

## CCD1: COLOUR (Histology) Photography

### Microscope

- Pull slider on LHS of actual camera OUT (this pulls colour filters INTO light path)
- Turn ON main green rocker on microscope
- Check switcher box is set to SPOT (not MM)
- Check slider on top-LHS of microscope is OUT
- Push the slider on top-RHS of microscope IN to see down binocular eyepiece
- Place your slide on the stage
- Use the 'condenser phase wheel' at the front of the microscope to choose brightfield
- Check metal ring (above phase wheel) is totally OPEN then stop down a little
- Check polariser is OUT of light path
- Focus and select field of view
- Check the Kohler illumination

### Computer

- Pull the slider on top-RHS of microscope OUT to send image to camera/monitor
- Turn on digital camera
- Log in to computer
- Open **SPOT** software
- Select **24 BF** from drop-down list in bottom right corner of SPOT interface (BF = 'brightfield' and 24 refers to 24Bits)
- Use **live focus preview** to fine-focus image on screen
- Hit **F10** on keyboard to Compute Exposure Time
- Hit **F9** on keyboard to capture image
- **Save** image (TIFF) to a folder on your server
- Compare your image with the original. If the colours are wrong, you need to change the 'White Balance': Move slide to blank area, away from specimen but still on glass, and click icon to **Compute White Balance**, then Compute Exposure Time again.

### After you've finished

- Check CCD1 bookings on Brian; if microscope is booked during next couple of hrs, then leave everything turned on, just **log out** of the computer. If no-one is booked after you for 2hrs or more, then log out, turn off microscope, camera, arc lamp (if it was on), and start the stopwatch
- Clean objectives with **lens tissue**; clean stage and bench with normal tissue. Throw away tissues/lens tissue in green bins, slides and coverslips in orange glass bins.
- Please **put blue plastic cover over microscope optics**, but avoid contact of the plastic cover and the hot arc lamp!

### Troubleshooting

- If error message says exposure too short, reduce light or add more neutral density filters
- If you cannot get a good colour balance, increase light or remove neutral density filters
- NB: If you change the amount of light, you will need to re-compute the White Balance.
- Suggested light settings:
  - turn neutral density wheel on the RHS of the microscope to 1.5(front wheel) and 100%(rear wheel)
  - put small round ND filter over the glass covering the field iris
  - press colour temperature button