

## **ABSTRACT**

*A source of air pollution derived from natural or human activities. One of the example human activities is waste combustion, which can produce gas nitrogen monoxide(NO), nitrogen dioxide(NO<sub>2</sub>), dinitrogen monoxide (N<sub>2</sub>O), sulphur dioxide (SO<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), hydrochloric Acid (HCl), And particulate (PM<sub>2.5</sub>). Therefore, waste management using incinerator is one of the ways to burn waste with an ability that can filter gas emissions and particulates produced on while burning. The purpose of The Research is measuring and analysing ratio concentraton of CO<sub>2</sub> , NO<sub>2</sub>, PM<sub>2.5</sub> and physical properties liquid (pH and turbidty) of condensate, while combustion of waste leaves(organis), plastic bottles (inorganic), and mixture of (composition 1:1 on organic and inorganic) using Bandung Techno Park Insinerator's, which located at Telkom University, Bandung. Sampling liquid Technique implemented by transition smoke to liquid caused by  $T_{device} < T_{smoke}$ . Instrument for emission measuring is positioned 30 cm from chimney with blower to makes most of the smoke into measuring space. The result of this measurement optimally than positioned direct from chimney outlet. In contrast to concentration of CO<sub>2</sub> can be measured when the process of combustion, sensor of PM<sub>2.5</sub> only detected the highest concentration. This case because the optic sensor's while combustion was blocked by smoke concentrated which entering to inside, therefore detected the maximum limits of measurement. The result represented maximum concentration of CO<sub>2</sub> on mixture waste combution ( up to 5000 ppm) highest than inorganic (3112 ppm) and organic (1248 ppm). Turbidity from organic liquid condensation (~2000 NTU) and inorganic (~400 NTU), this indicates the higher concentration of CO<sub>2</sub>, then the lower turbidity.*

**Keywords : air quality, CO<sub>2</sub>, incinerator, PM<sub>2.5</sub>, waste burning**