Supplementary material

**Supplementary Figures**



**Figure S1.** CV voltammogram of electropolymerized poly (p-TSA) grown at 5 cycles in 0.1 M NaCl solution



**Figure S2.** DPV responses of 100 ppm Trolox at poly (*p*-TSA) electrode of different film thicknesses in PBS pH 7.4



**Figure S3.** DPV responses of 100 ppm Trolox in different electrolyte solutions



**Figure S4.** DPV responses of 19.6 ppm ascorbic acid, 19.2 ppm gallic acid and 1.9 ppm trolox in a 0.1 M NaNO₃ solution at the poly (*p*-TSA) modified sensor

**Figure S5.** DPV responses of gallic acid (19.2, 26.3, 34.8, 43.1, 51.3 ppm), 8.9 ppm Trolox and 19.2 ppm ascorbic acid in 0.1 M NaNO3 solution at the poly (*p*-TSA) modified sensor (a: background). The inner graph represents the curve showing the relationship between the measured current values versus increasing gallic acid concentrations



**Figure S6.** DPV responses of ascorbic acid (19.6, 37.7, 55.5, 72.6, 89.1 ppm), 1.9 ppm Trolox and 19.2 ppm gallic acid in 0.1 M NaNO3 solution at the poly (*p*-TSA) modified sensor (a: background). The inner graph represents the curve showing the relationship between the measured current values versus increasing ascorbic acid concentrations