

Certificate of Calibration

THIS IS TO CERTIFY THAT UNITED TESTING SYSTEMS CANADA LTD., HAS CALIBRATED
THE FOLLOWING ROCKWELL HARDNESS TESTER IN ACCORDANCE WITH
ASTM-E18-XX INDIRECT METHOD AND UTS SOP-2125-RevXX-XXXX.

CERTIFICATION IS VALID FOR THE SCALE(S) LISTED BELOW AND MEETS THE
REQUIREMENTS OF ASTM-E18.

CERTIFICATE NUMBER: CR#0005
CERTIFICATE ISSUED: June 5, 2019

CALIBRATION DATE: June 5, 2019
REQUESTED DUE DATE: June 5, 2020

CALIBRATION & CUSTOMER INFORMATION:

COMPANY:	ANY COMPANY
ADDRESS:	123 ANY STREET
CITY/PROVINCE:	ANY CITY, ANY PROVINCE
SYSTEM LOCATION:	QUALITY ASSURANCE LAB
MANUFACTURER:	UNITED
MODEL:	UHT-10
SERIAL NUMBER:	XXXXXX
ASSET NUMBER:	BBBB
INDICATOR RESOLUTION:	0.1
TEMPERATURE / HUMIDITY:	23.0 °C 31%RH
SYSTEM CONDITION:	GOOD
READINGS AS FOUND:	IN TOLERANCE
READINGS AS LEFT:	IN TOLERANCE
CALIBRATION TECHNICIAN:	TECHNICIAN

CERTIFIED SCALES:

HRBW, HRC, HREW

TRACEABILITY AND UNCERTAINTY:

THE REFERENCE BLOCKS USED FOR VERIFICATION OF HRC SCALE ARE TRACEABLE TO NIST. ALL OTHER
SCALES ARE TRACEABLE TO DAVID L ELLIS Co INC. HARDNESS LABORATORY. UNCERTAINTIES EXPRESSED
IN THIS CERTIFICATE USE A COVERAGE FACTOR OF 2 (K = 2). UNCERTAINTY ANALYSIS RESULTS ARE VALID
ONLY FOR THE RESULTS OF THIS CALIBRATION.

HT-1 ENVIRONMENT RECORDER: LASCAR, S/N TH20124-283, TRACEABILITY NO. AAC14121013-TH20124,
DUE DATE: Month Day, Year, Un = 0.33 °C / 1.5 %RH.

CALIBRATED BY

AUTHORIZED SIGNATORY

United Testing Systems Canada Limited

21 - 225 Bradwick Drive, Concord, Ontario L4K 1K7
Tel.: (905) 669-5327 Fax: (905) 738-5051
E-mail: service@utscanada.com

ISO/IEC 17025 ANSI/NC SL Z540-1-1994; Part 1

Accredited by:

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NVLAP Lab Code: 200311-0

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UNITED CALIBRATION GROUP

Calibration Report

CERTIFICATE NUMBER: CR#0005
CERTIFICATE ISSUED: June 5, 2019

CALIBRATION DATE: June 5, 2019
REQUESTED DUE DATE: June 5, 2020

CALIBRATION & CUSTOMER INFORMATION:

COMPANY: ANY COMPANY
MODEL: UHT-10
SERIAL NUMBER: XXXXX

ONSITE INDIRECT VERIFICATION OF READINGS AS FOUND BEFORE MAINTENANCE:

ROCKWELL SCALE	TEST BLOCK S/N	NOMINAL VALUE	TOL +/-	INDENTER S/N	BLOCK UC	READINGS			
						1	2	3	AVG
HRBW	1223692	44.85	1.5	1377	1.03	44.1	43.7	44.1	43.97
HRBW	1712505	60.78	1.0	1377	0.64	60.5	60.3	60.3	60.37
HRBW	3672837	100.01	1.0	1377	0.48	99.2	99.2	99.4	99.27
HRC	3678988	26.67	1.0	0075908	0.39	26.4	26.1	26.3	26.27
HRC	3693534	41.86	1.0	0075908	0.32	41.3	41.2	41.2	41.23
HRC	3688445	61.44	0.5	0075908	0.31	61.3	61.2	61.3	61.27
HREW	1615546	76.94	1.0	GD40556	0.57	76.6	76.4	77.0	76.67
HREW	1712444	84.09	1.0	GD40556	0.55	84.1	83.9	84.2	84.07
HREW	1726805	97.75	1.0	GD40556	0.55	97.7	97.5	97.6	97.60

NOTES:

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CALIBRATION & CUSTOMER INFORMATION:

COMPANY: ANY COMPANY
 MODEL: UHT-10
 SERIAL NUMBER: XXXXX

ONSITE INDIRECT VERIFICATION OF READINGS AS LEFT AFTER MAINTENANCE:

ROCKWELL SCALE	TEST BLOCK S/N	NOMINAL VALUE	TOL +/-	INDENTER S/N	READINGS						ERROR	REPEAT
					1	2	3	4	5	AVG		
HRBW	1223692	44.85	1.5	1377	44.9	45.0	45.3	45.2	45.0	45.08	0.23	0.4
HRBW	1712505	60.78	1.0	1377	61.2	61.2	61.4	61.1	61.0	61.18	0.40	0.4
HRBW	3672837	100.01	1.0	1377	100.3	100.2	100.1	100.0	100.1	100.14	0.13	0.3
HRC	3678988	26.67	1.0	0075908	26.1	26.4	26.3	26.5	26.6	26.38	-0.29	0.5
HRC	3693534	41.86	1.0	0075908	42.0	41.7	41.7	41.7	42.0	41.82	-0.04	0.3
HRC	3688445	61.44	0.5	0075908	61.4	61.5	61.4	61.5	61.6	61.48	0.04	0.2
HREW	1615546	76.94	1.0	GD40556	76.7	76.9	76.8	76.8	77.1	76.86	-0.08	0.4
HREW	1712444	84.09	1.0	GD40556	84.2	84.0	84.7	84.5	84.5	84.38	0.29	0.7
HREW	1726805	97.75	1.0	GD40556	98.4	98.1	98.3	98.4	98.2	98.28	0.53	0.3

UNCERTAINTY ANALYSIS FOR ONSITE INDIRECT VERIFICATION AS LEFT:

ROCKWELL SCALE	TEST BLOCK S/N	NOMINAL VALUE	TOL +/-	BLOCK UC	STD DEV	BIAS	u (Rep & NU)	u (Resolution)	U _{MACH} (k = 2)
HRBW	1223692	44.85	1.5	1.0	0.16	0.23	0.073	0.029	1.0
HRBW	1712505	60.78	1.0	0.64	0.15	0.40	0.066	0.029	0.66
HRBW	3672837	100.01	1.0	0.48	0.11	0.13	0.051	0.029	0.49
HRC	3678988	26.67	1.0	0.39	0.19	-0.29	0.086	0.029	0.43
HRC	3693534	41.86	1.0	0.32	0.16	-0.04	0.073	0.029	0.39
HRC	3688445	61.44	0.5	0.31	0.08	0.04	0.037	0.029	0.32
HREW	1615546	76.94	1.0	0.57	0.15	-0.08	0.068	0.029	0.59
HREW	1712444	84.09	1.0	0.55	0.28	0.29	0.12	0.029	0.60
HREW	1726805	97.75	1.0	0.55	0.13	0.53	0.058	0.029	0.57

NOTES:

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ISO/IEC 17025

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