

Images of the rat bone and lumber vertebra using diffraction-enhanced imaging technique

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Different age groups of the rat bone, lumber vertebra and phantoms of different composition are imaged using 20, 30 and 40 keV synchrotron X-rays. The choice of optimum energy is chosen based on the quality of the image for better visualization and analysis. Visualized the embedded spongiosa within the bone, in order to know the embedded features in a more visible way with DEI. Diffraction-enhanced imaging technique provided, considerable improvement in contrast compared to conventional radiography. The scattered radiation is reduced considerably with the use of this novel technique, which provided considerable new information with medical and biological samples. Performed the rocking curve analysis at all the studied energies.

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