Table 12. Major (wt.%) and trace element (ppm) composition of intermediate to felsic orthogneiss from the Mbé – Sassa-Mbersi area.

Sample N14 K14 NB14 MM14 NB14 NB14 NB14 CK09 NFA

01b 01 03b 05 10a 07b 03 01 02

Type qz-mzd qz-mzd qz-mzd qz-mzd qz-mz ton mzgr syegr syegr

SiO2 57.18 57.32 57.42 58.74 62.44 67.55 73.70 74.82 76.35

Al2O3 15.54 15.68 14.79 17.28 16.67 15.87 14.15 13.37 13.32

Fe2O3tot 9.22 8.49 6.43 7.45 4.87 3.89 2.20 0.51 0.63

MnO 0.10 0.14 0.13 0.12 0.07 0.05 0.05 0.05 0.02

MgO 2.98 4.64 3.06 3.26 2.06 1.84 0.50 0.03 0.06

CaO 5.71 6.69 11.52 5.60 3.17 4.27 2.13 1.01 0.66

Na2O 4.12 2.99 2.46 3.87 3.89 4.40 3.48 4.06 3.90

K2O 1.79 1.90 2.38 1.97 3.66 1.45 3.58 4.33 4.99

TiO2 1.98 0.68 0.78 0.77 0.73 0.40 0.24 0.04 0.03

P2O5 0.46 0.20 0.17 0.30 0.28 0.11 0.07 - -

LOI 0.71 0.85 1.68 1.06 2.86 0.99 0.47 0.35 0.29

Total 99.80 99.58 100.81 100.42 100.10 100.82 100.56 98.57 100.25

Ba 645 613 504 658 1924 620 1067 24 187

Be 1.7 0.9 2.6 2.6 1.8 1.2 1.2 4.3 5.8

Co 28.6 25.2 17.7 23.7 11.2 12.1 4.1 0.5 1.7

Cr 345 206 92 399 18 47 154 51 172

Cs 1.0 1.0 0.9 2.9 0.4 0.3 0.4 4.8 5.0

Ga 23.7 18.3 21.4 24.6 20.0 22.6 17.3 19.3 25.1

Hf 5.7 2.7 4.7 3.5 5.2 2.8 3.3 2.6 3.8

Mo 37.2 2.9 1.8 40.6 - - 17.2 3.0 19.3

Nb 15.4 4.6 11.7 6.6 5.3 3.4 4.2 15.6 9.1

Ni 217 46 43 235 13.8 25 92 33 101

Rb 48 62 83 83 76 45 82 122 311

Sc 8.7 25.5 15.1 18.9 8.9 8.9 3.9 2.3 2.8

Sn 2.6 0.8 4.5 2.7 1.9 1.7 1.1 1.5 5.3

Sr 689 465 804 705 751 672 366 34 71

Ta 1.2 0.3 1.1 0.4 0.3 0.2 0.3 3.7 1.1

Th 5.4 4.8 11.6 4.4 1.7 3.6 8.2 7.0 18.1

U 0.8 0.6 4.1 0.6 0.3 0.2 1.0 22.9 4.4

V 140 141 118 128 79.4 58 15.1 0.9 2.1

W 1.1 0.4 1.7 1.2 - - 0.5 0.3 0.7

Y 15.3 19.1 27.7 19.0 14.4 7.2 15.8 30.6 24.4

Zn 124 100 92 113 71 63 45 22 27

Zr 233 94 171 135 221 99 103 62 61

La 37.49 18.23 33.19 28.33 33.70 24.74 22.80 2.87 13.02

Ce 82.32 39.61 73.58 58.94 67.77 47.51 44.79 6.38 27.20

Pr 9.91 4.92 8.68 7.19 7.74 5.20 4.98 0.85 3.26

Nd 38.44 19.82 32.87 28.53 28.70 18.54 18.00 3.71 11.67

Sm 7.23 4.25 6.64 5.87 5.07 3.13 3.32 1.61 3.30

Eu 2.03 1.13 1.40 1.53 1.49 0.84 0.86 0.35 0.22

Gd 5.27 3.65 5.66 4.65 3.82 2.31 2.75 2.16 3.01

Tb 0.69 0.55 0.85 0.65 0.51 0.31 0.43 0.49 0.54

Dy 3.54 3.37 5.22 3.61 2.83 1.60 2.62 3.74 3.42

Ho 0.60 0.72 1.03 0.70 0.55 0.28 0.54 0.86 0.71

Er 1.35 1.93 2.75 1.84 1.38 0.67 1.50 2.74 1.93

Tm 0.16 0.28 0.39 0.26 0.20 0.09 0.23 0.49 0.30

Yb 0.90 1.98 2.60 1.79 1.22 0.55 1.59 3.70 2.15

Lu 0.13 0.30 0.39 0.27 0.19 0.08 0.25 0.61 0.33

qz-mzd = quartz monzodiorite; qz-mz = quartz monzonite; ton = tonalite; mzgr = monzogranite; syegr = syenogranite.