

McCRONE ACCESSORIES & COMPONENTS

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WALTON BECKETT CALIBRATION WORKSHEET

You will need the following four items in order to do any calibrations for your new reticle

1. Ruler with centimeter scale
2. Stage micrometer
3. Reticle (eyepiece disc) that can be placed in 10X focusing eyepiece and removed.
You can use a crosshair, scale, or grid reticle, any Walton-Beckett reticle or a Porton reticle.
4. Phase contrast microscope with 10X focusing eyepiece capable of reticle installation and 40X phase objective.

The calibrations we need

1. **The diameter of the reticle** (eyepiece disc) that will fit in your eyepiece (standard sizes are 19 and 21mm). If you know the model number on your eyepieces, you could try calling the microscope manufacturer for the diameter. _____ **mm**
2. **The Actual Length** - This is the ruler measurement in mm of any reticle when outside of the eyepiece. For instance, you would measure a horizontal line from end to end in mm with a ruler. _____ **mm**
3. **The Magnified Length** - This is the same measurement taken with a stage micrometer when reticle is installed in 10X eyepiece and used with a 40X phase objective. If you measured a horizontal line before with your ruler, you would measure the same line now but using your stage micrometer. _____ **µm**
4. **The D Value** - Refers to the diameter of the circle pattern of the Walton-Beckett. Determining the exact D value is critical because the circle pattern has to measure 100µm with the stage micrometer. The D Value can be found once the Actual Length and Magnified Length have been determined.

$$\text{D Value} = \frac{\text{Actual Length} \times 100}{\text{Magnified Length}}$$

For example: $\frac{4.5 \times 100}{155} = 2.903\text{mm D Value}$

Your D Value = _____ mm