

Visual Detection of Catecholamines and Monitoring Tyrosinase Activity Using Pyrocatechol Violet-Sn⁴⁺ Complex

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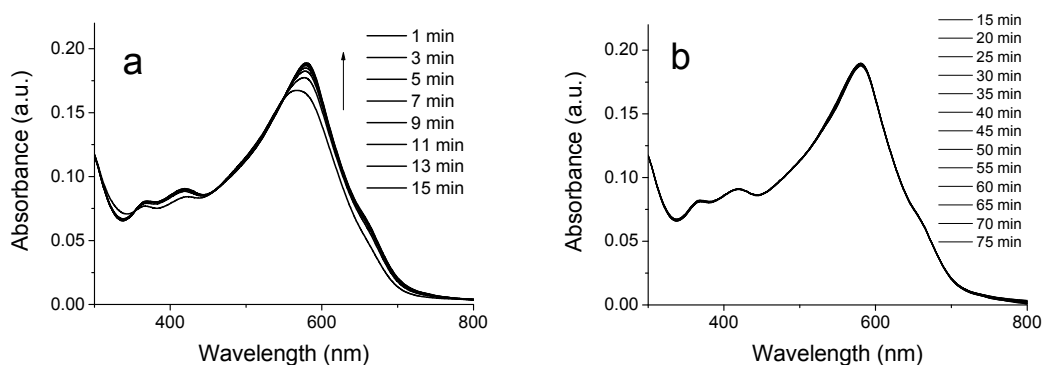


Fig. 1 UV/vis Spectra of PCV-Sn⁴⁺ mixture at pH 7.4 in 20 mM HEPES buffer as a function of time. The concentration of PCV and Sn⁴⁺ were 10 μ M and 5 μ M.

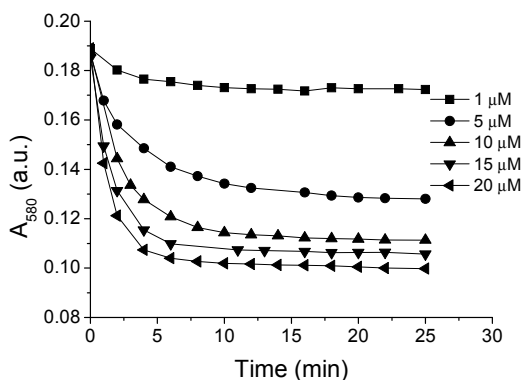


Fig. 2 Absorbance of PCV-Sn⁴⁺ mixture at 580 nm over an incubation time of 25 min at varied concentrations of dopamine in HEPES buffer (pH 7.4, 20 mM). The concentration of PCV and Sn⁴⁺ were 10 μ M and 5 μ M.

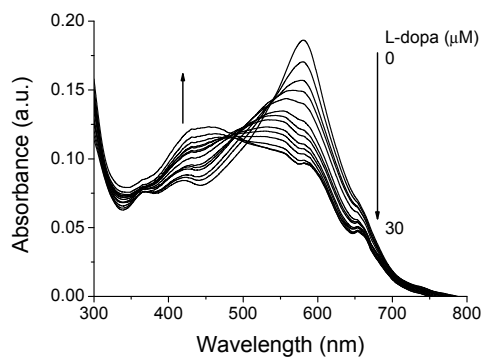
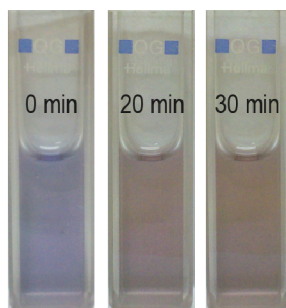


Fig. 3 UV/vis spectra of PCV-Sn⁴⁺ mixture in the presence of added L-dopa (0 μM, 1 μM, 2 μM, 3 μM, 4 μM, 6 μM, 8 μM, 10 μM, 10 μM, 12 μM, 14 μM, 16 μM, 20 μM, 25 μM, 30 μM) in HEPES buffer (pH 7.4, 20 mM). The concentration of PCV and Sn⁴⁺ were 10 μM and 5 μM.



Scheme 1 photographs of tyrosinase activity assay at 25 °C using PCV-Sn⁴⁺ mixture in the presence of L-tyrosine (50 μM). The concentration of PCV and Sn⁴⁺ were 10 μM and 5 μM. The concentration of tyrosinase is 4.0 U/mL.