



Report Visit to Videometer GPIII COST action CA16101

MoU objective: Improve the conversion rate of laboratory settings technologies into operationally deployed technologies by engaging in a 'practical' dialogue with the relevant Industry. This will provide industry with insights into state-of-the-art knowledge, needs and requirements for operational imaging technologies thus developing their portfolio, strengthening excellence and increase market competitiveness.

Academia meets Industry, March 2020 (12.03 – 14.03. 2020)

Visit of Dr Ksenija Radotic and Dr Dragosav Mutavdzic, University of Belgrade, Serbia, and Dr Manuel Algarra, University of Malaga, Spain to Videometer lab (Videometer A/S Horkaer 12B, 3. floor 12B, DK -2730 Herlev, Denmark).

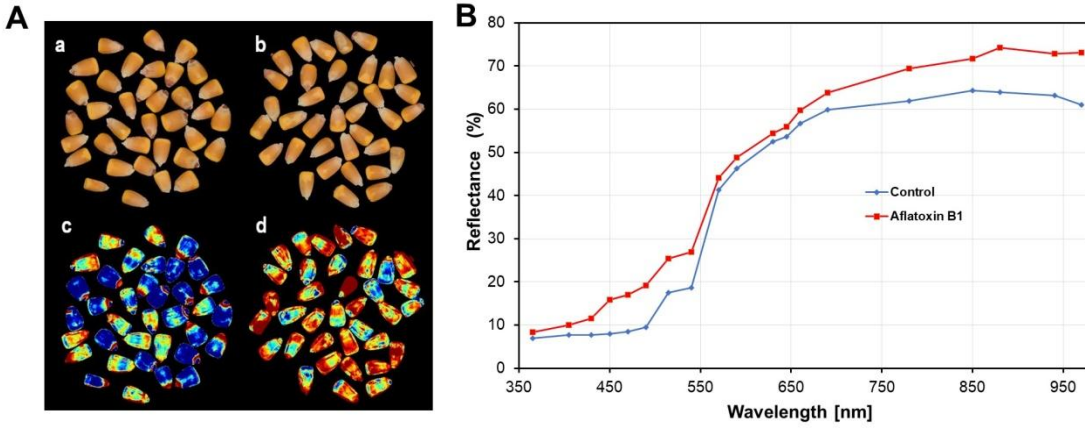
The purpose of visit: to assess the capabilities, limitations and desirable of multi spectral imaging - through a case study such as the analysis of seeds contaminated with micotoxins.

Two groups evaluated the same industrial technology in some sort of mini-workshop. A manuscript has been prepared and submitted to the journal Scientific Reports.

Description of the work and obtained results: Cereal seeds safety may be compromised by the presence of toxic contaminants, such as aflatoxins. During our visit to Videometer we used multispectral imaging (MSI) for discrimination of maize seeds naturally contaminated with aflatoxin B1 (AFB1) from the uncontaminated seeds.

Results: The MSI analysis combined with a normalized canonical discriminant analysis (nCDA) provided spectral and spatial patterns of the analysed seeds. Thus the MSI method classified successfully contaminated from uncontaminated seeds.

The impact of the results: on development of spectroscopic non-invasive methods for detection of AFs presence in seeds, providing valuable information for the assessment of seed adulteration in the field of food forensics and food safety.



A) sRGB images (a,b) and corresponding nCDA images (c,d) of *Zea mays* L. seedslot for control (uncontaminated) and AFB1-contaminated seeds. B) The average reflectance spectra from the multispectral images (A) of control and aflatoxin contaminated seeds.