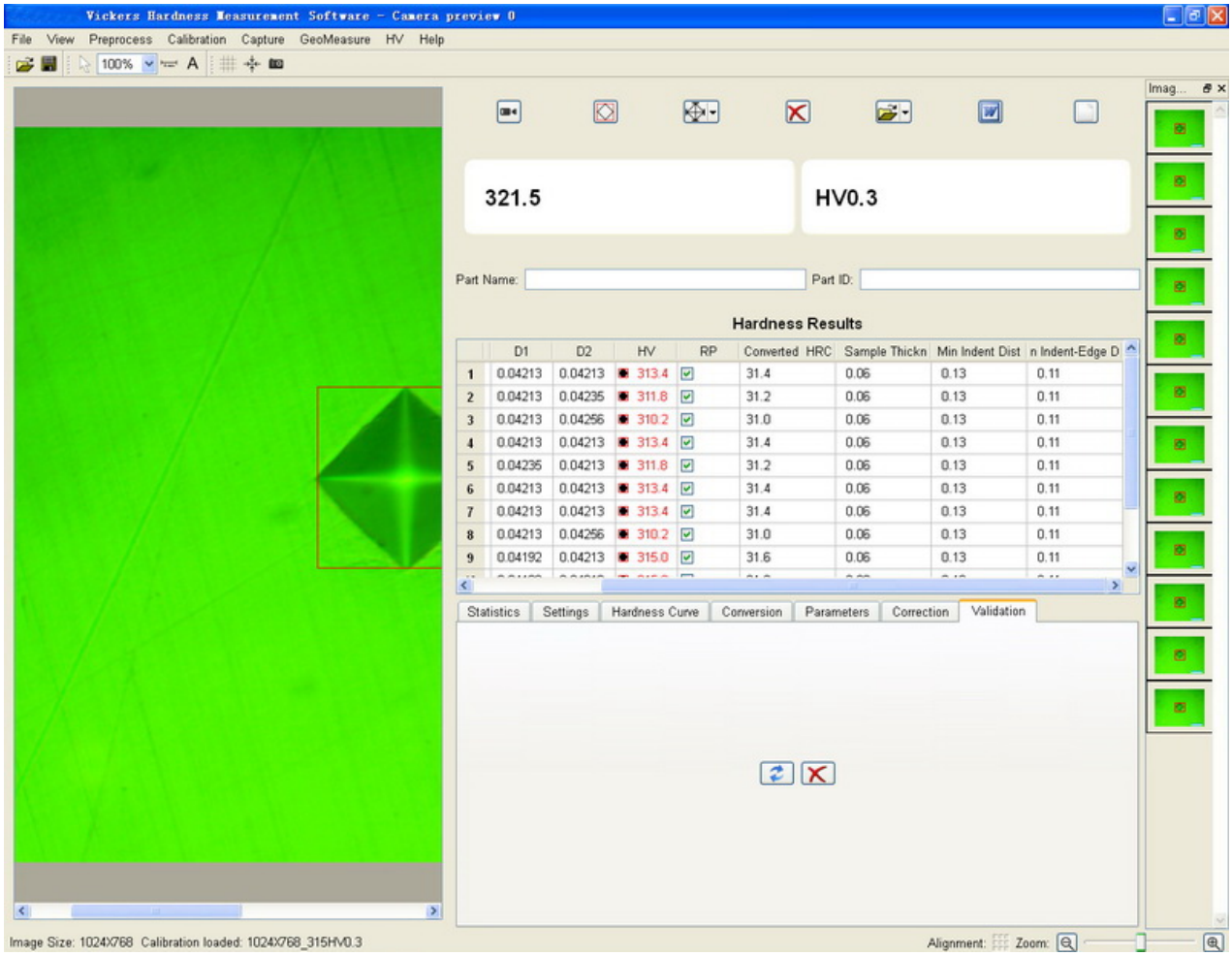
Vickers/Knoop Measurement Software iVick

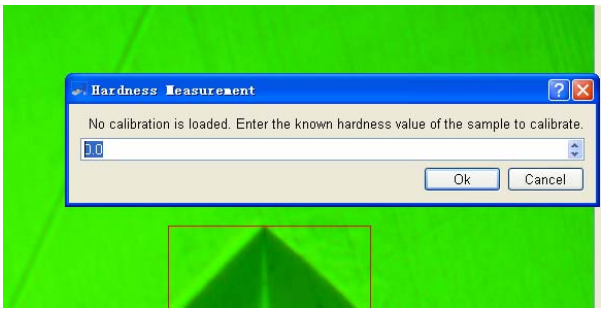
iqualitrol new generation Vickers (Micro Vickers)/Knoop measurement software iVick with friendly operation interface, apply USB camera to fast capture video and images, supports case depth inspection by analyzing the indentation image.

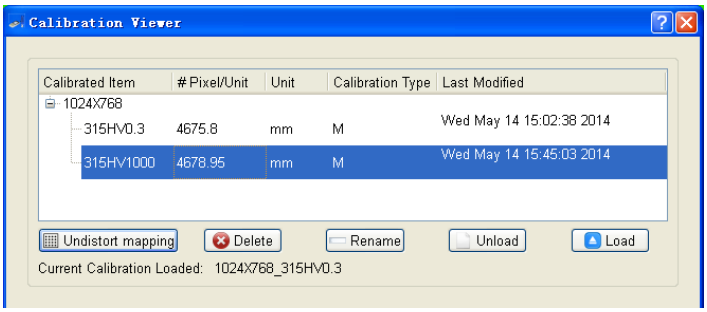
In traditional way, operators judge the size of the indentation through the microscopes, due to vision errors, different operators obtain different measurement results for same indentation. While by software, the indentation is enlarged through high resolution lens, and the size of indentation can be automatically obtained by image processing algorithm.



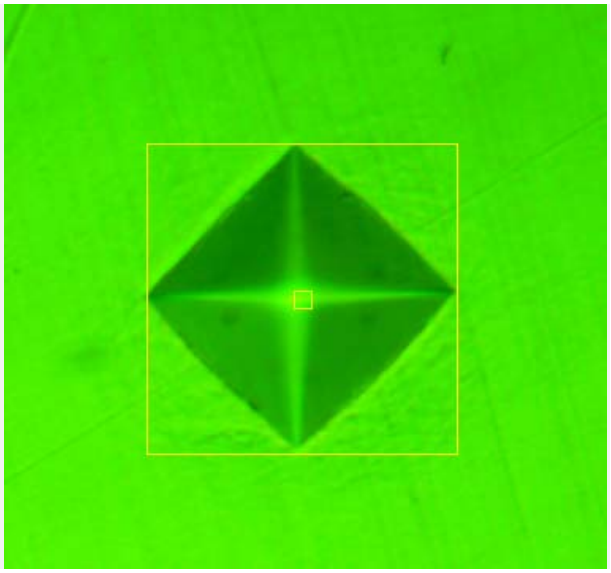
Following are highlighting of iVick

1, Easy Calibration, calibration can be done according to standard hardness blocks. Also can select calibration data according to test force, this function need to keep same test force with hardness tester.

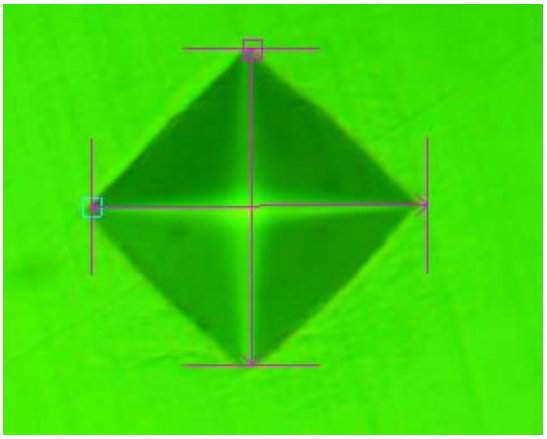


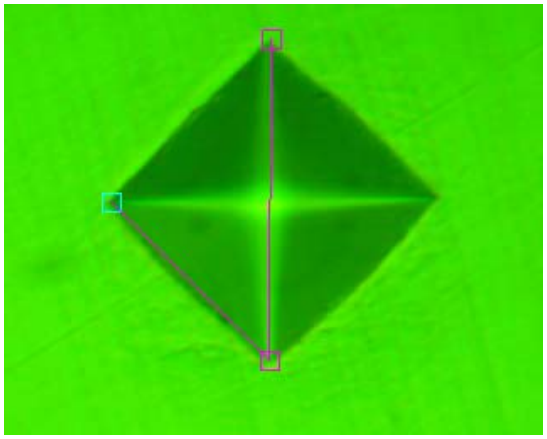


2, Auto Measurement: Apply Digital image processing technology, software can automatically find indentation precisely and compute hardness value. Manually adjust indentation length also available if indentation is not clearly.

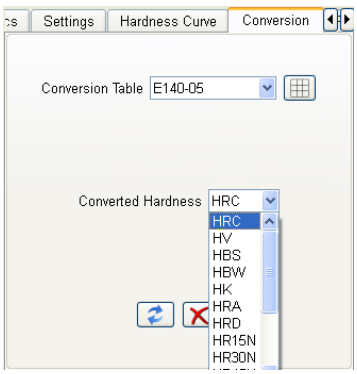


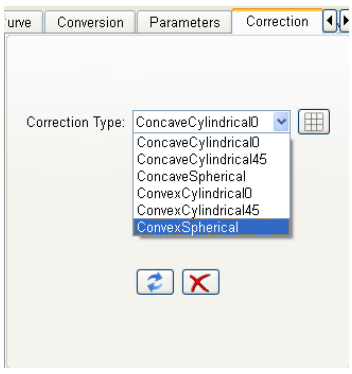
3, Manual Measurement: Support two methods for manual measurement, click four peaks of indentation or measure length of diagonal line.

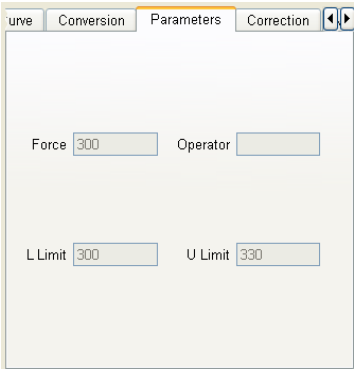




4, support hardness conversion among 12 hardness scales according to ASTM E140-05, hardness results correction of cylinder surface, upper and lower limit setting.







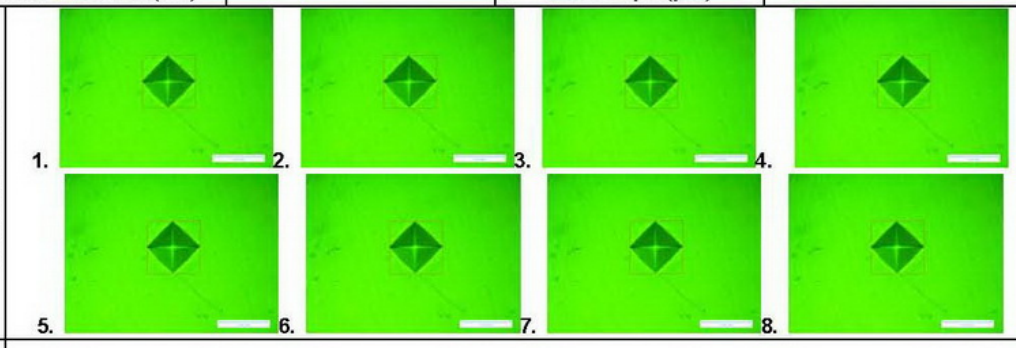
5, Hardness Results Display: Shows indentation dialog length, conversion value, requested minimal sample thickness, minimal any two indentations distance and material edge to the center of indentation.

Hardness Results

	D1	D2	HV	RP	Converted HRC	Sample Thickn	Min Indent Dist	n Indent-Edge D
1	0.04213	0.04213	313.4	☑	31.4	0.06	0.13	0.11
2	0.04213	0.04235	311.8	☑	31.2	0.06	0.13	0.11
3	0.04213	0.04256	310.2	☑	31.0	0.06	0.13	0.11
4	0.04213	0.04213	313.4	☑	31.4	0.06	0.13	0.11
5	0.04235	0.04213	311.8	☑	31.2	0.06	0.13	0.11
6	0.04213	0.04213	313.4	☑	31.4	0.06	0.13	0.11
7	0.04213	0.04213	313.4	☑	31.4	0.06	0.13	0.11
8	0.04213	0.04256	310.2	☑	31.0	0.06	0.13	0.11
9	0.04192	0.04213	315.0	☑	31.6	0.06	0.13	0.11

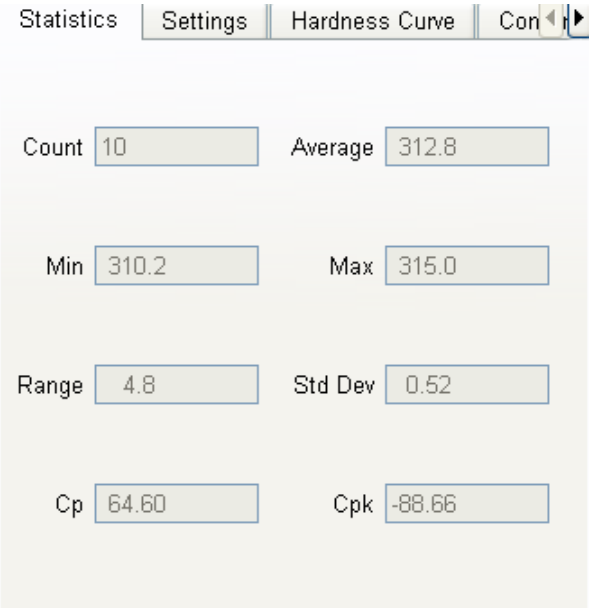
6, Test Report, export test results with indentation to MS EXCEL or WORD

Micro/Vickers Hardness (HV) Test Results

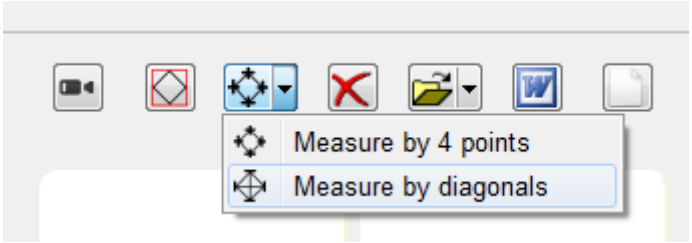
Submitter	iqualitrol			**Date Submitted**	APRIL 9, 2013							
Part Name	STEEL PLATE			**Part #**	SI1404125090							
# of Samples				**Sample Descri.**	STEEL PLATE							
Qual. UL	330.0			**Qual. LL**	300.0							
Machine ID				**Meas. Standard**								
Sample Cyl./Sph. Diam. (mm)				**Force (g)**	500							
Test Results												
#	**Depth**	**Y**	**D1**	**D2**	**Hard.**	**Conver.**	**#**	**Depth**	**Y**	**D1**	**D2**	**Hard.**	**Conver.**
	μm	μm	μm	μm	HV	HRC		μm	μm	μm	μm	HV	HRC
1			54.5	54.5	312.8	31.4	5			54.7	54.9	309.1	30.9
2			54.5	54.9	310.3	31.0	6			54.7	54.9	309.1	30.9
3			54.5	55.1	309.1	30.9	7			54.7	55.1	307.8	30.7
4			54.7	55.1	307.8	30.7	8			54.7	55.1	307.8	30.7
Case Hardness(HV)							**Case Depth(μm)**						
Indentation Images													
Statistics													
Maximum	312.8				Minimum	307.8							
Average	309.2				Std. Dev.	0.6							
Cp	8.93				Cpk	5.49							

Operator		Test Date	Auditor		Audit date
		2013.4.9			

7, Statistics: Automatically compute average value, variance, etc.



8, Others Functions: Support manual measurement, delete measurement result, etc.



iVick Versions Comparison:

iVick-U101	Manual Software, 1.3MP USB Camera, CCD Adapter
iVick-U102	Manual Software, 1.3MP USB Camera, CCD Adapter, Turret Control (Only Support Auto Turret Hardness Tester)
iVick-U103	Auto Software, 1.3MP USB Camera, CCD Adapter
iVick-U104	Auto Software, 1.3MP USB Camera, CCD Adapter, Turret Control (Only Support Auto Turret Hardness Tester)