

# World Congress and Expo on Recycling

July 20-22, 2015 Barcelona, Spain

## Recycling of olive pomace bottom ash for fired clay bricks

**Dolores Eliche Quesada**  
University of Jaen, Spain

Olive pomace bottom ash was used to replace different amount (10-50 wt %) of clay in brick manufacturing. The aims are both studying bricks properties and showing a new way of olive pomace bottom ash recycling. The properties of waste bricks were compared to conventional products following standard procedures in order to determinate the maximum waste percentage. The amount of olive pomace bottom ash is limited to 20 wt % obtaining bricks with superior engineering properties adding 10 wt % of waste. The addition of higher amount of waste gives rise to bricks that are on the edge of meet the values of water absorption and compressive strength established by UNE standards. Therefore, the addition of 10 and 20 wt % of olive pomace bottom ash gives rise to bricks with a bulk density of 1635 and 1527 kg/m<sup>3</sup> and a compressive strength of 33.9 MPa and 14.2 MPa respectively. Fired bricks fulfill standards requirements for clay masonry units at the same gets a better thermal insulation of the buildings due to a reduction of the thermal conductivity of 14.4% and 16.8% respectively respect to the control bricks (only clay).

[deliche@ujaen.es](mailto:deliche@ujaen.es)

## Emission characteristics and household food waste reduction strategies in South Korea

**Dong-Gun Hwang and Tae-WanJeon**  
National Institute of Environmental Research, Republic of Korea

In spite of the government's various efforts to reduce food waste, the food waste in South Korea has increased about 3% every year, mainly due to the growing population, number of households, and income. Food waste occurs in the processes of production, transportation, distribution, storage and cooking of food ingredients. However, there has been little reliable data about how households "a major food waste source" store and treat their food and how much food waste they produce. In this regard, we thought it was important to understand the exact amount and characteristics of food waste from households in order to reduce the country's food waste, which is why we monitored kinds, storage periods, treatment, and waste of food consumed in 100 households in the Seoul metropolitan area. A monitoring method for the selected monitor box and conduct education in spring (May), summer (July) and fall (September) while food waste monitoring for 3 so far has conducted. Households normally store their food ingredients in refrigerators on average 34 kinds and 55 kg of food are stored and some of them stayed there for up to 3 years. Moreover, not a small portion of the food is thrown away nearly untouched, mostly because people tend to purchase too much food at one time or they don't know or miss their expiration dates. The amounts of food waste by type were in the order of vegetable>side dish>frozen food>fruit>seasoning. Also, we suggest effective and realistic measures to reduce food waste and promote a more desirable food consumption culture in Korea.

[lunalian@korea.kr](mailto:lunalian@korea.kr)