

APPENDIX 2

Mineralogical and geochemical weathering indices in selected samples from the uppermost Triassic and Lower Jurassic in the Polish Basin (based on the results of previous research)

| No. | Lab. No | Sample | Clays and clay minerals | | | | | Chemical indices (major elements) | | | | | | | | | TOC (%) |
|-----|----------|----------|-------------------------|------|----------------------------|---------------------------|------------|-----------------------------------|-----------|---------|---------|---------|------|------|--|-------|---------|
| | | | ΣCM (%) | CI | Kaolinite (%) [*] | Smectite (%) [*] | K/(I+S+Ch) | Al/K | K/(Na+Ca) | CIA | CIW | PIA | B/Al | ICV | Al ₂ O ₃ /TiO ₂ | | |
| 1. | 10/13/30 | Nk/187.5 | 74 | 3.70 | 16 | | 0.19 | 4.70 | 3.30 | (78.28) | (93.94) | (92.42) | 0.83 | 1.05 | 18 | – | |
| 2. | 10/13/31 | Nk/178.4 | 68 | 2.62 | 90 | | 9.00 | 40.75 | 0.40 | 91.06 | 93.14 | 92.98 | 0.23 | 0.53 | 22 | – | |
| 3. | 10/13/32 | Nk/167.8 | 70 | 3.33 | 41 | 59 | 0.67 | 29.67 | 0.40 | 84.76 | 87.27 | 86.87 | 0.39 | 0.71 | 21 | – | |
| 4. | 10/13/33 | Nk/162.3 | 64 | 1.83 | ~100 | | | 206.00 | 0.10 | 94.93 | 95.37 | 95.35 | 0.11 | 0.21 | 13 | – | |
| 5. | 10/13/34 | Nk/157.7 | 65 | 1.91 | 73 | | 2.70 | 27.00 | 1.40 | 94.03 | 97.42 | 97.33 | 0.14 | 0.23 | 14 | – | |
| 6. | 10/13/35 | Nk/32.0 | 39 | 0.65 | 68 | | 2.13 | 8.64 | 4.28 | 87.50 | 97.36 | 97.03 | 0.19 | 0.32 | 9 | – | |
| 7. | 10/13/36 | Gr/204.1 | 83 | 5.53 | 64 | | 1.77 | 11.39 | 4.69 | 90.38 | 98.16 | 97.99 | 0.18 | 0.39 | 19 | 0.32 | |
| 8. | 5/15/24 | K/1973.8 | 54 | 1.69 | 34 | – | 0.52 | 6.32 | 1.52 | 79.22 | 90.58 | 89.01 | 0.44 | 0.61 | 17 | 0.13 | |
| 9. | 10/13/37 | K/1480.3 | 58 | 1.61 | 59 | | 1.44 | 6.28 | 3.82 | 83.07 | 95.73 | 94.96 | 0.36 | 0.61 | 13 | 1.18 | |
| 10. | 5/15/23 | K/1465.2 | 53 | 1.33 | 47 | | 0.89 | 6.45 | 3.32 | 83.11 | 95.41 | 94.61 | 0.33 | 0.42 | 12 | 1.44 | |
| 11. | 5/15/25 | K/1464.3 | 69 | 2.46 | 41 | | 0.69 | 6.02 | 5.77 | 83.55 | 97.00 | 96.43 | 0.32 | 0.40 | 12 | 2.52 | |
| 12. | 10/13/38 | K/1463.7 | 76 | 5.06 | 26 | | 0.35 | 4.37 | 5.57 | 78.66 | 95.91 | 94.76 | 0.43 | 0.54 | 8 | 2.34 | |
| 13. | 5/15/26 | K/1462.3 | 39 | 0.89 | 67 | tr. | 2.04 | 6.32 | 5.19 | 84.24 | 97.20 | 96.69 | 0.30 | 0.40 | 10 | 15.30 | |
| 14. | 5/15/14 | M/1130.0 | 45 | 0.83 | 56 | | 1.27 | 9.73 | 1.75 | 86.09 | 94.45 | 93.85 | 0.28 | 0.38 | 11 | 0.67 | |
| 15. | 5/15/15 | M/700.5 | 39 | 0.64 | 54 | tr. | 1.17 | 4.81 | 1.74 | 75.37 | 89.38 | 86.96 | 0.47 | 0.62 | 12 | – | |
| 16. | 10/13/39 | BL/185.5 | 54 | 1.20 | 46 | | 0.86 | 5.6 | 4.81 | 82.2 | 96.4 | 95.7 | 0.36 | 0.44 | 13 | 0.68 | |
| 17. | 10/13/40 | BL/162.0 | 63 | 1.91 | 37 | | 0.58 | 5.0 | 4.75 | 80.5 | 94.3 | 93.2 | 0.47 | 0.77 | 13 | 1.63 | |
| 18. | 10/13/41 | BL/159.0 | 75 | 3.57 | 82 | | 4.62 | 6.5 | 5.72 | 84.7 | 97.4 | 96.9 | 0.35 | 0.54 | 20 | 0.58 | |
| 19. | 5/15/27 | GW/815.0 | 79 | 3.95 | 55 | tr. | 1.22 | 5.81 | 1.73 | 78.57 | 90.27 | 89.31 | 0.54 | 0.87 | 11 | – | |

ΣCM – total clay minerals, CI (Clay index) = clay minerals/(quartz + feldspar), K/(I+S+Ch) – kaolinite/(illite + smectite + chlorite), CIA – Chemical Index of Alteration (Nesbitt and Young, 1982), CIW – Chemical Index of Weathering (Harnois, 1988), PIA – Plagioclase Index of Alteration (Fedo et al., 1995), B/Al – “Bases to Alumina” (Retallack, 2001), ICV – Index of Compositional Variability (Cox et al., 1995), TOC – Total Organic Carbon, tr. – trace content; Nk, Gr, BL – Holy Cross Mts. segment of MPT, K – Kuyavian segment of MPT, M – Pomeranian segment of MPT, GW – Fore-Sudetic Monocline (northern part)