The presence of d-aspartate (d-Asp), a biologically rare amino acid, was evaluated in 38 species of marine macroalgae (seaweeds). Despite the ubiquitous presence of free l-Asp, free d-Asp was detected in only 5 species belonging to the Sargassaceae family of class Phaeophyceae (brown algae) but not in any species of the phyla Chlorophyta (green algae) and Rhodophyta (red algae). All other members of Phaeophyceae, including 3 species classified into the section *Teretia* of Sargassaceae did not contain d-Asp. These results indicate that the presence of free d-Asp in marine macroalgae is restricted only to the Sargassaceae family, excluding the species in the section *Teretia*.

Presence of d-Aspartate in macroalgae is restricted to the Sargassaceae family except *Teretia* section