*Indian Journal of Ecology (2016) 43 (1): 257-261*

**Manuscript Number: 2306**
**NAAS Rating: 4.47**

# Degradation Status of Amarogentin on Storage in Different Solvents

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***Abstract*****:** *Swertia chirayita* is an important medicinal plant which is known for its bitter principles. The bitterness in *S. chirayita* is due to presence of two secoiridoid glycosides amarogentin and amaroswerin. Stability of amarogentin (a bitter compound) in different solvent systems was determined by using HPLC technique to identify the best solvent systems for its storage purpose. Pure amarogentin (isolated from *Swertia chirayita*) was stored in methanol, methanol-water mixtures (75:25, 50:50, and 25:75) and water for six months. The initial value of amarogentin content (99.87%) recorded at the time of storage, reduced to 97.21% in pure methanol, 27.81% in 75:25 mixture of methanol: water, 18.35% in 50:50 mixture of methanol: water, 21.46% in 25:75 mixture of methanol: water and 45.83% in pure water after six months of storage. The stored samples were also qualitatively monitored through TLC using chloroform: methanol: water (65:25:10) as the mobile phase and fast red B salt solution as the detection reagent. Additional spots detectable with fast red B salt solution started appearing after four and six months of storage. Additional peaks were also observed in the HPLC chromatograms.

***Key Words***: *Amarogentin* stability, HPLC and TLC*, Swertia chirayita*