



**Figure S1.** HPAEC chromatograms of monosaccharide compositions of ASWP (A), ASEP-A (B), ASEP-C (C), and ASEP-P (D). Fuc, fucose; Rham, rhamnose; Ara, arabinose; Gal, galactose; Glu, glucose; Man, mannose; Xyl, xylose; Gal acid, galacturonic acid; and Glu acid, glucuronic acid.