

## Summary

### A Paper Sheet Phantom for Scintigraphic Planar Imaging: Usefulness of Pouch-Laminated Paper Source

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In order to perform experimental measurements for evaluation of imaging device's performance, data acquisition technique, and clinical images on scintigraphic imaging, many kinds of phantoms are employed. However, since these materials are acrylic and plastic, the thickness and quality of those materials cause attenuation and scatter in itself. We developed a paper sheet phantom sealed with a pouch laminator, which can be a true radioactive source in air. In this study, the paper sheet phantom was compared to the acrylic liver phantom, with the thickness of 2 cm,

which is commercially available. The results showed that although some scatter counts were contained within the image of the acrylic liver phantom, there were few scattered photons in the paper sheet phantom image. Furthermore, this laminated paper sheet phantom made handling of the source and its waste easier. If the paper sheet phantom will be designed more sophisticatedly, it becomes a useful tool for planar imaging experiments.

**Key words:** Gamma camera, Phantom, Paper sheet source, Inkjet print paper, Pouch lamination.