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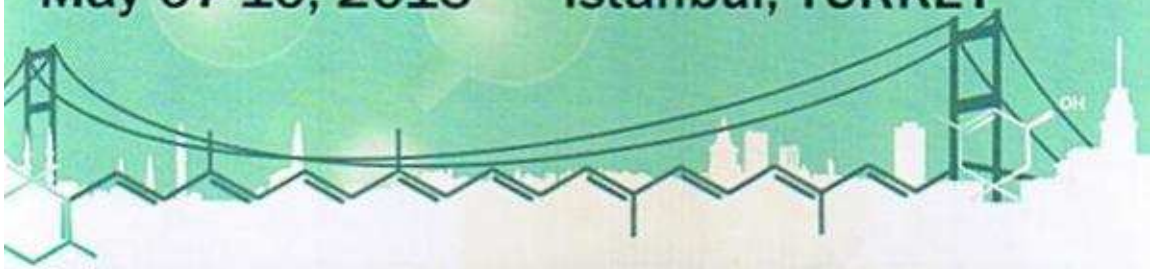

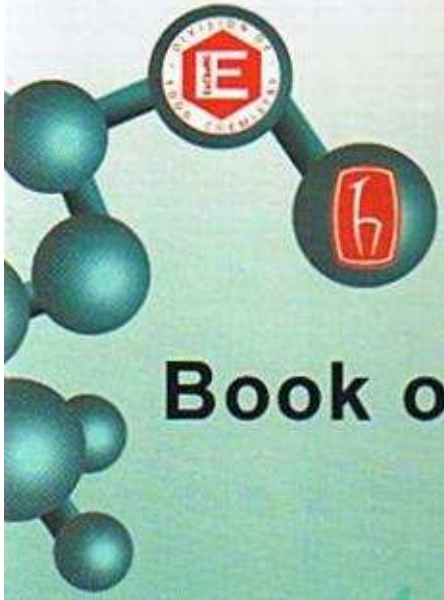

Book of Abstracts

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CONTRIBUTION FOR THE CHARACTERIZATION OF AROMATIC RICE

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Rice is consumed mainly as whole grain, and quality considerations are much more important than for any other food crop. Rice grain quality preference varies from country to country and among regions. Nowadays, aromatic rice varieties are playing a vital role in global rice trading, and also in Portugal. Five types of aromatic rice were collected and analysed for biometry characteristics, amylose content and gelatinization properties.

The aromatic rices are commercially classified as long grains B type, because they presented a length higher than 6 mm and the ratio length/ width higher than 3. Samples presented a high degree of whiteness (35.8-39.9). There is a stickily relationship between the total and vitrea whiteness (r2=0.95), and these parameters are related with the plaster area.

Cooking quality of rice mainly depends on amylose content and gelatinization temperature. The amylose content varied from 9.8% (classified as low value) and 20.4% (classified as intermediate value), meaning that the rice with low amylose content is dry, less tender and hard after cooking, also showing volume expansion and a high degree of flakiness. When rice presents an intermediate content of amylose is moist and tender upon cooking.

Aromatic rice flours showed significant differences of RVA viscosity profiles. Generally they presented significant differences in the gelatinisation temperature, but similar gelatinisation peak temperature, 95%. It was also observed that the different types of aromatic rice flours showed high viscosities, great differences in breakdown and setback values. Breakdown was positively related with the peak temperature (r^2=0.733) and peak viscosity (r^2=0.778), and the setback was correlated with amylose content (r^2=0.846) and final consistency (r^2=0.816).