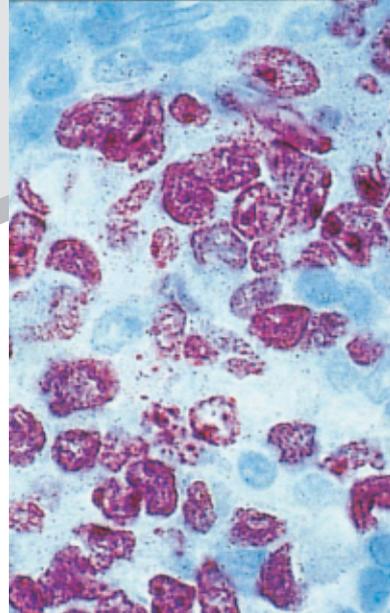
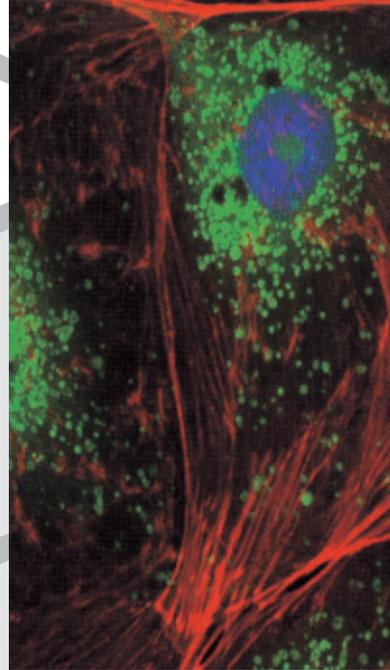
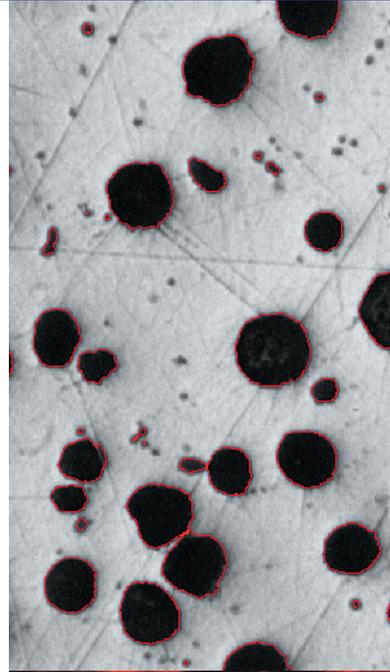


Measuring and Analyzing with Ease

Image processing, measurement
and analysis software.

Features a 32-bit / 64-bit COM-based
application for MS Windows which is easily
expanded through plug-in components.





The iSolution family of software helps you keep pace with today's rapidly changing digital technology. This exceptional software technology and leading image analysis tool will streamline image capture, measurement and enhancement, while improving the accuracy of your results. All versions combine revolutionary measurement and analysis technology with an exceptional, user-friendly interface. Become an expert in image analysis and optimize your work environment with this imaging software suite.

iSolution DT:

IMT's premium software program includes all of the functions. Customized modules are also available.

i-Solution:

This series is ideal for automatic image analysis.

iSolution Chameleon:

Designed for advanced image processing and enhancement. Manual measurement and simple automatic image analysis are also available.

iSolution Lite:

The perfect solution for manual measurement, including moderate image processing functions.

Image Acquisition

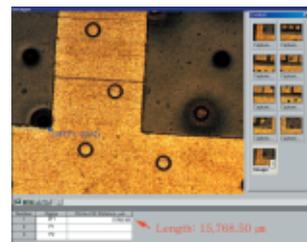
- i-Solution family of software is designed to receive images directly from various hardware sources. Keeping in tune with today's rapidly changing digital camera technology, you can directly control digital cameras. IMT software also supports TWAIN and WDM Drivers along with a wide variety of frame grabbers and i-LINK from Sony. The Time Lapse Capture tool offers accurate time interval analysis for video production for both analog and digital cameras. Movie recordings can be saved in AVI, MPG, MPEG, and MOV file formats. The time is also captured during recording.

Live Measurement

- Measuring and analyzing high volumes of images can take a long time. With live measurement you don't need to capture images in order to perform measurements. This will allow you to measure, analyze, sort and manage image statistics all from a Live Preview window. In addition, you can import measured data, images, statistical tables and diagrams into MS Excel in real time. You can perform these high-speed live measurements using both CCD and high resolution digital cameras. Crosshair generation and grid mask on the live preview window according to the calibrated scale are also available.

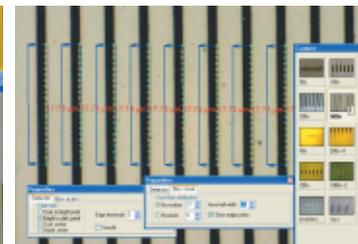
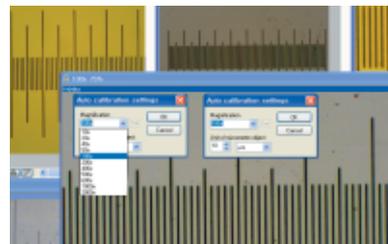
Large Size Object Measurement

- Until now, users could only measure images within the Field of View (FOV). To measure outside the FOV various measurement stages (including linear scale) were needed. The iSolution DT Image Analyzer overcomes this limitation and offers new, advanced tools for image measurement. The Image Analyzer software tracks an objects movements within the image at high-speeds, then uses the results to automatically extrapolate the distance between the two objects. Expensive, time-consuming measurement stages previously used to measure samples exceeding the full screen size are no longer required. IMT (Image & Microscope Technology) has patent in this technology.



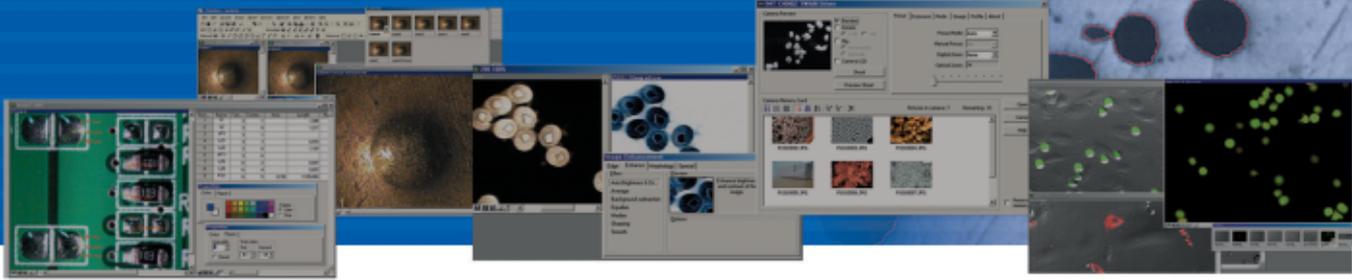
Auto Calibration

- Typically, image analyzers require a calibration process. IMT software has an Auto Calibration function that eliminates this inconvenience while enhancing measurement precision, reliability and consistency. When capturing the calibration scale image the software automatically reads the scale and calculates the correct length of the scale image. In addition, you can use this function directly in the Live Preview Window, no image captures are required. This efficient, user-friendly feature streamlines work, while boosting the accuracy and consistency of your data.



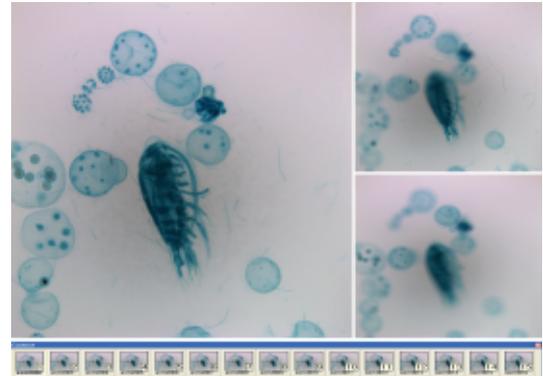
Measurement

- IMT software features versatile measurement tools for measuring lengths, areas, and angles and can auto detect an object's outline and then make specified measurements. The software is equipped with all the measurement functions you will ever need, including 3-point circle functionality, N-point circle measurement functionality, parallel line distance measurement, perpendicular distance measurement, object distance measurement, as well as auto object outline trace. In addition, a zoom-in window can be used to determine the accurate measuring point of an object. Once you've measured a specimen, you can easily export all of the images, measurement data and statistics to an Excel file.



Microscope Focus Enhancement

- Samples with curves or of varying heights are difficult to bring into focus under highly magnified conditions. IMT software combines many images using different levels of focus to provide one seamless image. This function leaves no trace of the composites and can even create perfectly focused images from Stereo Microscopes. In the case of Stereo Microscopes, two lenses positioned at different degree angles are used for observation. To set the focus for the camera image, the microscope's Z-axis needs to be manipulated and partially focused images are then taken continuously. This results in slightly crossed images. IMT software compensates for this by auto-correcting its location, resulting in a perfectly focused image every time.



Auto Edge Detector

- iSolution DT automatically detects the edge of any object being measured, including lines, points, circles, boxes, and arcs. iSolution DT's Auto-Detect feature simplifies the process of determining the beginning and end of the object being measured, further streamlining the task of image measurement and analysis.

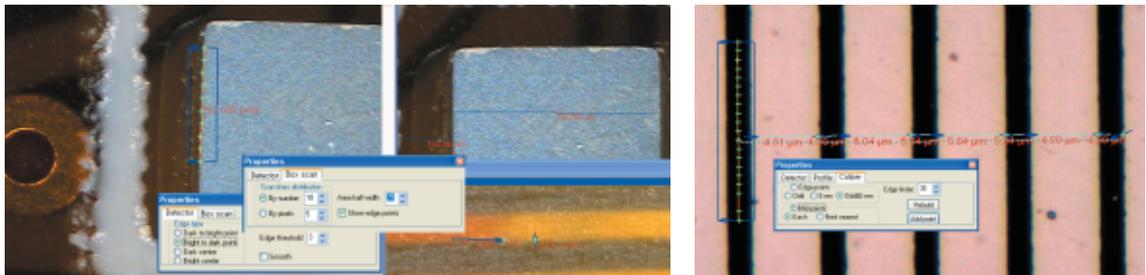
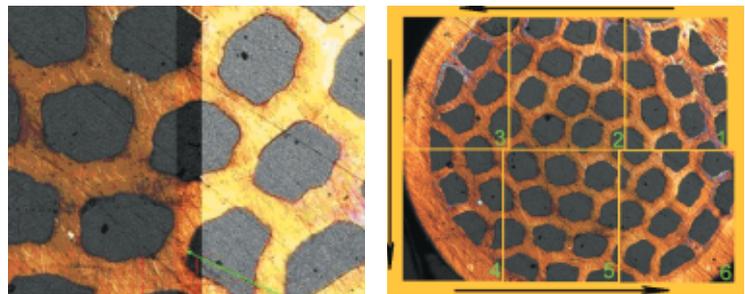


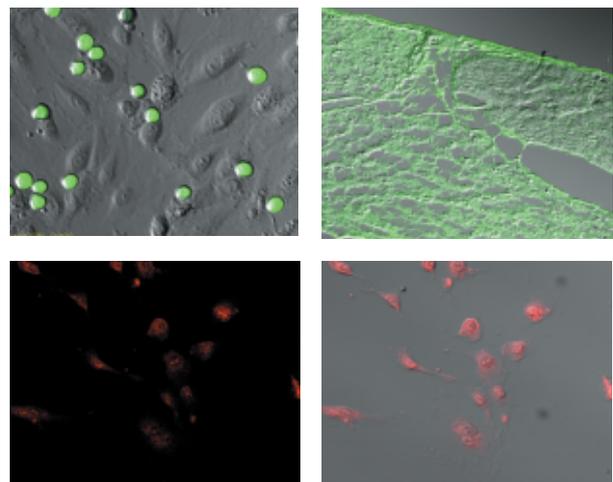
Image Stitching

- With IMT software you can create auto composites of continuously captured images in order to minimize the reduction in the FOV that typically comes with increased magnification. Combined images display no trace of former edges, and any irregularities in the brightness of the images are automatically corrected. Unlike other image analysis software packages, the i-Solution series automatically configures the various sizes of combined images in order to eliminate any discrepancies in the composite image size, and allows you to easily dissect magnified images without sacrificing resolution.



Fluorescent Image Composition

- iSolution DT, iSolution Chameleon, and i-Solution can create a perfect composite image of fluorescent images captured through mono channel filters and features a variety of methods, including Add, Mask, and Mean. This allows composites of colour images to create multi-channel image effects in addition to black and white images. With its exceptional quality, flexibility and speed, iSolution DT, iSolution Chameleon, and i-Solution's image composite technology for mono channel fluorescent filters is sure to impress even the most demanding users.





Movie File Production

- All versions feature a Time Lapse Capture function that supports CCD and digital cameras using TIF, BMP and JPG file formats. The Time Lapse Capture function also includes an Auto Save feature. You can save video movie recordings in AVI, MPG, MPEG, and MOV formats. When recording video, the time of the image is also captured so you can recheck the capture time when reproducing the video image.

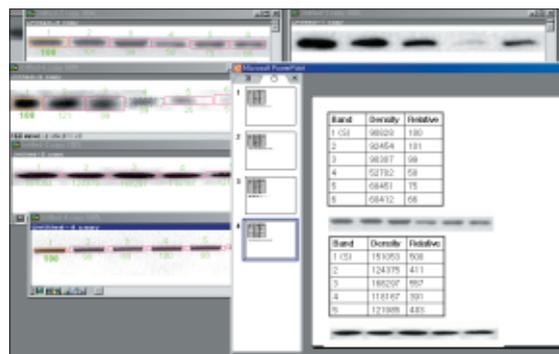


Count and Size

- With iSolution DT and i-Solution you can auto-detect specific objects within an image in order to find the total number of objects in the image and extract the data. By dragging the mouse, you can detect objects and generate a wide variety of data. With iSolution DT and i-Solution, the time-consuming Count function has been refined to a simple mouse click, with unparalleled speed and accuracy for data output. iSolution DT and i-Solution offer a variety of measurement tools that allow you to easily measure an object's area and perimeter. iSolution DT and i-Solution's measurement tools include equal circle diameter, ribbon length, line length, Circle SF and Ellipse SF. In addition, iSolution DT and i-Solution feature automatic output of statistics, sorting of measured data objects, creation of data tables for images, auto revision of extracted objects, auto separation of composite objects, auto image and data import to Excel.

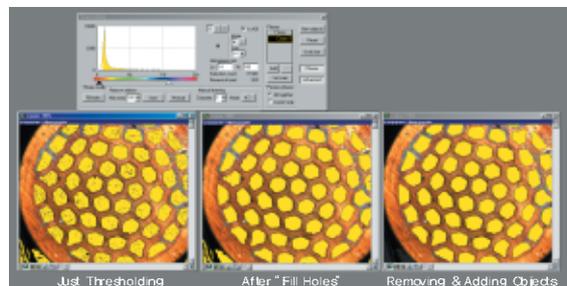
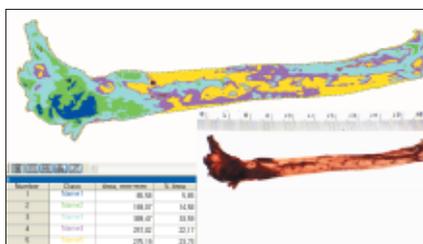
Densitometry

- iSolution DT and i-solution automatically calculates Optical Density (OD) by absolute and relative figures, semiautomatically, or manually based on user configuration. Images and OD figures can then be exported directly to an MS PowerPoint file.



Phase Analysis & Advanced Threshold

- With iSolution DT you can conduct phase analysis on an entire image or within a specified Region of Interest (ROI) and you can sort images using Gray Scale, RGB, HSB or YUV. In addition, you can automatically or manually manipulate images using Fill Holes and a Removing & Adding Objects tool during the thresholding stage of phase analysis. Because you can manipulate images during the thresholding stage rather than after it, your phase analysis will be more accurate. All results of phase analysis are displayed simultaneously as statistical data and in chart form. You can also export images, object data, statistical data, and charts directly to an Excel file.



Automated Stage Control and Image Stitching(Perfect Auto Montage)

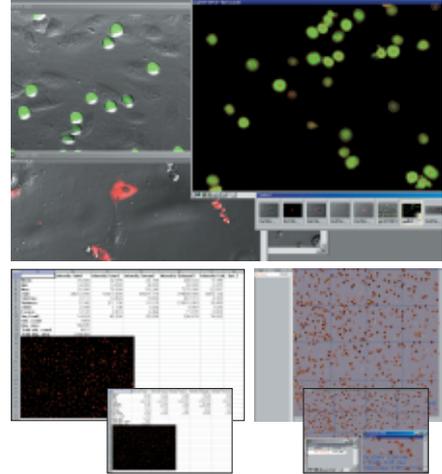
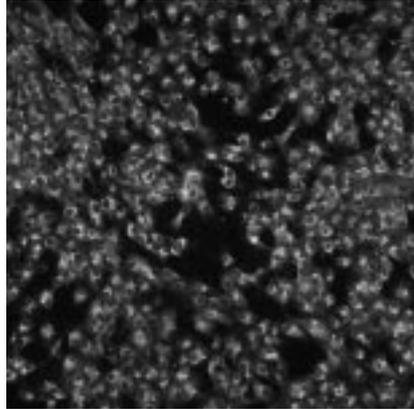
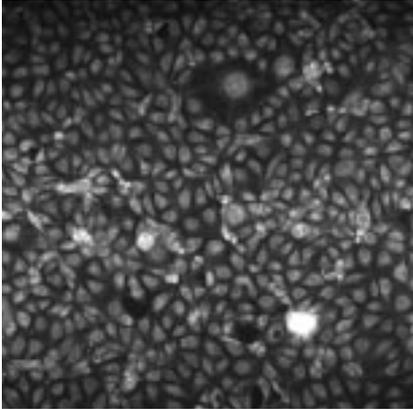
- iSolution DT Auto uses the Automated Stage function to transform partial images into high resolution automatically stitched images. This tool automatically adjusts the focus whenever the stage moves. However, image lighting might not be entirely uniform due to optical microscope specifications. When lighting is lopsided or biased to the middle, iSolution DT Auto automatically revises it and applies equal lighting to the image. iSolution DT Auto can also perform image stitching on empty images that contain no actual individual objects.





Cell Count and Intensity Analysis

- iSolution DT and i-Solution provide automatic cell number counting per unit area.

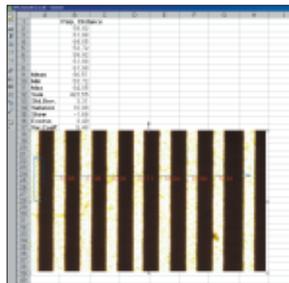


Thickness Measurement (Layer Depth Measurement)

- Average thickness is measured automatically by defining box. The number of scan lines can be defined by typing the number of the lines or pixels.

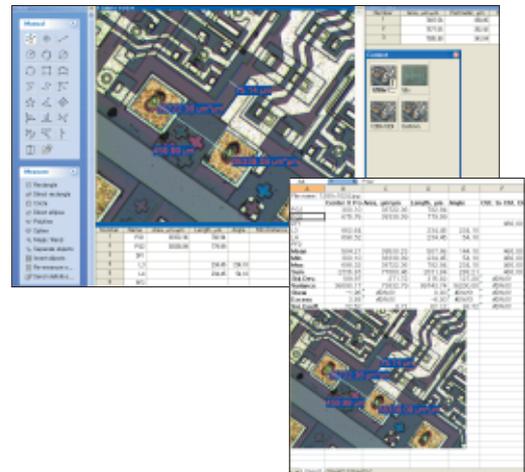
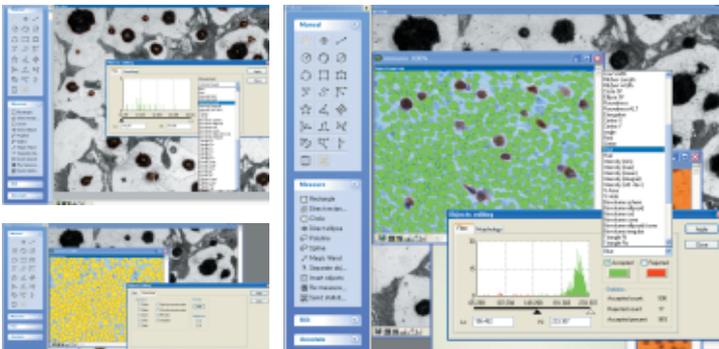
Caliper

- The Auto Edge Detector function automatically identifies lines and points and calculates each distance. This is a useful function for measuring objects with similar patterns, and the user-friendly design makes it simple to use.



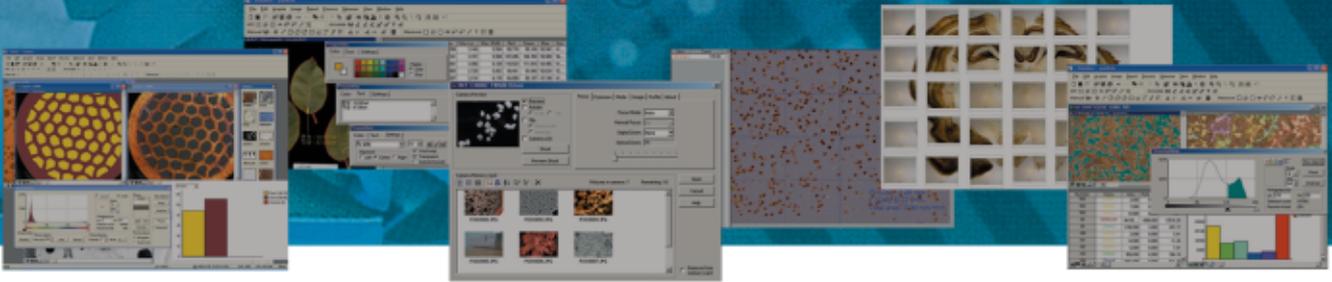
Unique Measurement Tools - Including Various Perpendicular Distance Measurements

- A unique measuring tool allows the measurement of straight and curved lines, diameters, radius, distances, area, perpendicular distance, and much more. From the measuring point, the distance is always calculated perpendicularly making the measurement very accurate.



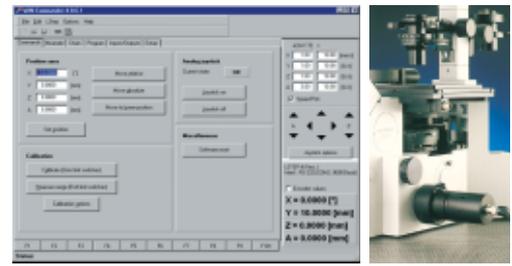
Objects Editing

- The i-Solution & iSolution DT provide a very special function for object counting. The function of counting after separating objects from images using the difference of contrast or color has been easily found. Besides, the object which was impossible to count only by the threshold function has not been fully understood. However, the i-Solution and iSolution DT provide an elaborate functions, which enable users to extract data precisely, such as separation and editing of the attached objectives, limitation of the objects to count based on the data, re-editing of object types, and like that.



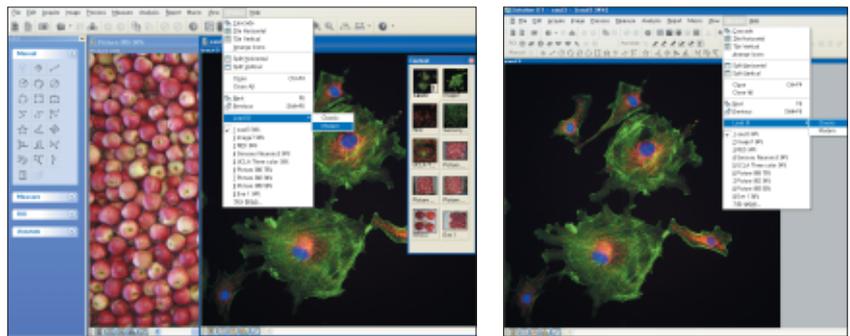
Motorized Stage Control

- iSolution DT Auto provides control function of a motorized stage. The X, Y and Z axis can be controlled in iSolution DT Auto. The Motorized Stage Control function provides continuous automatic measurement, image stitching, focus revision, automatic analysis and comparison between images.



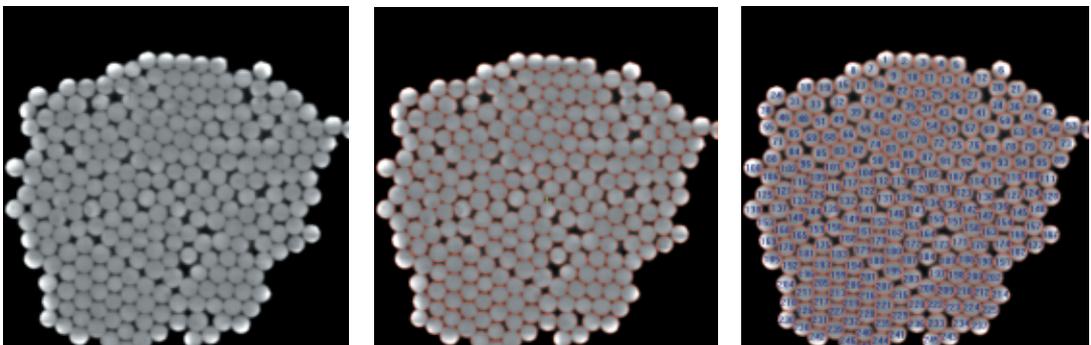
Dynamic User Interface

- The i-Solution Series provides a user-centered environment. Discarding a developer-centered software user environment, we designed it to allow users to edit the UI directly according to their own user environment. In addition, we made it for anybody to use an easily recognizable graphic environment under any surroundings with ease.



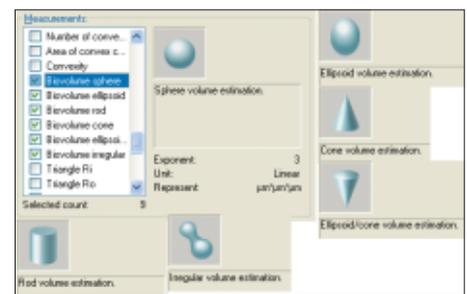
Auto segmentation

- Objects are segmented automatically by a simple mouse click.



Stereometry for Biovolume

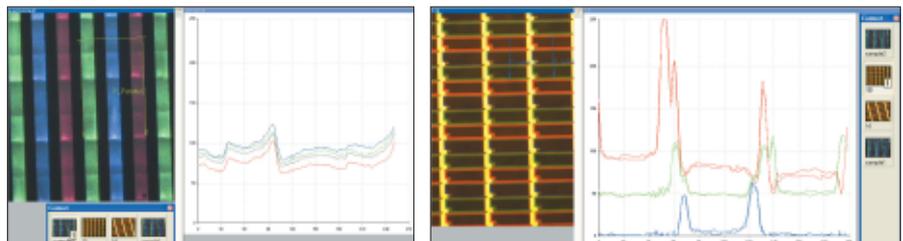
- The 3D volume of an object is calculated by using 2D measuring parameters.



Line and Box Profile

- Red, green, blue, and gray values are extracted in both profile and data.

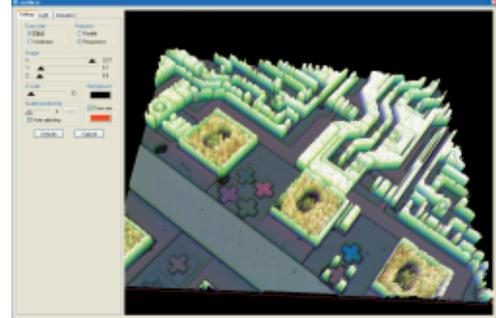
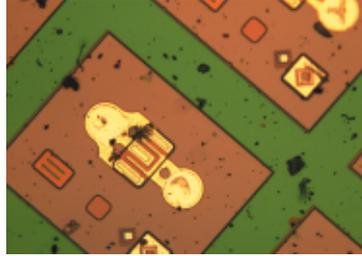
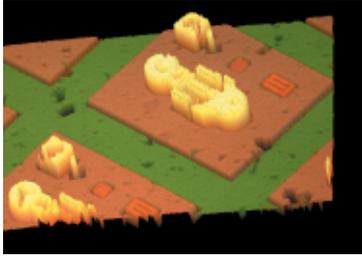
	A	B	C	D	E
1		P_Param0102	P_Param0102	P_Param0102	P_Param0102
2	Mean	74.721	82.826	86.781	95.612
3	Min	62.000	62.000	62.000	62.000
4	Max	93.000	116.000	124.000	124.000
5	Sum	10795.000	41628.000	69346.000	86899.000
6	Std.Dev.	7.984	13.261	12.165	11.306
7	Variance	63.746	176.677	147.985	127.827
8	Skew	1.377	0.429	0.222	0.333
9	Kurtosis	2.396	0.003	0.000	0.095
10	Var. Coeff.	10.685	13.633	14.018	13.089





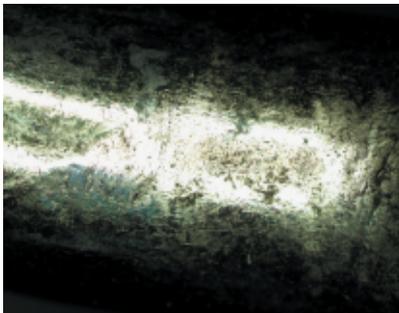
3D Visualization

- Three-dimensional pictures are created based on the brightness of normal images. This creates a better visualization of the surface through the realization of 3D images and rotating observation of 360 degrees on the XYZ axis.

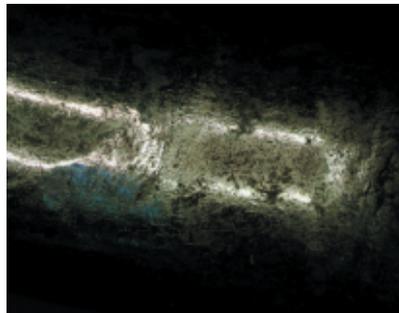


Removing the Reflected Light

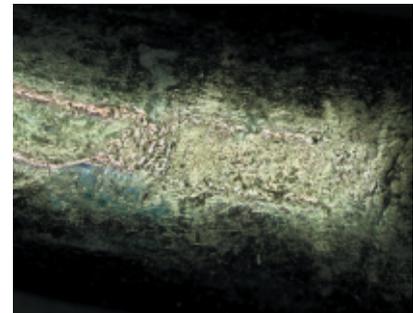
- Clear detailed images are created by removing the reflected light from a metal's surface.



Before



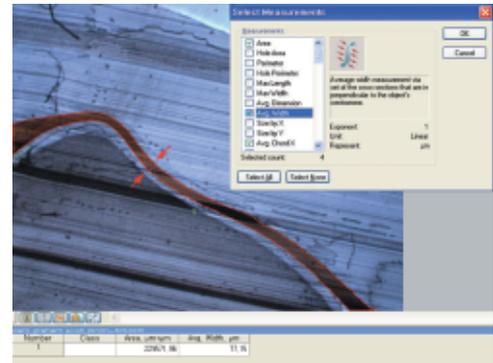
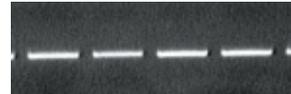
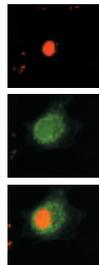
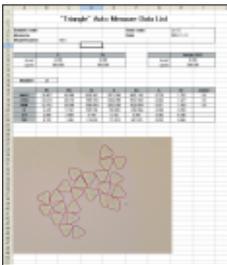
After Correction with Two Images



After Correction with Five Images

Average Width Measurement

- It gives the average width of any form of object. The cross-sections of every pixel that are in perpendicular to the object's centromere are measured.

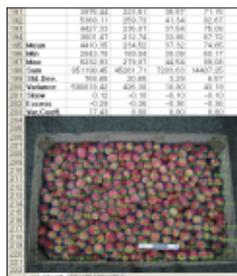


Software Enhancement and Development

- All images have their own unique attributes. It is not possible to satisfy all analysis objectives with limited options. iSolution DT can be customized to provide the most appropriate algorithm depending on the user request. A unique algorithm is created for each application.

Automatic Fruit Size Analysis

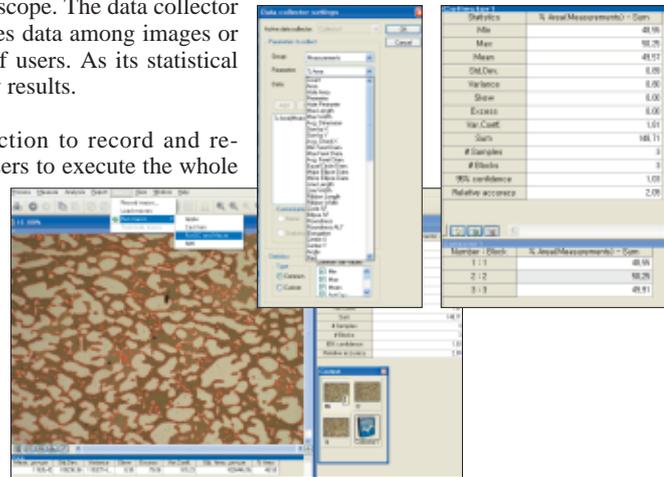
- It measures fruit size automatically.





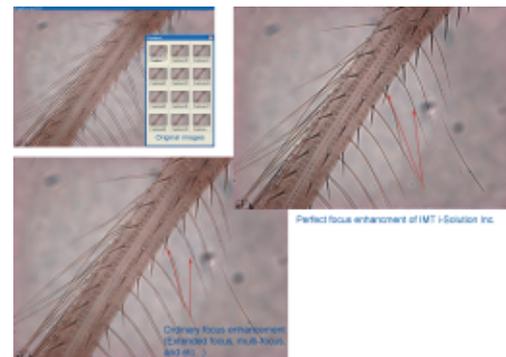
Data Collector and Macro

- The i-Solution & iSolution DT provide the data collection function among multiple images. Data on an image cannot be deemed the data for all the specimens being observed under a microscope. The data collector function solves these problems and it automatically provides data among images or after collecting the statistical data based on the requests of users. As its statistical data on the entire test pieces may add reliability to the study results.
- The i-Solution & iSolution DT provide the macro function to record and re-implement repeating works. The macro function enables users to execute the whole process at once with a single click on the mouse by recording the performance of repeating functions. Accordingly, the loss of time caused by the repeated measures and the occurrence rate of errors in the measurement may be minimized.



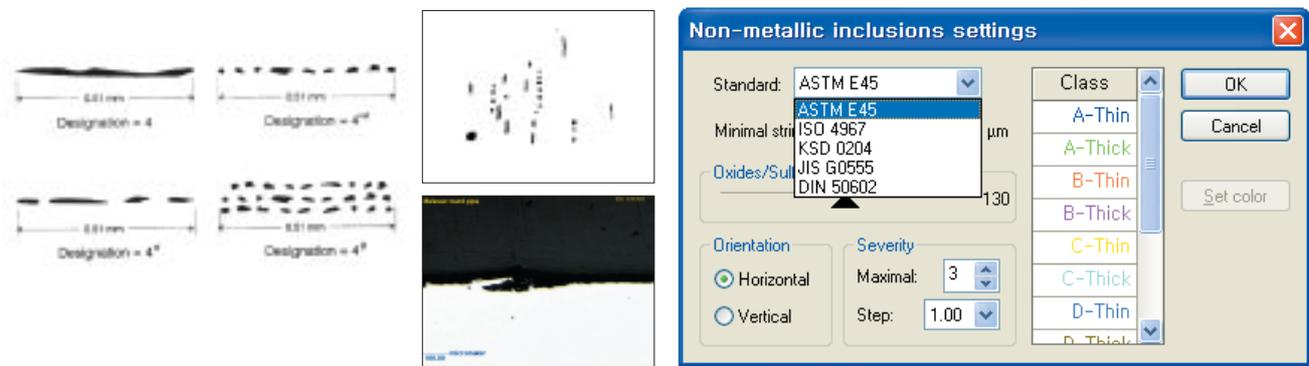
Perfect Focus Enhancement

- The i-Solution Chameleon & iSolution DT provide a function of focus compensation according to the varied microscope specifications. It's difficult to completely compensate the focus with a microscope using the transmitted lights through a general function of focus compensation. The i-Solution Chameleon and iSolution DT implement a perfect function of focus compensation irrespective of the status of lights and specimen through the reflection of understanding of the transmission microscope.



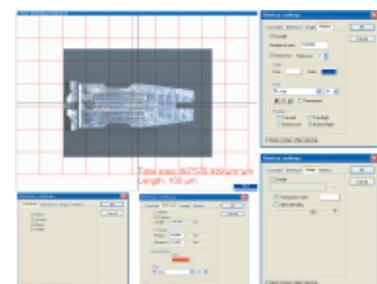
Non-metallic Inclusion Rating

- The iSolution DT is still an incessant endeavor to completely provide the whole function on the metal texture analysis. As one of the results, the analysis solution to non-metallic inclusion is unveiled now. The function is intended to determine the inclusion content of steel according to ASTM E45 (2002), ASTM E1122 (1996), DIN 50602 (1985), ISO 4967(1998), KSD 0204 (2002), JIS G0555 (2003). Two analysis approaches, Stereological measurements and JK inclusions ratings are implemented.



Overlay settings

- Overlay lines can be drawn above live image both previewed and captured. Live measurement mode supports overlays also. There are Crosshair, Grid mask, Image, and Calibration marker (Scale bar) group boxes in the settings. Any saved or captured image can be shown above live preview image. Calibration marker (Scale bar) can also be above live preview image. So each captured image can have fixed Calibration marker (Scale bar) automatically.



iSolution DT

i-Solution™

iSolution Chameleon

iSolution Lite



Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon	Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon
Acquire	●	●	●	●	View	●	●	●	●
Input Device					Zoom Tools				
<ul style="list-style-type: none"> 1) All TWAIN Support Devices 2) All WDM Support Devices 3) All i-Link from Sony Support Devices 4) Optronics digital cameras 5) Jenoptik ProgRes digital cameras 6) Nikon digital cameras 7) Lumenera digital cameras 8) Pixera digital cameras 9) Scion digital cameras 10) XLi digital cameras 11) Matrix vision mvBlueFox digital camera 12) Olympus digital cameras 13) Leica digital cameras by TWAIN 14) Carl Zeiss AxioCam digital cameras by TWAIN 15) Qimaging digital cameras 16) Pixelink digital cameras 17) Diagnostic Instruments Spot digital cameras 18) FlashBus frame grabbers 19) Matrox frame grabbers 					<ul style="list-style-type: none"> 1) Zoom In, Out, and 100% 2) Zoom In Window for More Accurate Edge Detect 3) Zoom 10% to 1600% User Defined Fit to Window or Image Status Bar Context Window to Manipulate Several Images 				
Image Capture					Edit	●	●	●	●
<ul style="list-style-type: none"> 1) Time Lapse Capture 2) Movie Recordings in AVI, MPG, MPEG, MOV 3) Crosshair Generation on Live Preview Window 4) Grid Mask on the Live Preview Window according to the Calibrated Scale 5) Measurement on Live Preview Window 					<ul style="list-style-type: none"> Undo, Redo, Copy, Paste, Paste New, Delete Delete All, Annotate, Image Information 				
Image File Format					Annotate				
<ul style="list-style-type: none"> jpg, jpeg, jpe, tif, tiff, bmp, gif, pcx, tga, mpeg, avi, mov, img, rpt, txt and etc. 					<ul style="list-style-type: none"> Line, Polyline, Spline, Rectangle, Ellipse, Text label 				
Overlay					Process				
<ul style="list-style-type: none"> 1) Crosshair 2) Grid mask 3) Image 4) Marker 					<ul style="list-style-type: none"> Filter, BCG Control, Pseudo Color 	●	●	●	●
Image	●	●	●	●	Filter				
<ul style="list-style-type: none"> Mode Change, Clone, Crop, AOI, Resize Rotate Split, Combine Color Plane 					<ul style="list-style-type: none"> 1) Edge : Gradient, Kirsch, Laplas, Sobel, Variance 2) Enhance : Auto Brightness and Contrast, Average, Background Correction, Equalize, Median, Sharping, Smooth 3) Morphology: Clean, Close, Dilate, Erode Fill Holes, Open, Split 4) Special : Emboss, Negative 	●	●	●	●
Image Mode Change					Focus Enhancement (Multi Focus)				
<ul style="list-style-type: none"> Grayscale, RGB, HSB, YUV, 8bit and 16bit per Channel AOI Control 1) Rectangle, Arbitrary Rectangle, Ellipse, Arbitrary Ellipse, Polygon, Spline Shape, Magic Wand 2) Copy, Paste, Crop AOI 					<ul style="list-style-type: none"> 1) Combine Individual Partly Focused Images into a Single In-Focus Composite Image 2) Combine without Trace 3) Auto Compensating Displaced Images from Stereo Microscopes 	●	●	●	●
Combine					Image Stitching				
<ul style="list-style-type: none"> 1) Split Color Plane RGB, HSB, YUV 2) Combine Color Plane RGB, HSB, YUV 3) Combine Color Images directly by Mean, RGB, Fluorescence Mask and Add 					<ul style="list-style-type: none"> 1) Perfect Auto Montage. Automatic Images Stitching by Automated Microscope Stage. 2) Auto and Manual Image Stitching 3) Stitching without Trace and Correcting any Irregularities in Brightness 	●			
Sequence Control					Calibration	●	●	●	●
<ul style="list-style-type: none"> 1) Play Forward, Backward 2) Making Movie File(mpg, avi, mov) with Still Images 3) Split Single Image from Sequence File 					<ul style="list-style-type: none"> 1) Full Auto Calibration 2) Semi-Auto Calibration 3) Special Calibration X and Y 4) Insert Calibration Marker 5) Split Calibration Marker 4 and 16 6) Save and Open Calibration 				
					Large Size Object Measurement	●			
					<ul style="list-style-type: none"> 1) Auto Objects Movement Tracking 2) Semi-Auto Objects Movement Scan 3) Manual Objects Movement Scan 4) Graphic Window 5) Generation of the Secondly Measurement Data from the First Measurement Data 				
					Development	●			
					<ul style="list-style-type: none"> Customized Modules and Application 				

Technology that will rewrite the history of Image Analysis.

Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon
Auto Edge Detector	●			
<ol style="list-style-type: none"> 1) Auto Line Edge Detector 2) Auto Point Detector 3) Auto Circle and Arc Edge Detector 4) Auto Angle Detector 				
Grid Mark	●	●	●	●
<ol style="list-style-type: none"> 1) Grid Mark on the Live Preview Window according to the Calibrated Value 2) Scale Marker on the Live Preview Window 3) Grid Mark on the Captured Image according to the Calibrated Value 4) Crosshair Generation on the Live Preview Window 				
Measurement	●	●	●	●
<ol style="list-style-type: none"> 1) Point, Straight Line, Spline, Polyline, Polygon Rectangle, Circle, Best Fit Circle, Circle By 3 Points, Angle, Angle Between 2 Lines, Distance, Parallel Line Width, Lines From Common Reference Point, Perpendicular Line Length 2) Auto Tracing Objects 3) Select Tool for Edit Measurements 4) Measurement Data 5) Measurement Statistics 				
Export to Excel	●	●	●	●
<ol style="list-style-type: none"> 1) Export to Excel Gray Image Data 2) Export to Excel Overlay and Original Image Measurement Data, Statistics, and Chart 				
Save	●	●	●	●
<ol style="list-style-type: none"> 1) Saving Data with TXT File Format 2) Saving all the image and the measurement data together with img File Format 				
Report	●	●	●	●
Report Generator				
<ol style="list-style-type: none"> 1) Create Report 2) Insert Image and Data 3) Insert other OLE Objects 				
Window	●	●	●	●
Split Horizontal, Split Vertical, Cascade Tile Horizontal, Tile Vertical, Arrange icons				
Dynamic User Interface (UI)				
<ol style="list-style-type: none"> 1) Classic 2) Modern 				
Count and Size				
Auto Count Objects	●	●		●
<ol style="list-style-type: none"> 1) Auto Detect Objects 2) Edit the Counted Objects by Add, Subtract, Cut, Split, and Morphological Filters 3) Set the Measurement Range 				
Manual Objects Count	●	●		
<ol style="list-style-type: none"> 1) Rectangle, Arbitrary Rectangle, Ellipse, Arbitrary Ellipse, Polygon, Spline Shape, Magic Wand 2) Invert Objects, Separate Object 				

Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon
Measurement Parameters	●	●		
Area, Hole Area, Perimeter, Hole Perimeter, Max Length, Max Width, Average Dimension, Size by X, Size by Y, Average Chord, Min Feret Diameter, Max Feret Diameter, Average Feret Diameter, Equal Circle Diameter, Major Ellipse Diameter, Minor Ellipse Diameter, Line Length, Line Width, Ribbon Length, Ribbon Width, Circle SF, Ellipse SF, Roundness, Roundness-ALT, Elongation, Center X, Center Y, Angle, Red Color, Green Color, Blue Color, Hue, Intensity(Min), Intensity(Max), Intensity(Mean), Intensity(Integral), Intensity(Standard Deviation), %Area, %Hole, Convex Perimeter, Biovolume sphere/ ellipsoid/ rod/ cone/ irregular, Triangle Ri/ Ro/ Ai/ Ao/ C/ ER, Round Davg/ Dmax/ Dmin/ DE/ DR, Polygon Lmax/ Lin/ RD/ LR				
Measurement Data				
<ol style="list-style-type: none"> 1) Measurement Data 2) Statistics Data from all Parameters 3) Classification and Statistics for each Parameters 4) Export to Excel Original Image, Overlay image Measurement Data, Statistics, and Chart in one step 	●	●	●	●
Objects Editing	●	●		
Target objects can be sorted by more than 65 measurement parameters as well as by the simple bright and color difference.				
Data Collector and Macro	●	●		
Profile	●	●	●	●
<ol style="list-style-type: none"> 1) Straight Line 2) Polyline 3) Parallel Line 4) Select and Change 				

iSolution DT includes all the below features also.

Caliper

Phase Analysis

Densitometry

Graphite analysis in Nodular Cast Iron

(ASTM A247, ISO 945, KS D4302, JIS G5502)

Grain Size Measurement (ASTM E112)

Chart Navigator

Non-metallic Inclusion Rating Analysis (ASTM E45, ASTM E1122, ISO 4967
DIN 50602, KSD 0204, JIS G0555)

Thickness Measurement

Average Width Measurement

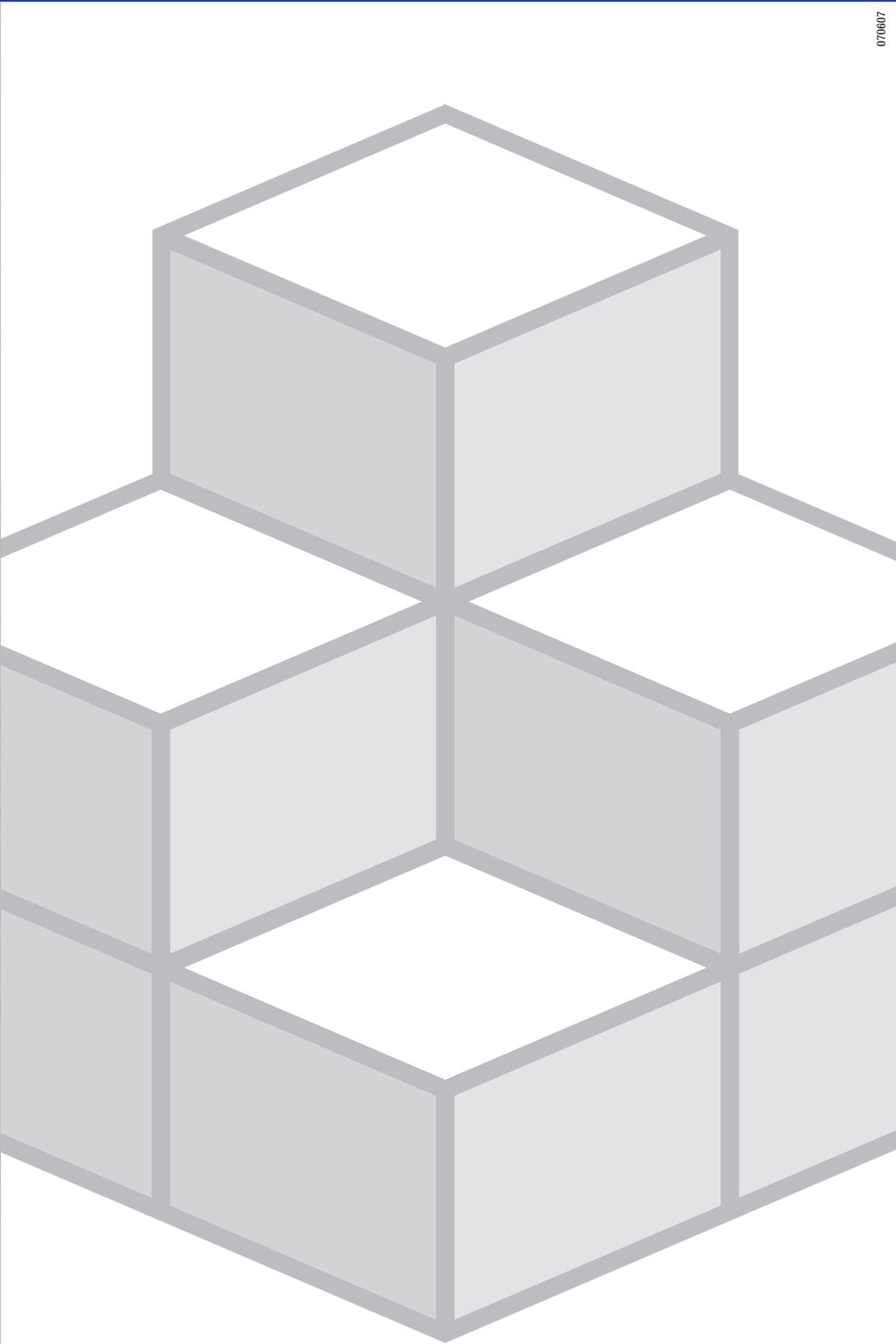
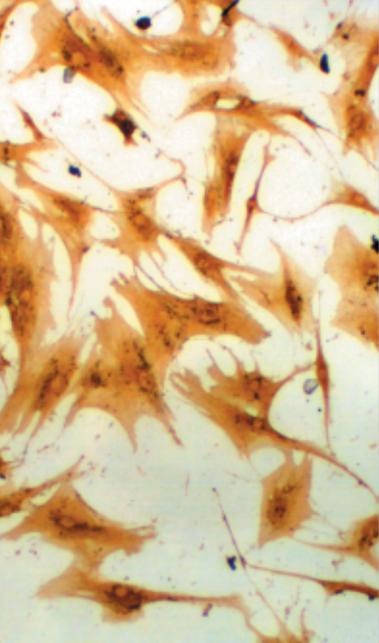
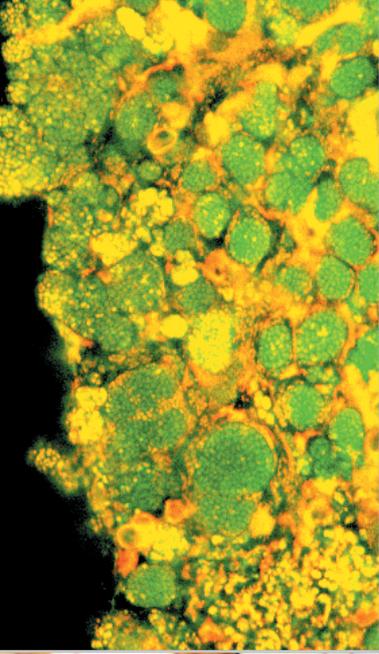
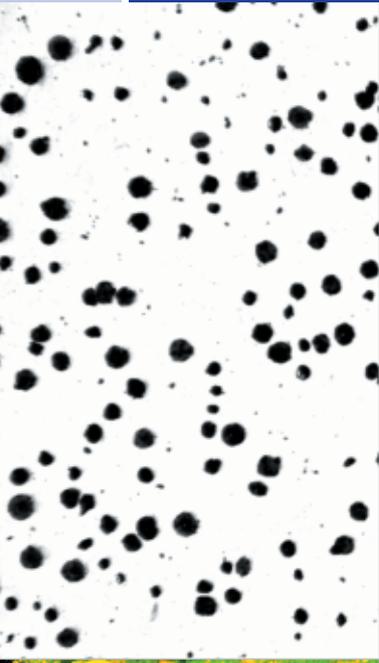
Perfect Focus Enhancement

Fruit Size Analysis

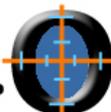
Motorized Stage Control

SDK (Software Development Kit)

iSolution DT
i-Solution™
iSolution Chameleon
iSolution Lite



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