



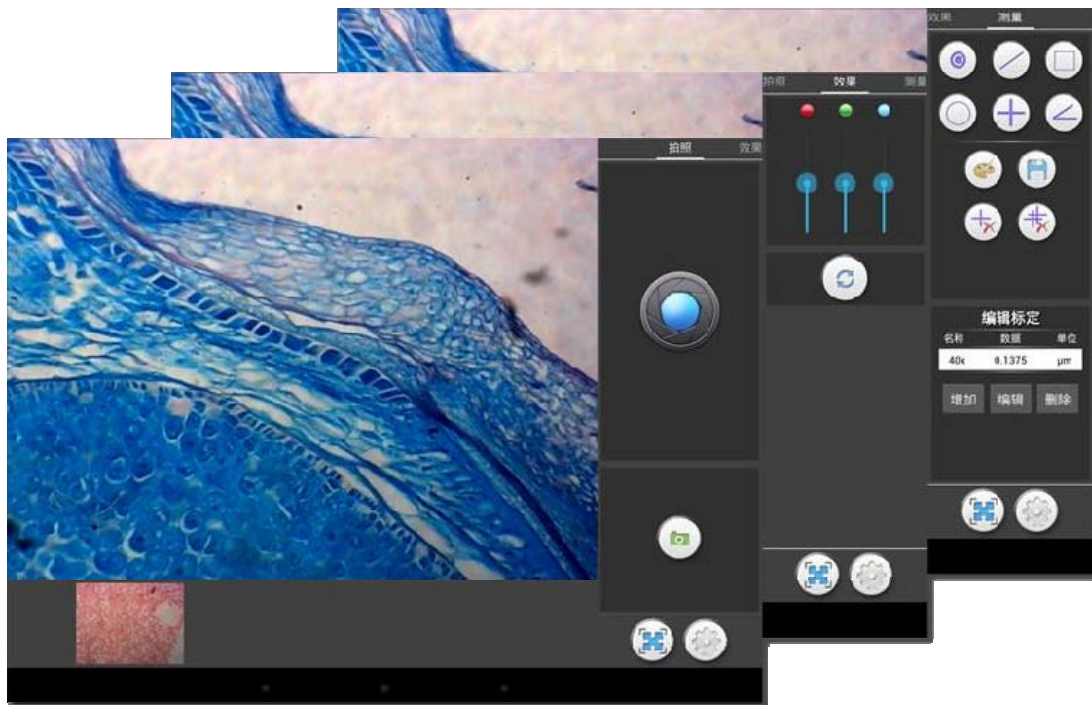
SPECTROLAB

www.spectrolab.co.uk sales@spectrolab.eu

Spectrolab in Optical Microscopy YXCamera User Manual

Real-Time Measurement Software for Android

V1.1 2014.08.09 CAT701112

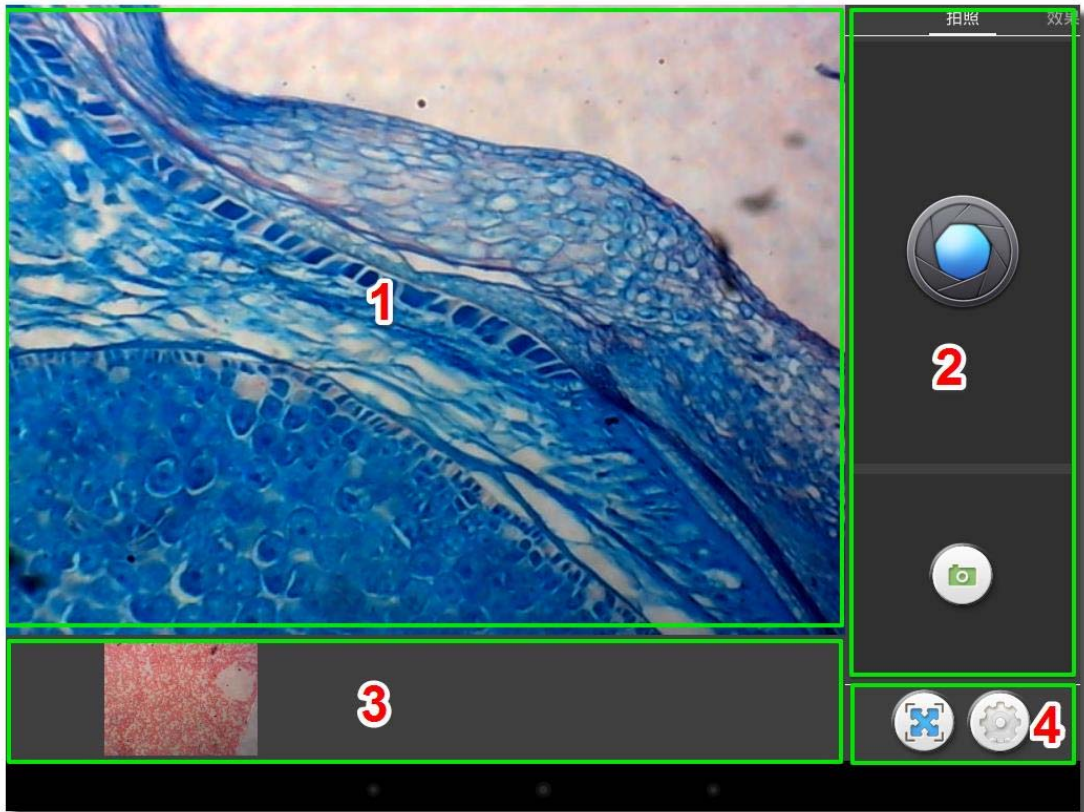


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1. Introduction


YXCamera is an camera application for an android device. YXCamera can adjust image parameters, measure objects and capture images and videos from the camera.



2. User Interface



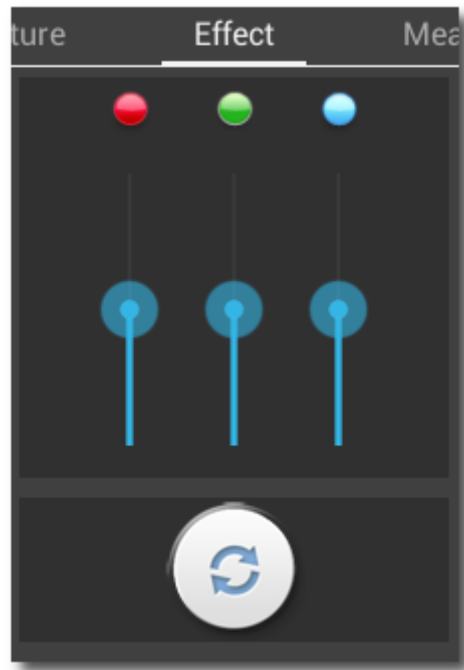
- 1. Preview Image – show live video of the camera.
- 2. Tool Panel – Control panels, capture, adjust parameter, measurement, etc.
- 3. Result Panel – Store results: images, videos, measure results.
- 4. System Tool – Switch Camera, full screen, configure.

3. Capture

Take picture is the default mode, Click  to take a picture.

Click  to switch to video recording mode, Click  to record, click again to stop recording

4. Adjust image parameters



When the color of an image is not very good, adjust the three sliders to adjust three channels(RGB) of the image until you are satisfied.

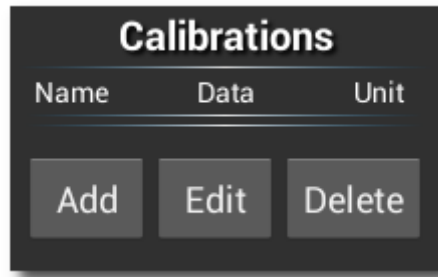
Click the reset button to restore the parameters.

5. Measurement

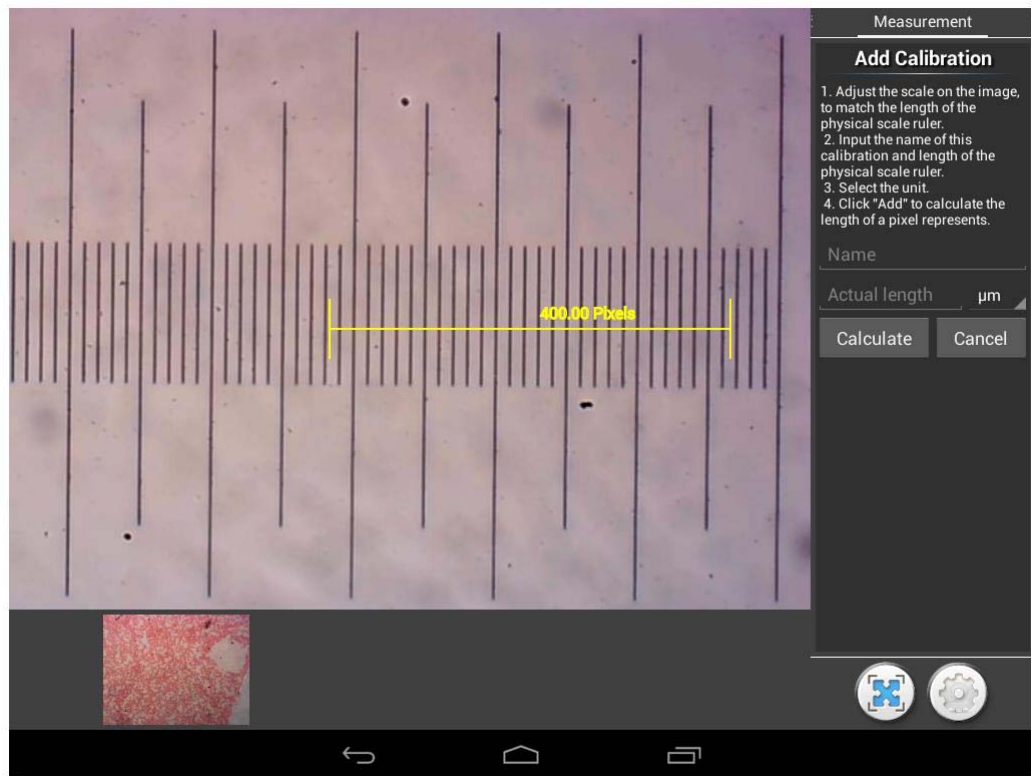
5.1 Calibration

The ruler should be calibrated before measurements are made. Also specific combinations of magnification of a microscope and the preview size of camera need specific calibrations.

Swap the tool pane to measurement, Click “Add” to add a new calibration, Click “Edit” to recalibrate the existing calibration.

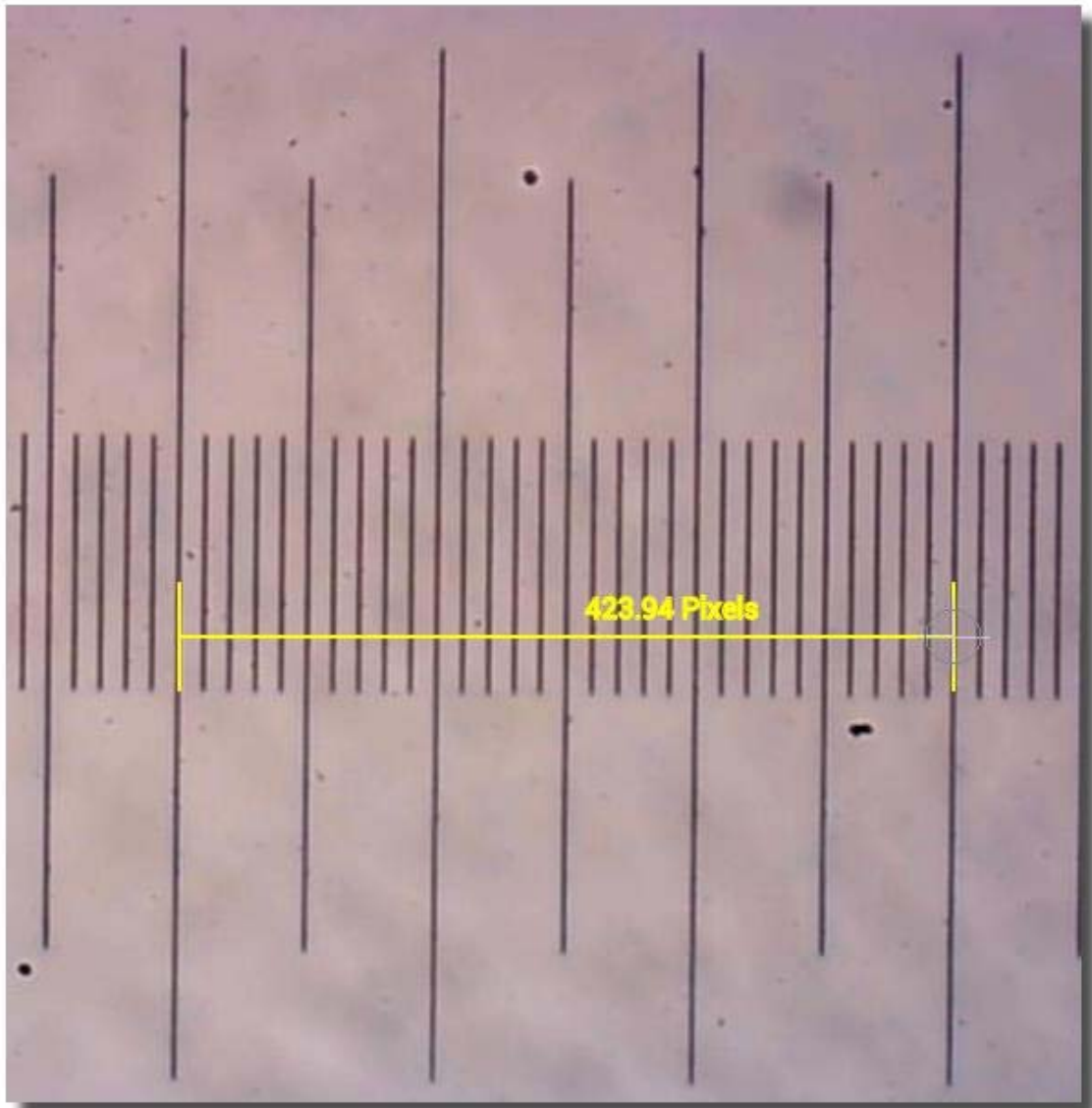


Calibration mode



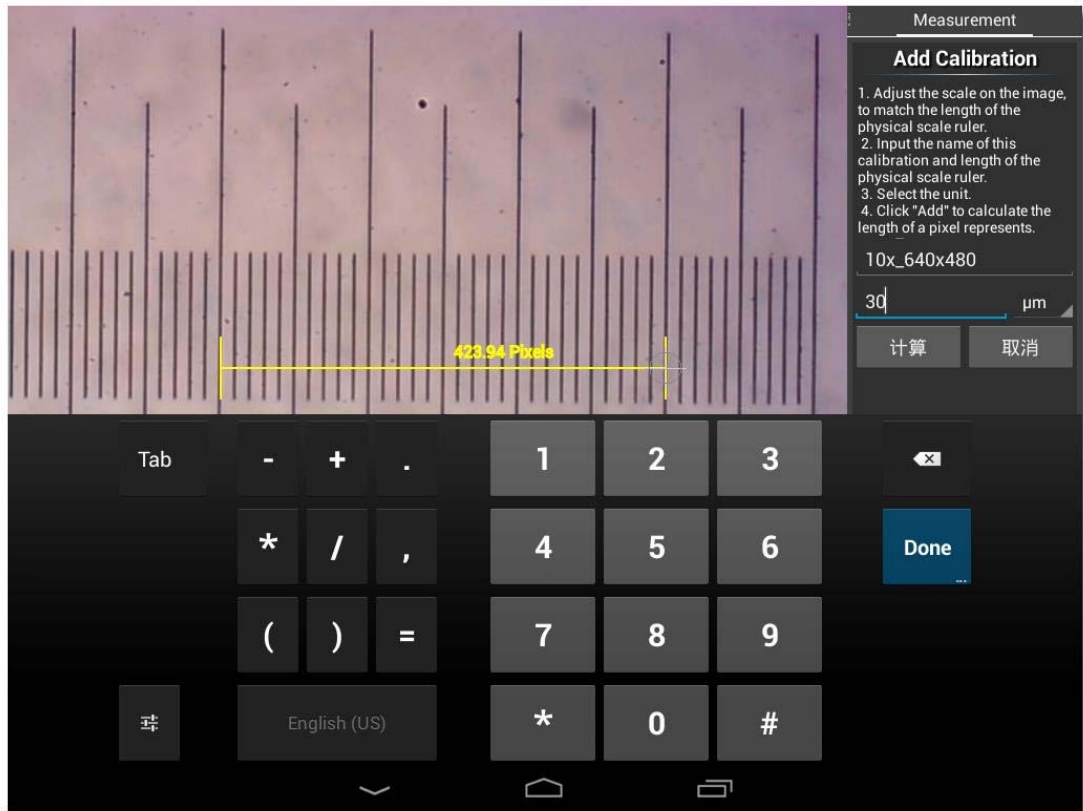
Follow the Tips :

1. Drag the yellow ruler, let endpoints of the ruler close to physical scale of the ruler. We use the 0.01mm physical ruler, each large grid is 10µm, if we pick three grids, that's 30µm.

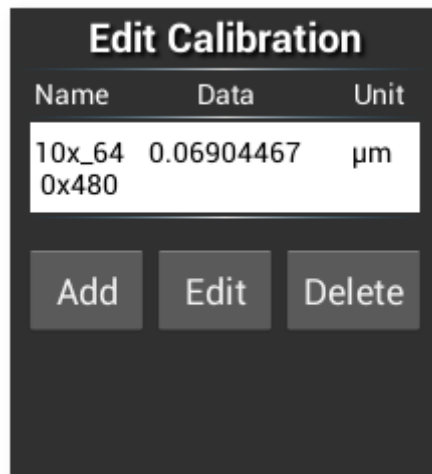


2. Input the name of the calibration and the physical length of the ruler. We input 10x_640x480 for the name, that means the magnification of objective is 10X, and the preview size of camera is 640x480.

Then input the physical length of the ruler, that is 30 μ m.



3. Click “Calculate” to calculate the calibration value for current objective and preview size, and save to list.

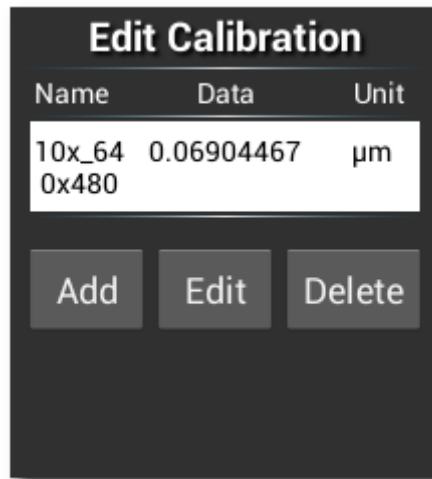


5.2 Measure tool

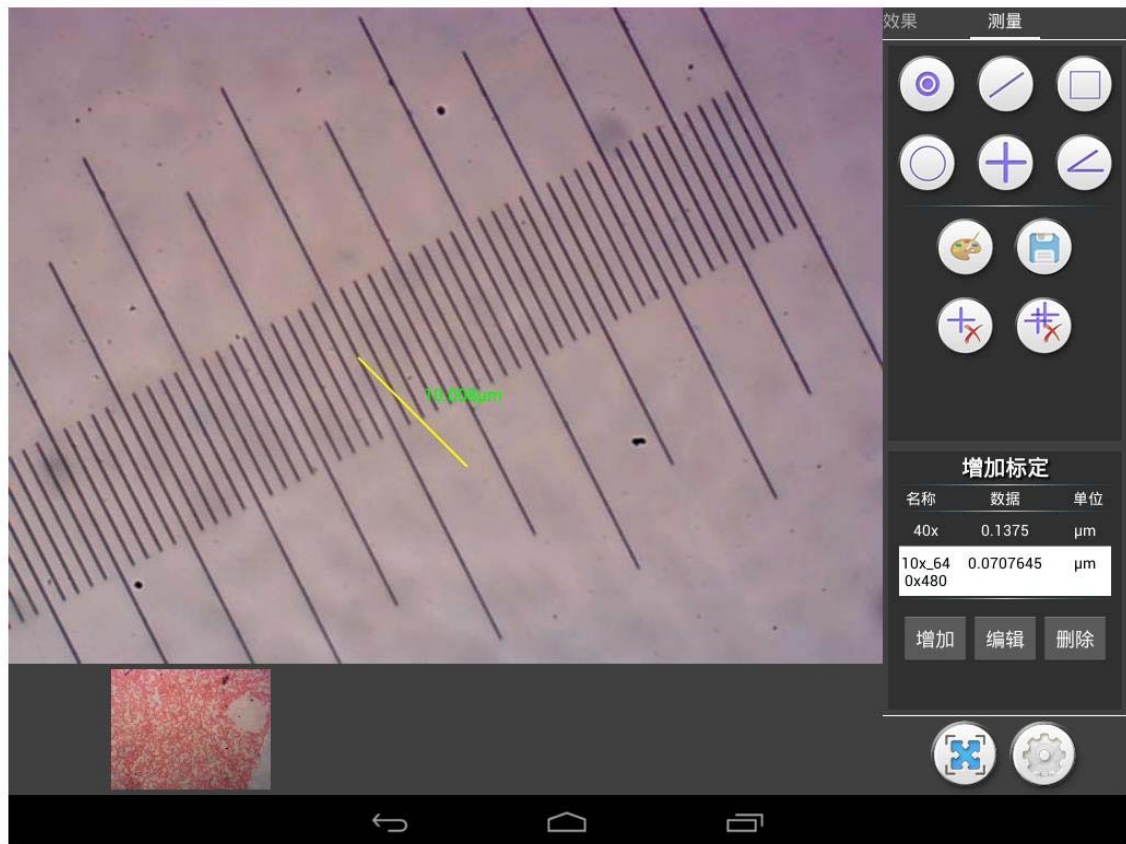
ICON	Function	Description
	point counting	Add a point counting marker on the image.
	Line	Measure distance of two points.
	Rectangle	Measure width, length and area of rectangle
	Circle	Measure area of circle
	Cross	Cross hair
	Angle	Angle measurement
	Option	Change stroke width and color of rulers, and the size and color of the text.
	export	Export the image with measurement rulers.
	Delete	Delete the selected ruler
	Delete	Delete all

5.3 Measure with a line ruler

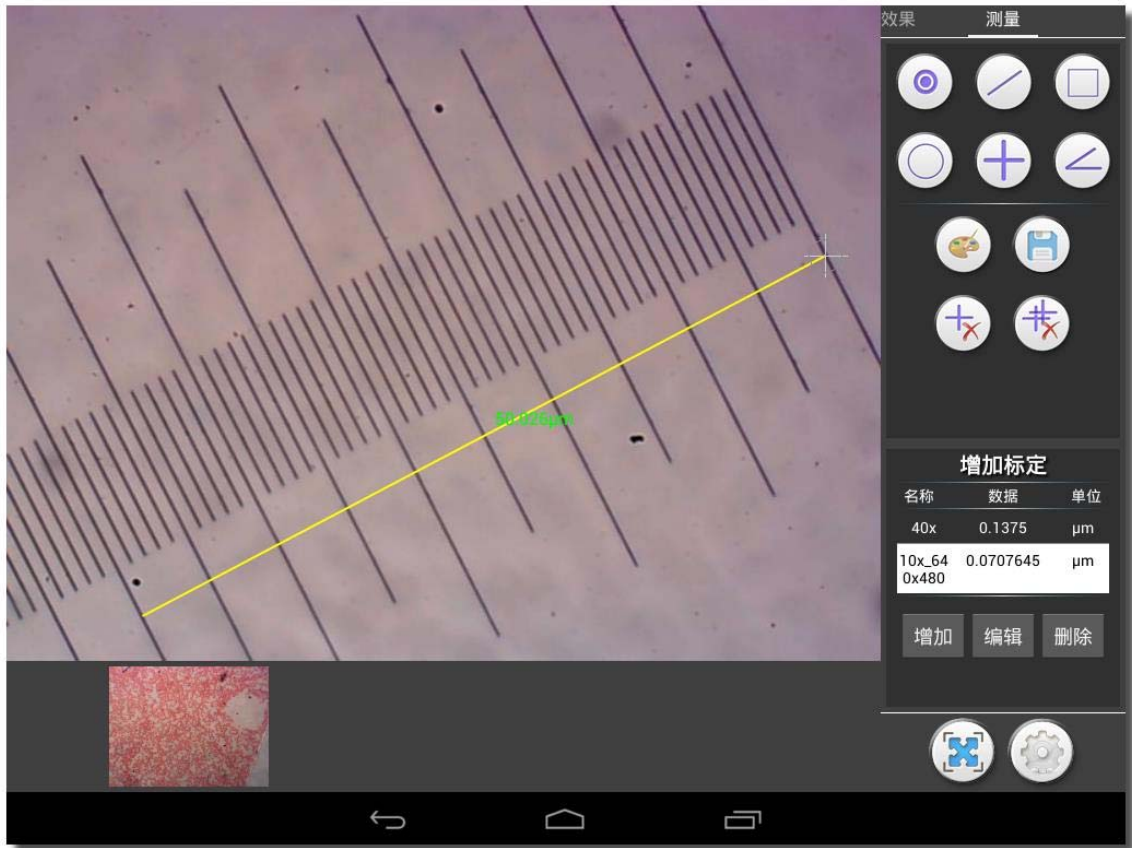
Choose a calibration, the selected item will show with a white background and black text.



Choose line ruler from right side of bar. There will be a line ruler showing on the image.



Use the line ruler to measure the physical ruler.



We measured 5 large grids, the line ruler shows 50.026 μ m, that confirms the result is correct.