Molecularly Imprinted Monolithic Cartridge for Extraction of Three Organic Acids from Salicornia herbacea L.

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Monolithic molecularly imprinted cartridge was designed and prepared for extraction of three organic acids from Salicornia herbacea L. Characterization of this monolithic molecular imprinting stationary phase was investigated based on the field emission scanning electron microscopy. Chromatographic analysis was conducted on a C18 column with UV detection at 270 nm, and an eluting solution consisting of acetonitrile/water/acetic acid (14/86/0.5, v/v/v) was used as the mobile phase at a flow rate of 0.8 mL min–1. The linearity was confirmed in the concentration range of 0.10–200.00 μ g mL–1, 0.20–400.00 μ g mL–1 and 0.30–600.00 μ g mL–1 for three organic acids, respectively, with the correlation coefficient (r2) above 0.9997. The SPE recoveries of three organic acids were ranging from 71.08 to 81.02 %. This method is simple and economical, and has been used successfully in extraction of three organic acids from Salicornia herbacea L.