

## Details Features/Specifications of HardnessPro

This software can be used in Steel plants, Metal forging industry, Oil & gas industry, Material Science, Mineralogy - metal and metal strength analysis Cement (Klincker) quality control and where ever Micro Hardness Testing machine are used in .This Package is very useful in Educational Institutions and ALL MATERIAL SCIENCE TECHNOCRATS AND METALLURGISTS.

### A.File Menu

**1.Open Image: -** Now we can open image in .bmp or .jpeg, format.

**2. Image Refresh: -** This is possible if the operator commits any mistake

**3. Save image & Save image As: -** It facilitates to Name the Images in different identities.

### 4. Report Preview:-

This is used for giving detailed reports like Name, Evaluation date, Sample ID No., Application, Operator, Magnification of Microscope. After entering details, You can generate reports. in MS-Word ,MS-Excel formats and direct print of image ,Further facilitates reports with image ,data, and various other details such as Histogram with different colors. Reports can be generated with the company's logo and title with address etc.,.

### 5.Image Properties: -

In this you can see the details of the image, like Type, Location, Size, When Created etc.

**6.Email: -** You can share the generated results and go for second and third opinion through email for clarification etc.,

### 7. Show Capture: -

We can directly capture images through the software without going outside the software .It has various features. You have to install only the frame grabber card driver we can easily capture images into the computer. We can capture images in .bmp format. It has more feature like: -

- I. Close Capture**
- II. Load Palette**
- III. Set Capture File As \*. avi etc.**
- IV. Allocate File Space**
- V. Save Captured Video As**
- VI. Save Palette**
- VII. Save Single Frame As .bmp**

### 8. Options

It has various options for capturing cards.

- I. Audio Format**
- II. Format**
- III. Source**
- IV. Display**
- V. Compression**
- VI. Preview**
- VII. Overlay**
- VIII. Card Details.**

### 9.Capture

This option is also for capturing.

- I. Single Frame**
- II. Frames**
- III. Video**

**10.Zoom Preview: -**

We can see Zoom Preview on the screen by simply moving the mouse on the particle.

**B.Measurement Tools.**

**1.Calibration :** - This tools is used for calibrating through calibration scale. This is done only once when we integrate with hardness tester . The procedure is given in help file (For all Tools) .

**2.Length: -** This is used for measuring length .It can measure any given length in the image. It calculates according to your selected calibrated scale name, chosen from drop list.

**3. Radius: -** This is used for measuring three points radius.

**4. Hardness Testing:-**

Micro-Hardness analysis can also be done. We can obtain knob, **Vickers or Brinell.**

The formula for calculating Hardness

$$Hv=1.854 \times Wt.in Kg / (d)^2$$

Hardness measurement from indentation image. This will give result of Hardness testing in **Vickers and Brinell values like d0, d1, Hv.**

**Note- Specifications are subject to change due to our continuous R&D programme**