International Journal of ChemTech Research
CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.9, pp339-345,2017

Green Synthesized Cobalt Nanoparticles using *Asparagus racemosus*root Extract & Evaluation of Antibacterial activity

T Varaprasad[1],Boddeti Govindh[2],B. Venkateswara Rao[3]*

[1]PR Govt. College, Kakinada, Andhra pradesh*, (India)*
[2]Department of H&S, Raghu Institute of Technology,Visakhapatnam, Andhra Pradesh, (India)
[3]*Department of Engineering Chemistry, College of Engineering, Andhra University, Visakhapatnam, India-530003.

Abstract: In the present study, cobalt nanoparticles were synthesized by an ecofriendly and cost effective method using *Asparagus racemosus*root extract and characterized using various techniques such as UV-visible spectrophotometry, Fourier transform infrared spectrometry and Scanning electron microscopy coupled with Energy dispersive micro analysis. The spectroscopic methods confirmed the formation of cobalt nanoparticles and the microscopic technique confirmed the shape and size of the cobalt nanoparticles as spherical with an average particle size of 48nm. Antibacterial activity of the synthesized nanoparticles was measured by disc diffusion method. The cobalt nanoparticles showed effective antibacterial activity againsthuman pathogenic bacteria*S. Dysenteriae&E. faecalis*when compared with antibioticCiprofloxacin.

Keywords: Cobalt nanoparticles, antibacterial activity, *S. dysenteriae&E. faecalis*, antibioticCiprofloxacin.

*****