

A thermostable Mn catalase (Kat B) of a cyanobacterium, *Anabaena* PCC7120 has been functionally characterized and its usefulness for the detoxification of H₂O₂ in textile industries is under evaluation.

The cyanobacterium *Anabaena* 7120 is nitrogen fixing photosynthetic bacterium that has capability to withstand very high doses of gamma radiation and other environmental stressors. The molecular basis of oxidative stress tolerance was investigated and a Mn catalase (KatB) role in higher oxidative stress tolerance has been demonstrated. KatB has been characterized both structurally and biochemically and observe some notable features like thermostability and function at wide pH range. The possibility this enzyme to use in detoxification of H₂O₂ in textile industries is being explored.

