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## **Numerical Modelling of High intensity Focused Ultrasound Induced In Brain Tissue Phantom**

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### **Abstract**

High-intensity focused ultrasound, is a new, advanced treatment option for select patients with brain cancer. This non-invasive procedure uses sound waves, instead of surgery or radiation, to image and destroy brain tumor. In This article the Numerical Modelling of High intensity Focused Ultrasound Induced Heating in Brain Tissue Phantom has been presented. The current model is inspired by the experiments to measure focused ultrasound induced heating in a brain tissue phantom. The simulation results are compared to the experimental data in the reference.

**Keywords:** high intensity focused ultrasound (HIFU), Brain Tissue Phantom, Numerical Modelling, COMSOL Multiphysics