

Application of Dating Method by Free Iron Oxides Analysis for loess sediments (Red-Brown soil Layer) of Matsue Area, Japan

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As an alternative to soil dating method by using widespread tephras, it is proposed dating method based on free iron oxides analysis by Nagatsuka (1973).

In the Matsue area, tephras from Sanbe volcanoes (SK, about 105ka) and Daisen volcanoes (DMP, about 130ka) are preserved. In this study, the authors examined the applicability of dating method by free iron oxides analysis for loess sediments (Red-Brown soil layer) below the DMP.

As a result, loess sediments below the DMP is classified red soils by Nagatsuka (1973).

Sasaki(2011) proved that it would take about 125ka for red soils to develop. The age is most consistent with tephra stratigraphy and chronology.

It shows that this method can be a good index of the degree of soil development.

Keywords: Free iron oxides analysis, Crystallinity ratio, Soil age, Loess sediments, Red soil, Matsue area

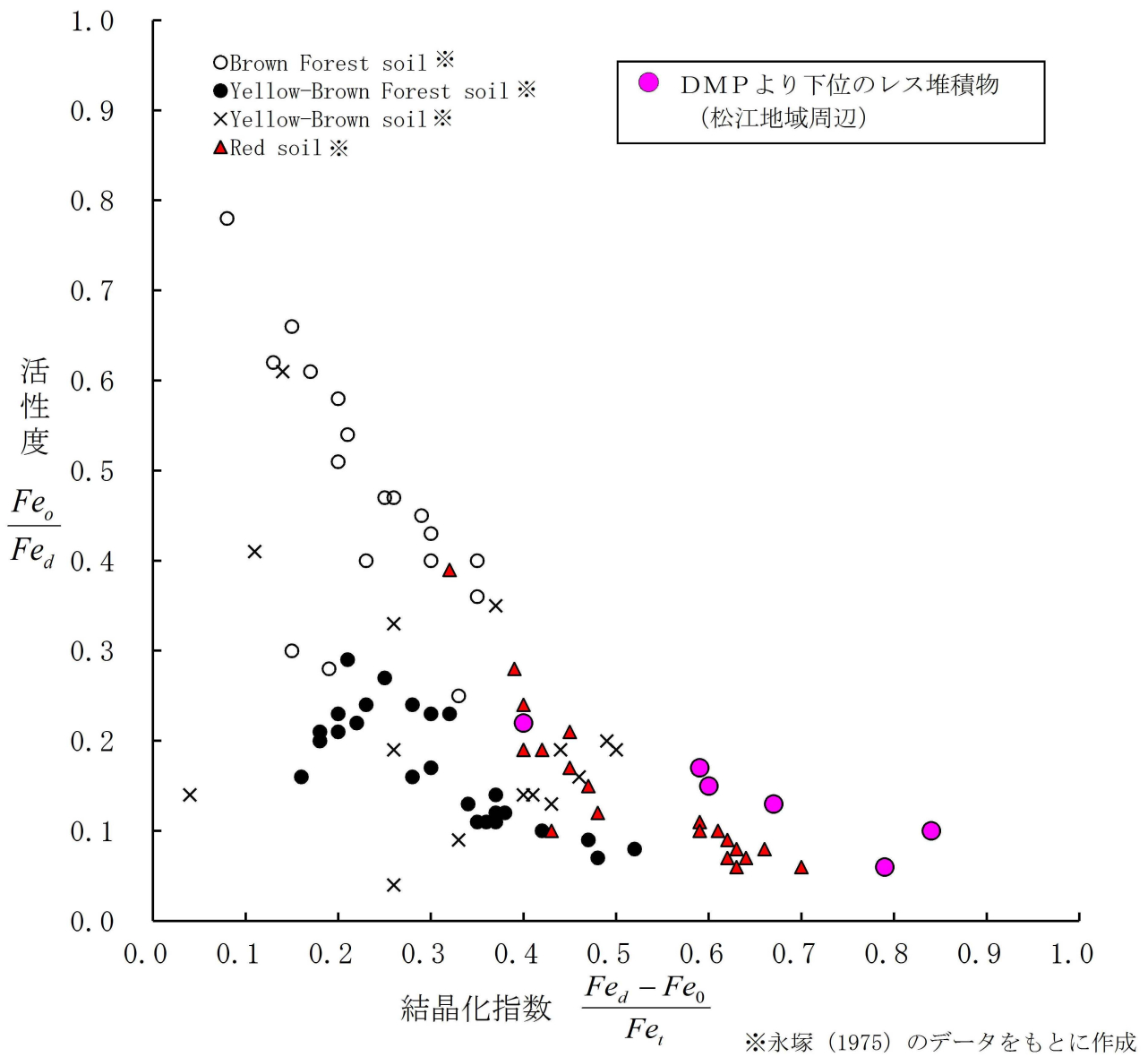


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