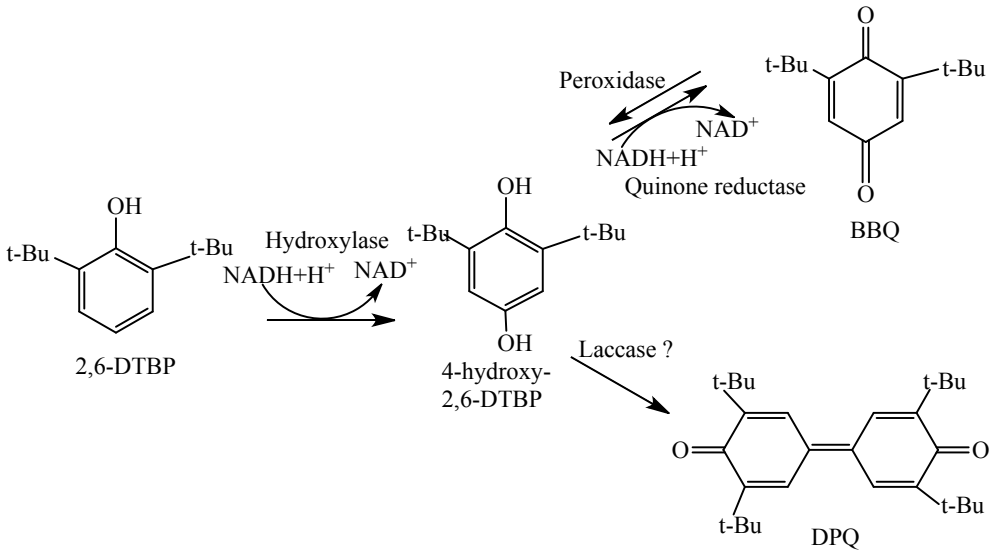
Electronic Supplementary Information



GC-MS analysis of degradation of high concentration of 2,6-DTBP (400 mg/L) confirmed the presence of 2,6-di-*tert*-butylbenzoquinone, BBQ (*m/z* 220) and 3,3,5,5-tetra-*tert*-butyl-4,4-diphenoquinone, DPQ (*m/z* 408), which, as quinone derivatives, are toxic for microorganism with EC_{50} of 0.5 mg/L (Walker 1988) and inhibited the pseudomonad at concentration of 10 mg/L (Trevors and Basaraba 1980). However, quinone and related with that their derivatives, could be reduced by NAD(P)H-quinone oxidoreductase (EC 1.6.5.5.) and further processed. Under the exposure to concentration of 400 mg/L of 2,6-DTBP *P. aeruginosa* san ai showed NAD(P)H-quinone oxidoreductase activity of 192 mU/mg. Both of identified metabolites- BBQ and DPQ could be reduced to hydroquinone derivatives whose toxicity is very low (Trevors and Basaraba 1980) and furthermore degraded as proposed for 2,6-DTBP.