



Azure cSeries Quick Reference Guide

Steps to Power Up/Power Down

Power Up

1. Turn main system on using switch on the back of the cabinet
2. Turn on Tablet using the button on the top of the system
3. Launch Azure Capture Software

Power Down

1. Quit Capture Software
2. Shut down tablet (swipe screen right to left and select the power option)
3. Power off the main system using switch on the back of the cabinet

Blue Lights vs UV

Using White Lights

- Use the Orange Tray and the **VISIBLE** light setting

Using Blue Lights

- Use the black tray for gels stained with dyes that excite in the blue range

Using UV Transilluminator

- Do not use a tray. Place gel directly on UV transilluminator tray.
- Use **UV 302** for dyes that are UV excitable. UV 302 is the brightest and best light source.
- Use **UV 365** for excising bands. This reduces DNA nicks that may be introduced by the UV 302 light source.

cSeries Field of View

UV Transilluminator

- Place gel directly in the middle of the UV Transilluminator. In this position the field of view is the maximum 20x15 cm.

Chemiluminescent Blots

- In the lower position the FOV matches the outer marking on the black chemi tray (20x15 cm).
- For low signal applications on the upper platform, the FOV matches the inner marking on the black chemi tray (15x11.25 cm).

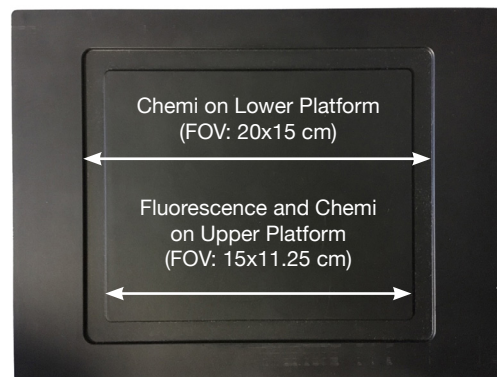
Fluorescent Blots

- Fluorescent blots should be captured on the lower platform using the black chemi tray. The FOV matches the inner marking on the black chemi tray (15x11.2 cm).

Fluor – inner edge

Chemi – on top inner edge

Maximum Field of View – 20 cm x 15 cm



Saving Tiff vs JPEG

JPEG Images

- These are saved using compression. It will retain any contrast settings you have applied but not unadulterated dynamic range.
- Further adjustments, edits and resaves of the image will decrease the quality of the image each time.

Tiff files

- These do not use compression. The raw data is saved and stored each time but contrast settings will not be retained.
- Contrast settings can be adjusted downstream without losing image quality and quantitative analysis can be performed on the .tiff data.

Contrast vs Pixel Intensity

Contrast

- Contrast only changes what the data looks like on the screen. It has no bearing on the underlying data, does not change the sensitivity of the image or the amount of light captured in the original image, and is merely superficial.

Pixel Intensity

- The pixel intensity is a true representation of the amount of light captured by the CCD camera at each point. This data can be used for analysis and quantification, and to measure noise:signal band intensities.

Resolution, Sensitivity and Binning

Binning

- In brief, binning explores the inverse relationship between image resolution and sensitivity. Users can sacrifice image resolution in order to gain sensitivity for sample exposure.

Highest sensitivity

- Max. Binning – This setting will give you the highest sensitivity, with the lowest resolution.

Lowest sensitivity

- No binning – This setting will give you the maximum resolution, with the lowest sensitivity.

Most users find the 'normal' setting (3x3) bin appropriate for most sample types. As long as users acquire images on 3x3 bin or better resolution, images will have at least 300 dpi.

Auto Exposure

Auto exposure is meant to give a broad dynamic range of data across our usable 16 bit depth. It does not always give the quickest exposure time, especially for relatively abundant proteins. Sometimes entering a manual exposure time may fit the assay and the user; manual exposure is always an option regardless of sample type.

Marker Workflow

Visible Light Marker

To add a visible light marker to your chemi image first highlight the marker button prior to image capture. The system will automatically take the visible light image after capturing the chemi image. To add the marker image to your chemi image, use the **ROI** tool as follows:

1. Select the Image1-Marker file, and then select the **ROI** tool.
2. Adjust the area of interest, then select **COPY**.
3. Switch over to the Image1-Chemi tab, then select **PASTE**. A new image is created and is automatically scaled so that the background matches on both images.

While selecting the marker using the ROI tool, try to minimize the black background within the selected area.

