

ABSTRACT

This study aims to obtain a comparison obtained by IndoQCT and ImQuest software in measuring NPS curves to characterise image noise on CatPhan 503 phantoms with variations in FOV and slice thickness. Automatic measurement using IndoQCT and ImQuest software. NPS is an objective method in evaluating noise. Many software have been developed to measure the NPS curve, so it is necessary to compare the measurement results with the tested software. In IndoQCT, the creation of Region of Interest (ROI) is done automatically while the determination of ROI in ImQuest is made manually, both measurements are made using the number of one ROI. The measurement results and NPS curves between IndoQCT and ImQuest have differences with each other, so the results between the two software are also different. The use of thicker slice thickness results in lower noise, but the sharpness of the image will decrease. The use of a high FOV results in lower noise. The results of the comparison of the two software in each variation, namely FOV and slice thickness, show that ImQuest has a higher value than IndoQCT.

Keywords : Noise Power Spectrum (NPS), phantom Catphan 503, slice thickness, Field of View (FOV).