**B. cereus** in samples of rice – growth and spore resistance

Lídia Mateus, Alberta Araújo, Joana Guerreiro, Paulo Fernandes
Escola Superior de Tecnologia e Gestão do Instituto Politécnico de Viana do Castelo
Av. Do Atlântico, 4900 Viana do Castelo, Portugal

*B. cereus* is a spore forming microorganism frequently associated with two foodborne diseases caused by different toxins: the diarrhoeal syndrome which is caused by labile toxins produced during growth in the small intestine and the emetic syndrome caused by cereulide, a small and very stable peptide produced in food before consumption. Rice and farinaceous food is frequently associated and involved in *B. cereus* poisoning. Fifty samples of raw and cooked rice of a school canteen were analyzed for the presence of *B. cereus* spores were quantified by NMP, using ISO 21871:2006. Although in levels of less than 9.2x10^-1NMP/g, 37% of the raw samples were contaminated with spores and only one sample of cooked rice was contaminated with *B. cereus* spores. Characterization in terms of spore resistance showed that *D*$_{90}$ was variable among the strains, with values between 8 min and 54 min. Growth was assessed at 7 ºC and 22ºC in rice and BHI. At 7ºC no growth could be observed during 6 days. Amplification of DNA by RT-PCR was performed with specific primers for the detection of the *ces* gene, present in emetic *B. cereus*. None of the *B. cereus* strains isolated from rice samples was positive for presence of the *ces* gene.