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Maceral composition for an environmental indicator, example from the Neogene to Pleistocene back arc basin, Japan

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Maceral compositions vary with sedimentary environments, because of changes in land-derived organic matter. We examined the relationship between maceral composition and sedimentary environments in the Miocene to Pleistocene strata in the Niigata and Akita sedimentary basins. Fluvial and estuary sediments are characterized by high contents of herbaceous and woody-coaly kerogens. Pro-delta sediments show very high woody-coaly kerogen contents. Shelf sediments have high amorphous kerogen contents. The woody-coaly content of kerogen is higher in slope sediments than in shelf sediments. Basin floor sediments have very high amorphous contents. Maceral composition in muddy sediments is useful tool for the sedimentary environment analysis of the Miocene to Pleistocene back arc basin in Japan.