## Abstract

A simple method based on physico-chemical property of sediment to estimate the similarity of tidal flat as benthic habitat was proposed. In the study, six tidal flats extending on river mouth in the Ariake Bay (Chikugo river mouth, Shiota river mouth, Rokkaku river mouth, Kikuchi river mouth, and Isahaya Bay) could be classified into five groups from results of the cluster analyses of sediment properties (particle-size distribution, water content and sulphide), and multidimensional scaling (MDS). The classified sediment groups showed the characteristic biota on biomass and species composition, indicating that biota in tidal flat will be estimated by sediment property.