*supplementary Table 2: Representative chemical analyses (in wt.%) of clinopyroxenes of Cameroon dykes*

| Sample | Mb | Mb | Mb | Mb | Mb | Mb | Mb | Mb | Mb | Mb | Mb | Mb | Mb | Mb | M3 | M3 | M3 | M3 | M3 | M3 | M3 | M3 | M3 | M3 | M3 | M3 | M3 | M3 | D1a | D1a | D1a | D1a | D1a | D1a | D1a | D1a | Tb | Tb | Tb | Tb | Tb | Tb | Tb | Tb | Tb | Tb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Description | gm | mcr | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | gm | core | rim | gm | gm | gm | gm | gm | gm | gm | gm |
| $SiO_2$ | 44.96 | 46.21 | 45.45 | 45.47 | 44.98 | 46.26 | 47.64 | 47.74 | 46.91 | 44.20 | 46.77 | 46.56 | 48.30 | 47.66 | 50.95 | 49.25 | 48.31 | 47.82 | 49.20 | 47.80 | 48.90 | 48.83 | 50.38 | 50.39 | 49.49 | 47.95 | 49.62 | 49.30 | 49.04 | 47.96 | 49.27 | 49.30 | 50.69 | 49.37 | 48.14 | 49.21 | 49.99 | 45.39 | 48.81 | 48.50 | 48.46 | 48.75 | 48.99 | 48.14 | 46.84 | 48.87 | 50.39 |
| $TiO_2$ | 4.32 | 2.84 | 3.52 | 3.92 | 3.39 | 2.75 | 1.96 | 1.10 | 3.21 | 3.86 | 3.29 | 2.97 | 1.82 | 2.53 | 0.97 | 2.20 | 1.57 | 1.71 | 1.56 | 2.27 | 1.69 | 1.93 | 2.32 | 1.10 | 1.74 | 2.20 | 1.42 | 1.11 | 1.75 | 2.21 | 2.24 | 2.16 | 2.22 | 1.76 | 2.02 | 2.04 | 1.46 | 3.74 | 1.87 | 2.25 | 2.05 | 2.15 | 1.60 | 1.60 | 2.43 | 2.02 | 0.40 |
| $Al_2O_3$ | 5.91 | 4.95 | 5.53 | 5.85 | 6.38 | 4.76 | 4.16 | 3.28 | 5.29 | 5.83 | 4.93 | 5.09 | 4.04 | 4.74 | 1.21 | 3.58 | 2.76 | 5.19 | 4.15 | 5.69 | 4.05 | 3.35 | 4.40 | 4.02 | 3.90 | 3.72 | 3.53 | 2.42 | 4.73 | 4.50 | 4.67 | 4.97 | 5.25 | 5.09 | 4.12 | 4.63 | 3.79 | 8.62 | 5.80 | 6.84 | 6.24 | 5.68 | 6.59 | 6.07 | 6.27 | 5.53 | 2.72 |
| FeO | 10.87 | 12.31 | 11.69 | 10.74 | 11.06 | 11.25 | 13.60 | 16.13 | 10.78 | 12.60 | 13.34 | 12.96 | 14.80 | 11.70 | 21.22 | 11.17 | 16.95 | 10.78 | 9.35 | 10.05 | 10.38 | 16.78 | 10.94 | 10.84 | 13.68 | 13.10 | 11.41 | 18.47 | 10.94 | 7.65 | 8.65 | 8.23 | 7.76 | 8.81 | 10.30 | 9.11 | 10.57 | 7.95 | 7.19 | 8.02 | 8.22 | 8.25 | 5.94 | 6.91 | 8.66 | 8.71 | 7.23 |
| MnO | 0.20 | 0.18 | 0.23 | 0.26 | 0.48 | 0.42 | 0.36 | 0.10 | 0.09 | 0.33 | 0.34 | - | 0.29 | 0.17 | 0.52 | 0.18 | 0.65 | 0.44 | 0.49 | 0.19 | 0.17 | 0.47 | 0.05 | 0.14 | 0.35 | 0.41 | 0.45 | 0.30 | 0.27 | - | 0.20 | - | 0.18 | 0.47 | 0.15 | 0.53 | - | - | 0.24 | 0.22 | - | - | 0.34 | 0.35 | - | 0.29 | - |
| MgO | 10.87 | 10.49 | 10.19 | 10.28 | 11.64 | 11.11 | 10.22 | 8.95 | 11.77 | 9.93 | 10.13 | 10.39 | 9.93 | 10.81 | 5.64 | 12.47 | 7.63 | 12.15 | 14.12 | 12.96 | 12.72 | 8.32 | 13.56 | 13.24 | 12.04 | 11.63 | 13.18 | 8.94 | 12.62 | 13.28 | 13.59 | 14.06 | 13.99 | 13.54 | 12.72 | 12.82 | 12.86 | 11.80 | 13.37 | 14.01 | 14.14 | 13.34 | 14.35 | 14.11 | 13.05 | 14.23 | 16.48 |
| CaO | 20.51 | 20.08 | 20.00 | 21.08 | 19.55 | 21.23 | 19.64 | 20.55 | 20.01 | 19.93 | 20.26 | 20.73 | 19.93 | 21.04 | 20.33 | 19.24 | 19.75 | 18.14 | 19.67 | 18.42 | 19.04 | 19.61 | 19.70 | 20.44 | 19.29 | 18.57 | 19.44 | 18.99 | 20.17 | 20.71 | 20.75 | 20.79 | 20.66 | 21.30 | 20.02 | 21.11 | 19.96 | 21.98 | 21.97 | 20.16 | 20.26 | 20.23 | 20.17 | 20.83 | 20.57 | 20.20 | 19.95 |
| $Na_2O$ | 0.60 | 0.51 | 0.58 | 0.49 | 0.31 | 0.34 | 0.25 | 0.19 | 0.42 | 0.30 | 0.33 | 0.45 | 0.29 | 0.52 | 0.16 | 0.23 | 0.13 | 0.08 | 0.30 | 0.13 | - | 0.21 | 0.17 | 0.18 | 0.18 | 0.24 | - | 0.18 | 0.19 | - | - | - | 0.08 | 0.15 | - | 0.09 | 0.02 | 0.11 | 0.12 | 0.16 | - | 0.07 | 0.22 | - | 0.07 | - | - |
| $Cr_2O_3$ | 0.15 | 0.23 | 0.05 | 0.10 | 0.06 | 0.05 | - | - | 0.34 | 0.22 | 0.13 | - | 0.19 | 0.35 | - | 0.10 | - | - | 0.14 | 0.35 | 0.33 | - | 0.57 | - | 0.18 | - | - | - | 0.05 | 0.29 | 0.45 | 0.23 | 0.71 | - | 0.20 | 0.10 | - | 0.36 | 0.17 | 0.30 | 0.09 | 0.56 | 0.52 | 0.53 | 0.28 | 0.29 | 0.32 |
| $V_2O_3$ | 0.19 | 0.38 | 0.31 | 0.16 | 0.20 | 0.27 | - | 0.23 | - | - | - | 0.07 | 0.29 | - | - | - | 0.06 | 0.28 | - | 0.16 | - | 0.08 | - | 0.36 | 0.14 | - | 0.16 | - | - | - | 0.14 | - | 0.07 | 0.67 | 0.21 | 0.32 | 0.53 | 0.04 | 0.08 | 0.14 | 0.34 | - | 0.29 | 0.12 | 0.07 | - | 0.10 |
| sum | 98.6 | 98.2 | 97.5 | 98.4 | 98.1 | 98.4 | 97.8 | 98.3 | 98.8 | 97.2 | 99.5 | 99.2 | 99.9 | 99.5 | 101.0 | 98.4 | 97.8 | 96.6 | 99.0 | 98.0 | 97.3 | 99.6 | 102.1 | 100.7 | 101.0 | 97.8 | 99.2 | 99.7 | 99.8 | 96.6 | 100.0 | 99.7 | 101.6 | 101.2 | 97.9 | 100.0 | 99.2 | 100.0 | 99.6 | 100.6 | 99.8 | 99.0 | 99.0 | 98.6 | 98.2 | 100.2 | 97.6 |
| Mg# | 64 | 60 | 61 | 63 | 65 | 64 | 57 | 50 | 66 | 58 | 58 | 59 | 54 | 62 | 32 | 67 | 45 | 67 | 73 | 70 | 69 | 47 | 69 | 69 | 61 | 61 | 67 | 46 | 67 | 76 | 74 | 75 | 76 | 73 | 69 | 72 | 68 | 73 | 77 | 76 | 75 | 74 | 81 | 78 | 73 | 74 | 80 |
| Si | 1.737 | 1.797 | 1.776 | 1.759 | 1.742 | 1.792 | 1.859 | 1.880 | 1.794 | 1.744 | 1.800 | 1.795 | 1.856 | 1.821 | 1.985 | 1.880 | 1.915 | 1.854 | 1.858 | 1.822 | 1.880 | 1.895 | 1.850 | 1.878 | 1.863 | 1.861 | 1.882 | 1.919 | 1.849 | 1.845 | 1.839 | 1.837 | 1.847 | 1.827 | 1.849 | 1.845 | 1.887 | 1.702 | 1.821 | 1.790 | 1.803 | 1.829 | 1.820 | 1.810 | 1.783 | 1.818 | 1.905 |
| $Al^{IV}$ | 0.263 | 0.203 | 0.224 | 0.241 | 0.258 | 0.208 | 0.141 | 0.120 | 0.206 | 0.256 | 0.200 | 0.205 | 0.144 | 0.179 | 0.015 | 0.120 | 0.085 | 0.146 | 0.142 | 0.178 | 0.120 | 0.105 | 0.150 | 0.122 | 0.137 | 0.139 | 0.118 | 0.081 | 0.151 | 0.155 | 0.161 | 0.163 | 0.153 | 0.173 | 0.151 | 0.155 | 0.113 | 0.298 | 0.179 | 0.210 | 0.197 | 0.171 | 0.180 | 0.190 | 0.217 | 0.182 | 0.095 |
| Ti | 0.126 | 0.083 | 0.103 | 0.114 | 0.099 | 0.080 | 0.058 | 0.033 | 0.092 | 0.115 | 0.095 | 0.086 | 0.053 | 0.073 | 0.028 | 0.063 | 0.047 | 0.050 | 0.044 | 0.065 | 0.049 | 0.056 | 0.064 | 0.031 | 0.049 | 0.064 | 0.041 | 0.033 | 0.050 | 0.064 | 0.063 | 0.060 | 0.061 | 0.049 | 0.058 | 0.058 | 0.041 | 0.106 | 0.053 | 0.063 | 0.057 | 0.061 | 0.045 | 0.045 | 0.070 | 0.057 | 0.011 |
| $Al^{VI}$ | 0.006 | 0.024 | 0.031 | 0.026 | 0.033 | 0.010 | 0.050 | 0.033 | 0.032 | 0.015 | 0.023 | 0.026 | 0.039 | 0.034 | 0.040 | 0.041 | 0.044 | 0.091 | 0.042 | 0.077 | 0.063 | 0.048 | 0.041 | 0.055 | 0.036 | 0.032 | 0.040 | 0.031 | 0.059 | 0.050 | 0.044 | 0.055 | 0.073 | 0.049 | 0.035 | 0.049 | 0.056 | 0.083 | 0.077 | 0.088 | 0.077 | 0.080 | 0.109 | 0.079 | 0.064 | 0.060 | 0.027 |
| $Fe^{3+}$ | 0.046 | 0.044 | 0.029 | 0.021 | 0.049 | 0.062 | - 0.005 | 0.037 | 0.010 | 0.028 | 0.007 | 0.040 | 0.015 | 0.027 | - 0.070 | - 0.033 | - 0.043 | - 0.040 | 0.029 | - 0.030 | - 0.051 | - 0.039 | - 0.023 | - 0.019 | - 0.011 | - 0.003 | - 0.003 | - 0.001 | - 0.004 | - 0.032 | - 0.022 | - 0.020 | - 0.057 | - 0.037 | - 0.006 | - 0.006 | - 0.024 | - 0.001 | - 0.001 | - 0.001 | - 0.002 | - 0.041 | - 0.018 | - 0.005 | - 0.011 | - 0.000 | 0.036 |
| $Fe^{2+}$ | 0.305 | 0.356 | 0.353 | 0.327 | 0.310 | 0.303 | 0.449 | 0.495 | 0.335 | 0.388 | 0.422 | 0.378 | 0.460 | 0.347 | 0.761 | 0.390 | 0.605 | 0.390 | 0.266 | 0.350 | 0.385 | 0.584 | 0.359 | 0.319 | 0.420 | 0.429 | 0.364 | 0.603 | 0.340 | 0.278 | 0.292 | 0.276 | 0.293 | 0.236 | 0.337 | 0.291 | 0.358 | 0.248 | 0.223 | 0.249 | 0.254 | 0.300 | 0.203 | 0.212 | 0.265 | 0.271 | 0.193 |
| Mn | 0.006 | 0.006 | 0.008 | 0.009 | 0.016 | 0.014 | 0.012 | 0.003 | 0.003 | 0.011 | 0.011 | 0.000 | 0.009 | 0.006 | 0.017 | 0.006 | 0.022 | 0.015 | 0.016 | 0.006 | 0.005 | 0.016 | 0.001 | 0.004 | 0.011 | 0.014 | 0.015 | 0.010 | 0.009 | 0.000 | 0.006 | 0.000 | 0.006 | 0.015 | 0.005 | 0.017 | 0.000 | 0.000 | 0.008 | 0.007 | 0.000 | 0.000 | 0.011 | 0.011 | 0.000 | 0.009 | 0.000 |
| Mg | 0.626 | 0.608 | 0.593 | 0.593 | 0.672 | 0.642 | 0.594 | 0.526 | 0.671 | 0.584 | 0.581 | 0.597 | 0.569 | 0.616 | 0.327 | 0.709 | 0.451 | 0.702 | 0.795 | 0.736 | 0.729 | 0.481 | 0.742 | 0.736 | 0.675 | 0.673 | 0.745 | 0.519 | 0.710 | 0.762 | 0.756 | 0.781 | 0.760 | 0.747 | 0.728 | 0.716 | 0.724 | 0.659 | 0.744 | 0.771 | 0.784 | 0.746 | 0.795 | 0.791 | 0.741 | 0.789 | 0.929 |
| Ca | 0.849 | 0.837 | 0.837 | 0.874 | 0.811 | 0.881 | 0.821 | 0.867 | 0.820 | 0.843 | 0.835 | 0.856 | 0.821 | 0.862 | 0.849 | 0.787 | 0.839 | 0.753 | 0.796 | 0.752 | 0.784 | 0.815 | 0.775 | 0.816 | 0.778 | 0.772 | 0.790 | 0.792 | 0.815 | 0.854 | 0.830 | 0.830 | 0.807 | 0.845 | 0.824 | 0.848 | 0.807 | 0.883 | 0.879 | 0.797 | 0.808 | 0.813 | 0.803 | 0.839 | 0.839 | 0.805 | 0.808 |
| Na | 0.045 | 0.039 | 0.044 | 0.037 | 0.023 | 0.026 | 0.019 | 0.015 | 0.031 | 0.023 | 0.024 | 0.033 | 0.022 | 0.038 | 0.012 | 0.017 | 0.010 | 0.006 | 0.022 | 0.010 | 0.000 | 0.016 | 0.012 | 0.013 | 0.013 | 0.018 | 0.000 | 0.014 | 0.014 | 0.000 | 0.000 | 0.000 | 0.006 | 0.011 | 0.000 | 0.006 | 0.002 | 0.008 | 0.009 | 0.011 | 0.000 | 0.005 | 0.016 | 0.000 | 0.005 | 0.000 | 0.000 |
| Cr | 0.005 | 0.007 | 0.001 | 0.003 | 0.002 | 0.001 | 0.000 | 0.000 | 0.010 | 0.007 | 0.004 | 0.000 | 0.006 | 0.011 | 0.000 | 0.003 | 0.000 | 0.000 | 0.004 | 0.011 | 0.010 | 0.000 | 0.017 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.001 | 0.009 | 0.013 | 0.007 | 0.020 | 0.000 | 0.006 | 0.003 | 0.000 | 0.011 | 0.005 | 0.009 | 0.003 | 0.016 | 0.015 | 0.016 | 0.008 | 0.009 | 0.010 |
| V | 0.006 | 0.012 | 0.010 | 0.005 | 0.006 | 0.008 | 0.000 | 0.007 | 0.000 | 0.000 | 0.000 | 0.002 | 0.009 | 0.000 | 0.000 | 0.000 | 0.002 | 0.009 | 0.000 | 0.005 | 0.000 | 0.003 | 0.000 | 0.011 | 0.004 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.004 | 0.000 | 0.002 | 0.020 | 0.006 | 0.010 | 0.016 | 0.001 | 0.002 | 0.004 | 0.010 | 0.000 | 0.009 | 0.004 | 0.002 | 0.000 | 0.003 |
| sum | 4.020 | 4.016 | 4.010 | 4.008 | 4.021 | 4.027 | 3.998 | 4.015 | 4.005 | 4.014 | 4.003 | 4.019 | 4.003 | 4.014 | 3.965 | 3.983 | 3.977 | 3.976 | 4.015 | 3.983 | 3.974 | 3.979 | 3.988 | 4.004 | 4.003 | 3.998 | 3.996 | 3.999 | 4.002 | 3.984 | 3.987 | 3.990 | 3.971 | 4.009 | 3.994 | 3.992 | 3.980 | 4.000 | 3.999 | 3.997 | 3.996 | 3.979 | 3.987 | 4.001 | 4.004 | 4.000 | 4.017 |
| Ca | 46 | 45 | 46 | 48 | 44 | 46 | 44 | 45 | 45 | 45 | 45 | 46 | 44 | 46 | 45 | 42 | 45 | 41 | 42 | 41 | 42 | 44 | 42 | 43 | 41 | 41 | 41 | 41 | 43 | 46 | 45 | 44 | 45 | 45 | 44 | 45 | 43 | 49 | 47 | 44 | 44 | 45 | 45 | 45 | 45 | 43 | 41 |
| Fe* | 20 | 22 | 21 | 20 | 20 | 20 | 24 | 28 | 19 | 23 | 24 | 22 | 26 | 20 | 38 | 20 | 31 | 20 | 16 | 18 | 18 | 30 | 18 | 18 | 23 | 23 | 20 | 32 | 19 | 13 | 15 | 14 | 13 | 15 | 18 | 16 | 18 | 14 | 13 | 14 | 14 | 14 | 11 | 12 | 15 | 15 | 12 |
| Mg | 34 | 33 | 33 | 33 | 36 | 34 | 32 | 27 | 36 | 32 | 31 | 32 | 30 | 33 | 17 | 38 | 24 | 39 | 42 | 41 | 39 | 26 | 40 | 39 | 36 | 36 | 39 | 27 | 38 | 41 | 41 | 42 | 42 | 40 | 39 | 38 | 39 | 37 | 40 | 42 | 42 | 41 | 44 | 43 | 40 | 42 | 47 |

gm = groundmass; Mg# = atomic 100*Mg/(Mg + Fe).