quantitation	●	●	●	●
Report Generation	●	●	●	●
Blot sample tray ID	N/A	●	●	●
UV transilluminator ID	N/A	N/A	N/A	●
B/W transilluminator ID	option	option	●	●

Model	KETA S	Dolphin Doc Plus	KETA GLX II
Software	Band Tool	Dolphin 1D	Magic 1DX
Auto exposure	●	●	●
Manual exposure	●	●	●
LCD controlled	●	Laptop or PC	●
UV safety interlock	●	●	●
Programing exposure	●	●	●
Quantitation	●	●	●
Report generation	PC only	●	●

** The Spec is subject to change without prior notice