



## **Assessment of Heavy Metals in Solid Waste Used for Electricity Generation during Pre & Post Combustion in Different Seasons**

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### **ABSTRACT**

*Solid waste contains heavy metals, after combustion in waste to energy facilities is collected in fly and bottom ash, small quantity is being discharged from stack as flue gases. This study reviews the characteristics and presence of heavy metals in the solid waste used in the electricity generation units. The samples of solid waste are collected before and after combustion process to study the concentration of heavy metal presences. The range of trace metal emissions from a single waste-to-energy (WTE) facility over a period of three seasons is compared with individual tests by selected parameters indicating that the waste composition and the combustion technology employed contribute to the variability of metals and particulate emissions. Analysis of heavy metals like chromium, cadmium, mercury, arsenic, cobalt, copper, nickel, zinc, manganese, vanadium and lead is being carried out by using ICP-AES technique, the heavy metals like As and Hg in raw material and ash remains stable in pre & post combustions in contrast, the Pb, Zn and Cu tended to increase, which likely enhanced their release potential during combustion.*

**Keywords:** Combustion, Municipal solid waste (MSW), Heavy metals

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