# Garnets – LD10-084 (long: 113.4575, lat: -0.8934)

 **1084-1 1084-2 1084-3 1084-4 1084-5 1084-6 1084-7 1084-8**

Weight % oxide

SiO2 35.37 35.23 35.62 34.90 35.36 34.93 35.55 35.53

Al2O3 19.93 20.24 20.44 20.39 20.31 20.24 20.15 20.01

TiO2 0.14 0.09 0.06 0.02 0.06 0.00 0.07 0.01

Cr2O3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Fe2O3 5.45 5.81 3.96 7.11 6.08 6.69 5.38 6.05

FeO 29.62 28.34 30.01 28.49 28.87 28.93 29.18 28.16

MnO 5.86 6.52 6.53 5.51 5.47 5.73 5.93 6.28

MgO 2.21 2.31 2.04 2.22 2.21 2.18 2.17 2.31

CaO 1.85 1.66 1.79 1.82 1.92 1.88 1.88 2.03

Na2O 0.12 0.22 0.02 0.30 0.33 0.16 0.24 0.27

Total 100.55 100.42 100.47 100.76 100.61 100.74 100.55 100.66

Formulae calculated on the basis of 24 oxygens

Fe3 calculated for 16 cations

Si 5.756 5.728 5.794 5.661 5.733 5.677 5.772 5.760

Al 3.824 3.880 3.920 3.899 3.882 3.878 3.857 3.824

Ti 0.017 0.011 0.007 0.002 0.007 0.000 0.009 0.001

Cr 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

Fe3 0.667 0.711 0.484 0.868 0.742 0.819 0.658 0.739

Fe2 4.031 3.853 4.082 3.865 3.914 3.932 3.962 3.818

Mn 0.808 0.898 0.900 0.757 0.751 0.789 0.816 0.862

Mg 0.536 0.560 0.495 0.537 0.534 0.528 0.525 0.558

Ca 0.323 0.289 0.312 0.316 0.334 0.327 0.327 0.353

Na 0.038 0.069 0.006 0.094 0.104 0.050 0.076 0.085

Alman 63.2 60.4 65.8 59.8 62.0 60.7 63.0 60.2

And+Sch 15.7 16.7 11.7 20.2 17.6 19.0 15.7 17.5

Gross 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Pyrope 8.4 8.8 8.0 8.3 8.5 8.2 8.3 8.8

Spess 12.7 14.1 14.5 11.7 11.9 12.2 13.0 13.6

 **1084-9 1084-10 1084-11 1084-12 1084-13 1084-14 1084-15 1084-16**

Weight % oxide

SiO2 34.96 35.30 35.39 35.28 35.49 35.44 35.30 35.71

Al2O3 20.05 20.01 19.98 20.69 19.84 20.41 20.33 20.11

TiO2 0.13 0.00 0.03 0.00 0.56 0.11 0.00 0.00

Cr2O3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Fe2O3 6.49 6.35 5.96 5.66 4.90 5.22 6.15 5.00

FeO 28.60 28.40 28.73 28.44 28.72 28.83 28.13 28.64

MnO 6.33 6.47 6.21 6.44 6.75 6.26 6.52 6.97

MgO 2.31 2.32 2.30 2.36 2.03 2.41 2.34 2.26

CaO 1.78 1.57 1.65 1.63 2.11 1.66 1.60 1.67

Na2O 0.11 0.24 0.24 0.20 0.23 0.19 0.27 0.18

Total 100.76 100.66 100.49 100.70 100.62 100.53 100.65 100.54

Formulae calculated on the basis of 24 oxygens

Fe3 calculated for 16 cations

Si 5.683 5.734 5.755 5.712 5.768 5.747 5.724 5.798

Al 3.843 3.832 3.830 3.949 3.801 3.902 3.886 3.849

Ti 0.016 0.000 0.004 0.000 0.068 0.013 0.000 0.000

Cr 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

Fe3 0.794 0.776 0.729 0.689 0.599 0.637 0.751 0.611

Fe2 3.888 3.858 3.907 3.851 3.903 3.910 3.815 3.889

Mn 0.872 0.890 0.855 0.883 0.929 0.860 0.896 0.959

Mg 0.560 0.562 0.557 0.569 0.492 0.582 0.565 0.547

Ca 0.310 0.273 0.287 0.283 0.367 0.288 0.278 0.291

Na 0.035 0.076 0.076 0.063 0.072 0.060 0.085 0.057

Alman 59.7 59.6 60.9 60.8 62.7 62.0 59.6 61.6

And+Sch 18.3 18.0 17.1 16.3 14.4 15.2 17.6 14.5

Gross 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Pyrope 8.6 8.7 8.7 9.0 7.9 9.2 8.8 8.7

Spess 13.4 13.8 13.3 13.9 14.9 13.6 14.0 15.2

 **1084-17 1084-18 1084-19 1084-20 1084-21 1084-22 1084-23 1084-24**

Weight % oxide

SiO2 35.16 35.61 35.25 36.07 35.57 35.40 35.60 35.98

Al2O3 20.10 20.05 20.08 20.24 20.09 20.08 20.27 22.07

TiO2 0.12 0.08 0.17 0.11 0.00 0.17 0.00 0.07

Cr2O3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Fe2O3 5.98 5.39 6.72 3.24 5.41 5.56 5.03 2.33

FeO 28.00 28.37 26.84 29.93 28.89 28.03 28.52 30.56

MnO 6.85 6.40 6.57 6.34 6.36 6.67 6.62 5.55

MgO 2.21 2.18 2.41 2.25 2.21 2.23 2.27 1.85

CaO 1.94 2.15 2.29 2.09 1.93 2.18 2.10 1.84

Na2O 0.17 0.25 0.34 0.04 0.17 0.20 0.13 0.27

Total 100.53 100.48 100.67 100.31 100.63 100.52 100.54 100.51

Formulae calculated on the basis of 24 oxygens

Fe3 calculated for 16 cations

Si 5.719 5.781 5.707 5.857 5.774 5.749 5.775 5.797

Al 3.854 3.838 3.833 3.875 3.845 3.844 3.877 4.192

Ti 0.015 0.010 0.021 0.013 0.000 0.021 0.000 0.008

Cr 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

Fe3 0.732 0.659 0.819 0.396 0.661 0.679 0.614 0.282

Fe2 3.809 3.852 3.634 4.065 3.922 3.807 3.870 4.117

Mn 0.944 0.880 0.901 0.872 0.874 0.918 0.910 0.757

Mg 0.536 0.527 0.581 0.545 0.535 0.540 0.549 0.444

Ca 0.338 0.374 0.397 0.364 0.336 0.379 0.365 0.318

Na 0.054 0.079 0.107 0.013 0.054 0.063 0.041 0.084

Alman 59.6 61.7 57.3 66.9 62.0 60.6 61.9 71.7

And+Sch 17.2 15.8 19.4 9.8 15.7 16.2 14.7 7.4

Gross 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Pyrope 8.4 8.4 9.2 9.0 8.5 8.6 8.8 7.7

Spess 14.8 14.1 14.2 14.4 13.8 14.6 14.6 13.2

 **1084-25 1084-26 1084-27 1084-28 1084-29**

Weight % oxide

SiO2 35.75 35.20 35.18 35.68 36.57

Al2O3 20.05 19.82 20.16 20.16 20.00

TiO2 0.02 0.22 0.00 0.00 0.08

Cr2O3 0.00 0.00 0.00 0.00 0.00

Fe2O3 4.79 6.57 6.72 5.93 3.37

FeO 29.02 27.45 27.78 28.69 29.98

MnO 6.64 6.57 6.42 5.77 5.66

MgO 2.11 2.22 2.05 2.33 2.76

CaO 1.89 2.36 2.28 1.69 1.71

Na2O 0.18 0.26 0.26 0.39 0.21

Total 100.45 100.67 100.85 100.64 100.34

Formulae calculated on the basis of 24 oxygens

Fe3 calculated for 16 cations

Si 5.812 5.716 5.704 5.776 5.912

Al 3.843 3.794 3.854 3.848 3.812

Ti 0.002 0.027 0.000 0.000 0.010

Cr 0.000 0.000 0.000 0.000 0.000

Fe3 0.586 0.803 0.820 0.723 0.410

Fe2 3.946 3.727 3.767 3.885 4.054

Mn 0.914 0.904 0.882 0.791 0.775

Mg 0.511 0.537 0.495 0.562 0.665

Ca 0.329 0.411 0.396 0.293 0.296

Na 0.057 0.082 0.082 0.122 0.066

Alman 63.1 58.5 59.1 61.4 66.4

And+Sch 14.1 18.9 19.3 17.1 10.1

Gross 0.0 0.0 0.0 0.0 0.0

Pyrope 8.2 8.4 7.8 8.9 10.9

Spess 14.6 14.2 13.8 12.5 12.7

**Garnets – SW16/LD09-16** (long: 111.7129, lat: -0.6083)

 **SW16-1 SW16-2 SW16-3 SW16-4 SW16-5 SW16-6**

Weight % oxide

SiO2 35.57 35.57 35.24 35.49 35.85 35.32

Al2O3 19.73 19.45 19.22 19.59 19.69 19.42

TiO2 0.00 0.00 0.09 0.02 0.05 0.02

Cr2O3 0.00 0.00 0.00 0.00 0.00 0.00

Fe2O3 4.20 4.17 4.54 4.79 3.95 4.86

FeO 28.09 28.11 27.74 27.89 27.98 26.86

MnO 10.40 10.10 10.41 10.05 10.97 11.15

MgO 1.09 1.25 1.11 1.14 1.22 1.15

CaO 0.99 0.92 0.95 1.04 0.92 0.80

Na2O 0.15 0.17 0.16 0.22 0.10 0.22

Total 100.22 99.74 99.45 100.23 100.74 99.81

Formulae calculated on the basis of 24 oxygens

Fe3 calculated for 16 cations

Si 5.851 5.875 5.850 5.837 5.867 5.838

Al 3.826 3.787 3.762 3.798 3.799 3.784

Ti 0.000 0.000 0.011 0.002 0.006 0.002

Cr 0.000 0.000 0.000 0.000 0.000 0.000

Fe3 0.520 0.518 0.567 0.593 0.487 0.605

Fe2 3.865 3.882 3.851 3.836 3.830 3.713

Mn 1.449 1.413 1.464 1.400 1.521 1.561

Mg 0.267 0.308 0.275 0.279 0.298 0.283

Ca 0.174 0.163 0.169 0.183 0.161 0.142

Na 0.048 0.054 0.052 0.070 0.032 0.071

Alman 60.8 60.8 59.8 59.9 60.0 57.4

And+Sch 12.3 12.2 13.2 13.9 11.4 14.0

Gross 0.0 0.0 0.0 0.0 0.0 0.0

Pyrope 4.2 4.8 4.3 4.4 4.7 4.4

Spess 22.8 22.1 22.7 21.9 23.8 24.1