

eSpot™ Video Imaging Software for MicromATR Vision™

The MicromATR Vision™, from CziTek, is an integrated video microscopy imaging and micro-Attenuated Total Reflection (ATR) accessory designed for use with commercial FTIR instruments. This unique sample handling system will transform the sample compartment of your FTIR instrument into a microanalysis workstation. The MicromATR Vision features a diamond-based ATR sampling platform capable of handling all forms of sample in the condensed phase – from hard intractable solids to corrosive liquids. Beyond the mechanical strength and chemical resistance, the diamond is visibly transparent, thereby allowing the user to view the sample at the ATR interface.

MicromATR Vision employs the latest in digital imaging technology for the analyst and researcher. To realize the full advantage of video microscopy coupled with ATR spectroscopy, CziTek has developed eSpot, a video microscopy package geared towards analytical applications in criminalistics, surface defect analysis, polymer product characterization, pharmaceutical development, quality assurance, geology, and others.

eSpot interfaces to MicromATR Vision via a USB 2.0 interface. The integrated 5 megapixel camera is “plug and play.” The computer and software immediately recognize the MicromATR Vision camera.

Figure 1. eSpot main screen – 2,4 dinitrotoluene crystal habit.

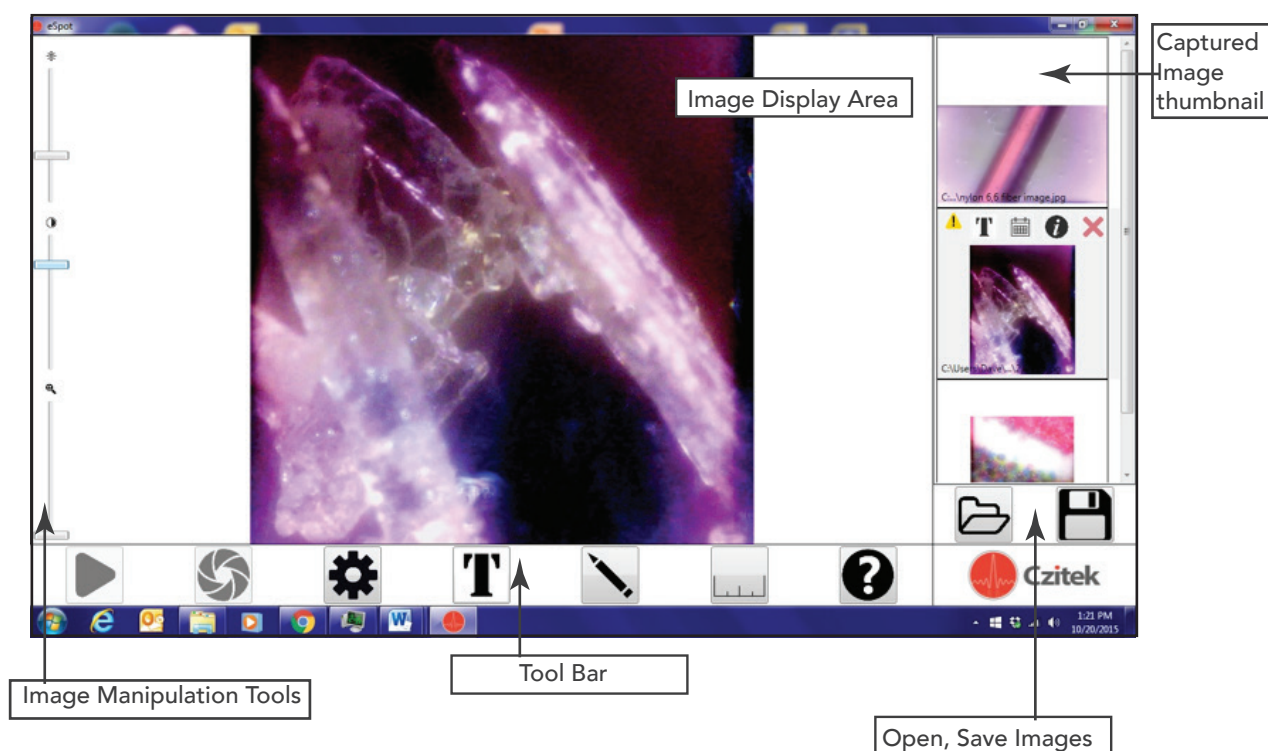
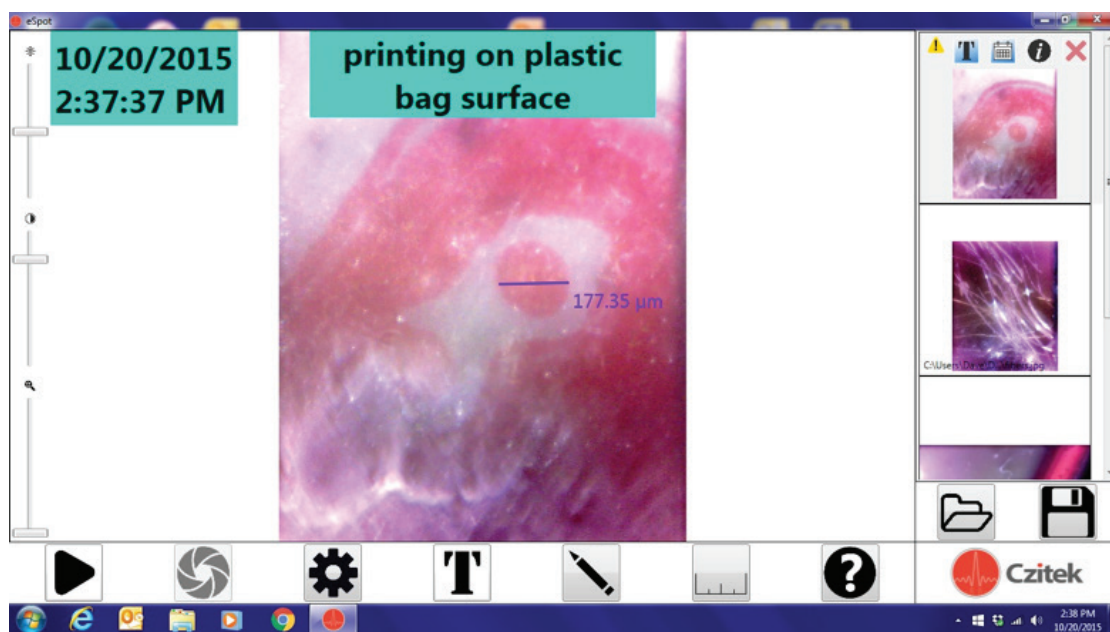


Fig 1 shows the main screen of eSpot. Live or captured images are displayed in this area of the screen. Images can be analyzed or manipulated. The image manipulation slider tools allow the expansion (zoom) of live or captured images, and adjustment of brightness or contrast on live or captured images. The thumbnail on the right side of the software screen displays images that have been captured and stored in memory. A scroll bar allows sorting through the images in memory. eSpot allows the user to save captured images as JPG or TIFF image files and to open files of the same format. Operational modes are easily toggled using the icons on the tool bar. These modes allow the selection of the live video image, image capture, changes in settings, text annotation, feature measurement, and a micrometer reticle.

Figure 2. eSpot showing image annotation and feature measurement.



Features of eSpot™

- Live video image observation
- Adjustable resolution and frame rate
- Image capture and storage
- Image recall
- Text and date/time stamp saved with image
- Image digital zoom (magnification)
- Brightness and contrast adjustment
- Feature measurement tool
- Micrometer reticle scale

Fig 2 shows eSpot with the text annotation displayed. The annotation can be used to document the sample with the image for subsequent report generation. Through annotation, the image can be related to the ATR spectral data recorded with MicromATR Vision. Also shown in Fig. 2 are the feature measuring tool. Details with any orientation can be measured with the pencil tool. The user "draws" on the image and the size is displayed in micrometer units. The measurements are also stored with saved images.



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