



Appendix Fig. 2. Discrimination diagrams with boundaries for apatites from different ore deposits (discrimination step II; Table 5; App. Table 5): a) The first discriminant function (DP2-1-1) vs. the second discriminant function (DP2-1-2); $DP2-1-1 = -2.275 \cdot \log Mn - 1.429 \cdot \log Sr + 1.504 \cdot \log Y + 3.247 \cdot \log Ce - 1.088 \cdot \log Eu + 0.1925 \cdot \log Dy + 0.7636 \cdot \log Yb - 0.05301 \cdot \log Th - 1.538 \cdot \log U - 3.655$; $DP2-1-2 = 1.321 \cdot \log Mn + 1.576 \cdot \log Sr + 14.63 \cdot \log Y - 0.005804 \cdot \log Ce + 1.605 \cdot \log Eu - 16.53 \cdot \log Dy + 3.251 \cdot \log Yb - 0.2426 \cdot \log Th - 1.155 \cdot \log U - 20.30$. b) The second discriminant function (DP2-2-2) vs. the third discriminant function (DP2-2-3); $DP2-2-2 = 1.882 \cdot \log Mg - 1.872 \cdot \log Mn - 0.8039 \cdot \log Sr - 12.21 \cdot \log Y - 0.6912 \cdot \log Ce - 2.014 \cdot \log Eu + 14.84 \cdot \log Dy - 3.946 \cdot \log Yb - 0.734 \cdot \log Th + 2.513 \cdot \log U + 24.20$; $DP2-2-3 = -0.3009 \cdot \log Mg - 0.078 \cdot \log Mn - 1.591 \cdot \log Sr - 6.697 \cdot \log Y - 0.6125 \cdot \log Ce - 0.2912 \cdot \log Eu + 0.722 \cdot \log Dy + 2.686 \cdot \log Yb + 1.466 \cdot \log Th + 0.4239 \cdot \log U + 16.26$. c) The first discriminant function (DP2-3-1) vs. the second discriminant function (DP2-3-2); $DP2-3-1 = 1.034 \cdot \log Mg - 3.069 \cdot \log Mn + 4.045 \cdot \log Y + 3.368 \cdot \log Ce - 3.127 \cdot \log Eu - 0.2322 \cdot \log Dy - 0.7732 \cdot \log Yb - 0.1035 \cdot \log Pb - 1.228 \cdot \log Th - 0.2231 \cdot \log U - 4.263$; $DP2-3-2 = 1.888 \cdot \log Mg - 1.839 \cdot \log Mn - 4.813 \cdot \log Y - 0.3218 \cdot \log Ce - 3.421 \cdot \log Eu + 10.67 \cdot \log Dy - 5.662 \cdot \log Yb + 1.706 \cdot \log Pb - 1.043 \cdot \log Th + 1.803 \cdot \log U + 14.24$. Variables are log₁₀-equivalents of element concentrations in ppm for all elements, except for Mg which is in wt %.