



Karyoview® 9 - Semi-Automated Chromosome Analyzer

KARYOVIEW® - SEMI-AUTOMATED CHROMOSOME ANALYZER

UNPACKING & INSTALLATION

Karyoview® components are carefully packed in containers/boxes specifically designed for safe transportation.

Upon receipt of your system please:

1. Examine the boxes for any visible damage. Please document any damage and take pictures accordingly. Serious damage to any package/box/container should be immediately reported.
2. Move the boxes to the location where you intend to set up your system - (i.e. where you have your microscope)
3. Open the box that contains the computer and remove the contents
4. Open the box with the monitor and set it up adjacent to the microscope. We recommend that it be placed to the right, but it may depend on your particular configuration.
5. Open any other included boxes and place the respective contents where you can see them
6. Find the adapter and the camera, and with care, remove the covers for these two components. Caution should be used as dust and other particles can easily attach themselves to the lenses and may be difficult to clean.
7. Connect the camera to the adapter, screwing the camera into the adapter (in the case of most “C mount” configurations)
8. Connect the camera’s power supply to the camera, and then to a 110V outlet. If your system shipped with a surge protector, please connect all outlets to this unit, then to a 110V outlet.
9. Attach the camera and the adapter to the microscope making sure that it is safely and securely seated, with no movement observable
10. Review all included cables and using the labels on each end, connect them to the corresponding locations. Please make sure that all connections are secure, including tightening screws to connections where this is applicable.
11. All shipped components included in your shipment should now be assembled and connected.
12. Put a slide with good metaphases on the microscope and find some metaphases that are well spread and that have well defined bands.

Quick Set up:

1. Make sure that the green filter is in the microscope’s light path
2. Using the 100x objective, magnify a metaphase that you consider is of good quality
3. Turn ON the Karyoview® monitor
4. Turn ON the Karyoview® computer; it will guide the user as it automatically proceeds through different screens until it gets to the home screen for Karyoview®.
5. If you have reviewed the Karyoview® tutorial (<http://www.eljainc.com/LaboratorySolutions/LaboratorySolutions/Karyoview/KaryoviewUsersManual.html>) and are adept at conventional analysis of chromosomes, you are now ready to use the system.
6. We recommend that you practice with some of the metaphases that are included with the system. Make sure to process some of the short and some of the long chromosomes until you have acquired enough experience with the system.

****If you have any problems or concerns please contact us at: solutions@eljainc.com**

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DESCRIPTION & SETUP

Karyoview®

Karyoview® is a semi-automated system for metaphase analysis and karyotype construction and analysis. It is understood that individuals working with Karyoview® are competent, well trained, and experienced cytogeneticists who know how to analyze metaphases and karyotypes. Karyoview® does not replace the work or judgement of a cytogeneticist.

Karyoview® systems include:

- A video camera
- An adapter to be used between the microscope and the camera. If an adapter was included with your system, it is the model recommended for the microscope that you informed us would be used for the cytogenetic analysis using Karyoview®.
- A desktop computer including a large capacity hard drive where the Karyoview® program files reside and where data acquired is stored
- A high resolution, high speed display
- A keyboard
- A track ball
- An internal CD/DVD reader writer for data back up
- A printer
- All corresponding cables

Karyoview® features (abbreviated):

- Karyoview® [on a user's command] acquires selected metaphase images as seen under the microscope
- Using the different functions for image analysis included in Karyoview® the user can:
 - Acquire and store metaphases for immediate or future analysis
 - The user can "separate" and "cut" chromosomes
 - The user may semi-automatically produce a karyotype which can subsequently be edited for any misclassifications
 - The user can print a karyotype/s
 - Users can efficiently produce reports based on the analyses conducted. Other reports and tables, including images and data for a particular study are kept in Karyoview® and may also be printed.
 - Karyoview® permits for the simultaneous review of 4 karyotypes in rows, displayed one on top of the other, with scrolling allowing views of all chromosomes.
 - Karyoview® allows the user to review a single chromosomes, normal and abnormal, and for the construction of translocations and deletions to be compared with the ones that may have been found in the patient.
 - For a more complete description of all the functions and different menus of Karyoview® please visit: www.eljainc.com where you will find detailed descriptions and images of the functions and uses.

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****PLEASE DO NOT CHANGE ANY OF THE DEFAULT LIGHT AND CONDENSER SETTINGS UNTIL YOU ARE COMPLETELY CONVINCED THAT MAKING ADJUSTMENTS WILL IN FACT LEAD TO IMPROVED CHARACTERISTICS NEEDED FOR AN APPROPRIATE ANALYSIS.****

The Karyoview® factory settings should produce the needed images if the microscope produces them.

Guidance

1. The results yielded from analysis using Karyoview® largely depend on the quality of the metaphases that are selected. The user will find two sets of metaphases included with Karyoview®, one has short chromosomes that have a few thick bands, as they are found in bone marrow and other tissues that do not produce long chromosomes with well defined bands. The other set has long chromosomes with many well defined bands. These have the quality that is desirable for Karyoview® to work at its best.
2. The acquisition of appropriate metaphases is a COMPLEX PROCESS, even if the metaphases appear to be “perfect” under the microscope. Karyoview® has been factory set to optimize image, acquisition, display, and printing. We recommend that the user acquire a metaphase, and print it, then compare the printout with the image on the screen. If they are close or the same, the user does not need to perform any modifications.

Settings: Brightness & Contrast

Brightness and Contrast can be adjusted in three different formats:

- @The microscope:
 - The user should set the microscope by increasing or decreasing the light, changing the position of the condenser, and using the appropriate green filter (the camera is specifically sensitive to green light to acquire high resolution, high contrast images). If the microscope has the optics that are needed to obtain high resolution images of the chromosomes, and you are experiencing other issues, we recommend that you contact your microscope vendor directly.
- @The Karyoview® monitor:
 - The Karyoview® Monitor has been factory optimized, and does not require calibration. If the user experiences issues the following may be considered.
 - If the image viewed on the monitor does not display well defined, clear, dark and light bands on the chromosomes, and the user is unable to recognize at least 8 shades of gray on the bands, the user should slowly increase/decrease the light on the microscope and examine the changes that take place on the monitor.
 - If the above still has not rectified the observed issues, the user may opt to use the two controls for brightness and contrast on the left side of the monitor. Simply adjust them slowly and carefully to change the image.
- @In the process of image acquisition:
 - Using the Karyoview® function “acquire” the microscope image is displayed on the monitor. If it does not display with satisfactory results, adjust the brightness and contrast using the controls that are included on that screen. Move them slowly to increase/decrease to reach the desired view

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