

Red thermoluminescence (RTL) dating using coarse quartz grains from Omachi APm tephra beds

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Red thermoluminescence (RTL) dating by additive dose method was applied to coarse quartz grains of Omachi APm tephra beds, which ages by their stratigraphy were estimated between 300ka and 350ka. Electron spin resonance (ESR) dating was also attempted using the same samples. The ages obtained by RTL were 260ka, 250ka, 410ka, 270ka and 220ka in order of the stratigraphic deposition. The Al centers ($g=2.018$) gave highly scattered results of ages and doesn't agree with RTL ages. It suggests that the RTL ages are more reliable than the ESR ages by Al signal in the dating of volcanic ash samples. The evaluated RTL ages were slightly younger than stratigraphical ages and gave their lower limits.