How to get the best images form your Digital Microscope Camera Eyepiece

You may notice that when you first use your Digital Microscope Camera Eyepiece, some of your images might not be as clear as you were expecting. These instructions tell you how to make a few simple adjustments that will greatly improve your images. The photos below show paramecium images before and after the adjustments were made.





Microscope Adjustments

PLEASE NOTE, your microscope may come with a set-screw to hold the current eye piece in place. This set-screw needs to be loosened in order to remove the camera and to insert the camera. Please note to loosen it far enough as to not scratch the camera as you insert the camera. The camera should slide in easily and fit snugly.

Also please note the focal length may change when you insert the camera. This will cause you to have to raise the stage closer to the specimen than you viewed with you eye.

The stage stop may be set too low. The stage stop is a **screw** behind the mechanical stage, under the arm of the microscope. This is a factory set screw that is used to prevent the slide on the stage from hitting the 40X or higher objective. Since we are dealing with fractions of millimeters on this screw it may be set too low by the factory. You can loosen the **nut** around the screw, and then loosen the screw a little, then retighten the nut.



Do not worry about where it should be set since the 40X or the 100X objective can push inside itself and still not damage the objective. However, adjusting more than ¼ inch should be discouraged.

Adjusting the Software

This digital camera's software has certain factory defaults. These settings should be used for most microscope use, but we offer some suggestions to make your viewing more enjoyable.

The following adjustments can decrease the dark lines when viewing image at low powered magnification. This is typically seen most on specimens that are small and very transparent.

1) Always set your microscope to allow the SMALLEST amount of light to come through the condenser. This means to shut your *iris diaphragm* or move the *disk diaphragm* to the smallest opening.



Iris Diaphragm

Disc Diaphragm

2) When you are viewing the specimen, click on the *Video Capture Filter* button, to the right of the image.



3) UNCHECK the box that says *Auto Exposure*

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8532 Camera Property	Set]			
Auto Exposure		_ <u>)</u>	1	128
Brightness —	^)		128

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- 4) Note the Exposure Time setting at *Auto Exposure*. This number will be important to determine how much to raise the *Exposure Time* number.
- 5) Adjust the *Exposure Time* UP. This can be done by clicking on the pointer to the left of the words *exposure time*. Click on the pointer and use your right arrow button on your keyboard to increase the exposure time.

Properties	
8532 Camera Property Set	
Auto Exposure	Saturation
Exposure_Time 20	Gamma
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Contrast 128	SharpeningS

- 6) The Exposure Time should not have to be increased that much, maybe 20 points at the most.
- 7) If needed, you can continue to adjust the *Exposure Time* to find the best setting for your specimen.

Important – Each specimen, depending on what you are looking at, will have a different "exposure time". So do not expect the same number for all microscopes and all slide specimens.