# Lab 3: Microscopy

## Name and Course Section:

## Procedure

wet mount of letter/word 40X

*Nostoc* 40X

*Nostoc* 400X

*Nostoc* 100X

|  |  |  |
| --- | --- | --- |
| **Objective Lens** | **Total Magnification (\_\_\_X)** | **Diameter of the Field of View (mm)** |
| Scanning (red) |  |  |
| Low (yellow) |  |  |
| High (blue) |  |  |

## Summary Questions

1. Calculate the total magnification of a hypothetical microscope with a 20X ocular lens and 30X objective lens rotated into viewing position.
2. Does the field of view (in mm) get larger or smaller as you increase the magnification with a microscope?
3. When biological supply companies produce prepared slides, they often place specimens upside down (compared to the words on the slide label) on the slide. Why do they do this?
4. You estimated the length of individual Nostoc cells today at both 100X and 400X magnifications. Obviously, the actual size of a cell is the same no matter what magnification it is viewed at. Given that, why do your two length estimates for the same cell differ? For which magnification do you suspect you have the more accurate estimate?