

## Food Waste Management in the Restaurant Industry

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**Abstract :** The main aim of this research is to investigate, analyse and provide solutions for the reduction of food waste in the restaurant industry. The amount of food waste that is sent to landfill by UK restaurants and food chains is considerably high, and also acts as an additional cost to the restaurants, as well as being a significant environmental issue. Food waste, for the most part, is disposed in landfill, but due to rising costs associated with waste disposal, it increases public concerns about the environmental issue. This makes conversion of food waste to energy an economic solution. The relevant properties, such as water content and calorific value, will vary considerably, depending on the particular type of food. This work, therefore, includes the collection and analysis of real data from restaurants on weekly basis. It will also investigate how the waste destined for landfill can be instead reused to produce fuels such as syngas or ethanol, or alternatively as fertilizer. The potential for syngas production will be tested using a microwave plasma reactor.

**Keywords :** fertilizer, microwave, plasma reactor, syngas

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