



**Studies on Variation In Electronic – Spectral Parameters of Sm (III) Ion  
in Different Ligand Environment**

**Sudhir N. Limaye\* and Sneha Wanakr**

\*Department of Chemistry, Dr.H.S.Gour Central University, Sagar 470003, **INDIA**

Email: [snehawanker21@yahoo.com](mailto:snehawanker21@yahoo.com), [snl222@yahoo.co.in](mailto:snl222@yahoo.co.in)

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**ABSTRACT**

*Studies on electronic spectral behavior of Sm (III) in different ligand environments at controlled pH medium in aqueous media have been carried out with a function to observe the influence of different ligand environments on the spectral parameters viz., oscillator strengths and the radioactive parameters of Sm(III). The experimental data have been evaluated using Judd's relation. In all cases it has been found that the oscillator strength values increases near about pH ~3-4 at which complexation occurs. The metal ligand interaction were obtained from  $\Omega_\lambda$  parameters where ( $\lambda=2,4,6$ ). The  $\tau_R$  values of complexes [Sm:L-Isoleucine], [Sm:L-Histidine], [Sm:Glycylglycine] at different pH showed better correlation with respect to their partial charge on -O atom.*

**Keywords:** Oscillator strength, Judd-Ofelt parameters.

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