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8 September 1983

**Committee D11 on Rubber
Subcommittee D11.10 on Physical Testing**

Research Report D11-1024

**Interlaboratory Study to Establish Precision Statements for ASTM
D1415 - 06 Standard Test Method for Rubber Property—International
Hardness**

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

July 19, 1983

Ms. Martha Kirkaldy
c/o ASTM
1916 Race Street
Philadelphia, PA 19013

RECEIVED

JUL 26 1983

A.S.T.M.

Dear Martha:

The enclosed data is the raw data from which the precision statements for D-1415 were generated. I assume that this writing constitutes a research report.

This round robin was initiated by me as Task Group Chairman in February of 1981. I contacted Testing Machine Inc. and they agreed to furnish a set of Micro Hardness Test Blocks which had been calibrated on May 29, 1980. This set consisted of one block each of a 40, 50, 60 and 70 IRHD reading.

Six different labs agreed to participate and it was agreed that all labs would take five IRHD readings per block on two different days by the same operator. All readings were taken at 30 seconds after the addition of the major force to the plunger.

The labs involved were:

Testing Machine Inc.	Mr. Robert Malito
Xerox Corporation	Mr. Ernest Goral
Firestone Tire	Mr. E. W. Conrad
Norton Company	Mr. G. R. Chumita
Dana Corporation	Mr. Tom Saltis
Acushnet Company	Mr. Art Mellyn

The data was then forwarded to D11.16 and they put it in the format that it currently appears in D-1415. A copy of each company's work sheet is attached and should become a permanent part of the report.

If any other data is necessary for this research report, please contact me for additional details.

With warmest regards,

ACUSHNET COMPANY



Arthur R. Mellyn
Chairman D11.10

ARM:vw

cc: Mr. Charles Tidd
c/o Western Electric Co.
2500 Broening Highway
Baltimore, MD 21224

Mr. Loren Caudill
c/o E.I. DuPont Co.
Chestnut Run
Wilmington, DE 19898

Enclosure

ACUSHNET COMPANY, 1000 BROADWAY, NEW YORK, N.Y. 10001 • TEL. (617) 997-2811

This is a preview. Click here to purchase the full publication.

ASTM Standard D-1415-80

Committee D-11.10 Round Robin

DATE: 3/18/81

	<u>40-41</u>	<u>51-53</u>	<u>63-65</u>	<u>74-76</u>
	40.7	52.3	65.0	75.4
	40.8	52.3	64.5	76.0
	41.1	52.3	64.9	74.0
	41.4	52.2	64.8	76.0
	40.8	52.7	65.0	75.3
Mean Deviation	40.96	52.36	64.84	75.34
Std. Deviation	.288	.195	.207	.817

DATE: 3/19/81

	41.7	52.1	65.9	75.1
	40.6	52.4	64.3	74.8
	41.3	52.3	64.8	74.7
	40.7	51.9	64.7	74.7
	40.6	52.0	64.6	74.6
Mean Deviation	40.98	52.14	64.86	74.78
Std. Deviation	.497	.207	.611	.192

Combined Statistics

Mean Deviation	40.97	52.25	64.85	75.06
Std. Deviation	.383	.222	.430	.633

ASTM D 1110 KOUNO KUNO TESTING PRECISION & ACCURACY OF ASTM D 1415-80 INTERNATIONAL HARDNESS MICRO HARDNESS TEST BLOCKS - CALIBRATED 29-5-80.

IRHD READINGS ON H.W. WALLACE & CO. INSTRUMENT

DAY No. 1 DATE: 3/31/81

READINGS @ 30 SECONDS

DAY No. 2 DATE: 4/1/81

READINGS @ 30 SECONDS

IRHD SAMPLE	#1	#2	#3	#4	#5	AVG.	#1	#2	#3	#4	#5	AVG.
10-41	43	43	44	43.5	43	43	43	43.5	42.5	42	43.5	43

51-53	55	54.5	55	55	55	55	54.5	54	53.5	54	54	54
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3-65	66.5	66	67	66	67.5	67	67	66.5	66.5	66	66	66
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4-76	77	78	77	77	77.5	77	76.5	76	76	76.5	76	76
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RESPECTFULLY SUBMITTED

ERNEST W. CORAL

XEROX CORP.

800 SALT ROAD - BLDG. 843.

WEBSTER, N.Y. 14580

4/1/81