Bioassay-Guided Separation of an Î Amylase Inhibitor Anthocyanin from Vaccinium arctostaphylos Berries

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Vaccinium arctostaphylos is a traditional medicinal plant in Iran used for the treatment of diabetes mellitus. In our search for antidiabetic compounds from natural sources, we found that the extract obtained from V. arctostaphylos berries showed an inhibitory effect on pancreatic Î amylose in vitro [IC50 = 1.91 (1.89–1.94) mg/mL]. The activity-guided purification of the extract led to the isolation of malvidin-3-O-ß-glucoside as an Î amylose inhibitor. The compound demonstrated a dose-dependent enzyme inhibitory activity [IC50 = 0.329 (0.316–0.342) mM].

Key words: Vaccinium arctostaphylos, Î Amylase Inhibitory Activity, Malvidin-3-O-ß-glucoside