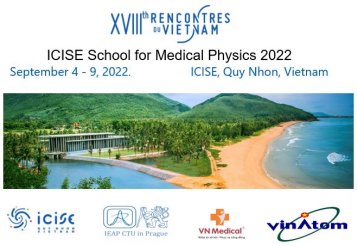

Contribution ID: **55** Type: **not specified**

A simple tool to show depth dose distributions in goods treated by 10 MeV electron beam

Thursday 8 September 2022 12:00 (15 minutes)

When we use the 10 MeV electron beam to irradiate goods (eg: frozen fish, seafood, pet food, fruit⋯), absorbed dose and Dose Uniformity Ratio (DUR) are two important aspects that must be considered. The energy depth distribution of the electron beam when going through the matter is quite varied, so the absorbed dose is varied too. We have to create a tool that demonstrates the absorbed dose inside the goods quickly and visually. Based on that tool, the accelerator operator can predict the dose distribution then they can decide rapidly and precisely if the good can be treated by electron beam and which the surface dose should be.
Almost every operator is not an expert in coding, so that tool needs to be simple. The calculation is based on depth dose distributions in a water phantom, with some adjustments from real-life dosimetry and we used Microsoft Excel software to perform the demonstration, with great help from the conditional formatting function

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