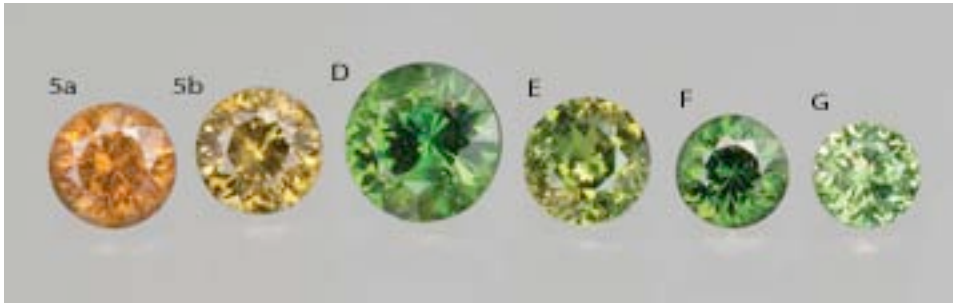


G&G Data Depository: Electron microprobe data to accompany A. Inns and B. M. Laurs, “Gem News International: Andradite from Erzincan, eastern Turkey,” Summer 2009 *G&G*, p. 142.



Courtesy of Rock Logic, Glencoe, Minnesota; photo by Kevin Schumacher.

Electron microprobe analyses of six andradites from Turkey.

Property/ chemical composition	Sample 5a	Sample 5b	Sample D	Sample E	Sample F	Sample G
Hue	Orangy brown	Brownish yellow	Yellowish green	Yellow- green	Yellowish green	Yellowish green
Variety	Andradite	Andradite	Demantoid	Demantoid	Demantoid	Demantoid
Specific gravity	3.82	3.93	4.43	4.17	4.25	4.38
Oxide (wt.%) ^a						
SiO ₂	35.43	35.29	35.41	35.38	35.41	35.46
TiO ₂	0.13	0.04	0.03	0.02	0.06	0.02
Al ₂ O ₃	0.05	0.02	0.04	0.06	0.16	0.14
Cr ₂ O ₃	bdl	0.02	0.09	0.65	1.45	0.12
Fe ₂ O ₃	30.96	31.19	31.15	30.41	29.18	30.80
MnO	0.03	0.02	0.02	0.03	0.03	0.03
MgO	0.06	bdl	0.01	0.04	0.04	0.07
CaO	32.46	32.34	32.46	32.37	32.36	32.27
Total	99.12	98.92	99.21	98.96	98.69	98.91
Mol% end-members ^b						
Uvarovite	-	0.07	0.30	2.20	4.90	0.41
Spessartine	0.07	-	0.05	0.07	0.07	0.07
Pyrope	0.18	-	0.04	0.17	0.17	0.30
Grossular	-	-	0.11	0.06	0.56	0.34
Andradite	98.90	98.92	98.46	96.52	93.41	97.75
Schorlomite	-	0.13	-	-	-	-
Remainder	0.86	0.88	1.04	0.98	0.88	1.14
Total	100.01	100.00	100.00	100.00	99.99	100.01

^a Average composition of five analyses each; bdl = below detection limit. Na was not detected in any of the analyses.

^b Calculated on the basis of 12 oxygens, using the method of A. Locock, “An Excel spreadsheet to recast analyses of garnet into end-member components, and a synopsis of the crystal chemistry of natural silicate garnets, *Computers & Geosciences*, Vol. 34, 2008, pp. 1769–1780.