

X-ray revelation of foreign objects in food - The Low Energy capabilities

Food safety is many things. What makes X-ray technology interesting is when you experience unpleasant surprises, such as glass splinters, bone fragments, sharp metallic inclusions, and other foreign bodies that compromise food safety. Such foreign objects can be **prevented** using X-ray inspection.

Food safety may also relate to foreign matter or living organisms which are not thought of as being part of the package.

This example relates a concrete experience of an InnospeXion employee who were cooking dinner. When preparing chickpeas, he noticed small black objects among the peas. They were initially considered to be impurities. However, upon cooking it became clear that they were small flies, and the peas had tiny holes in them. We decided to inspect the peas using our low-energy X-ray systems, and the X-ray image below clearly shows the small cavities where the flies have lived.

As the figure shows, some of the peas had large holes in them and were easy to detect by vision, but others did not have superficial holes, and the flies inside where therefore very difficult to detect with the eyes.

This story serves as an example of the importance of X-ray inspection and of how easily product defects can be detected. It also shows how important thorough product inspection is.

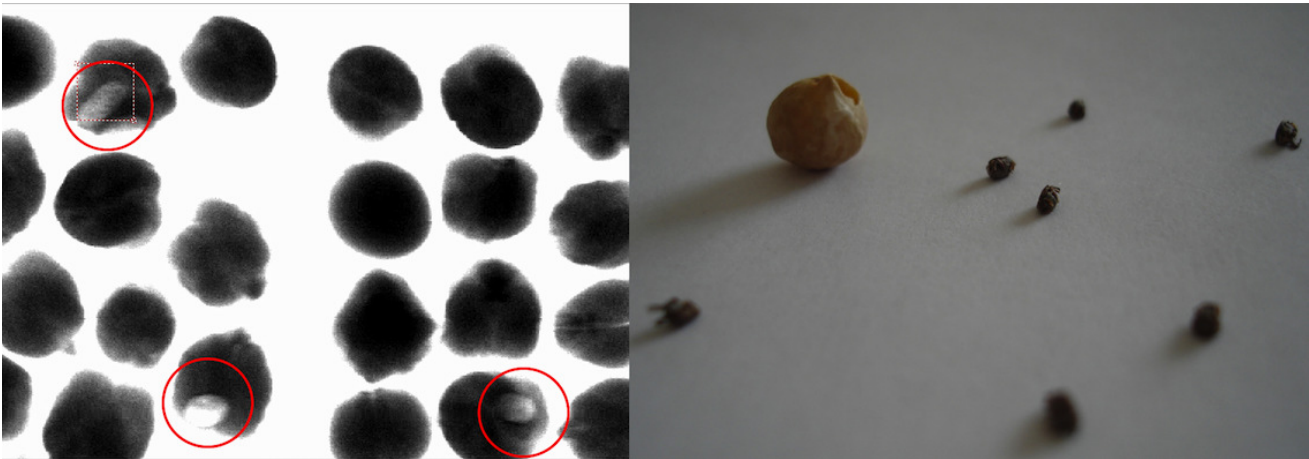


Fig. 1. Chickpeas with larvae holes (marked with red circles) in which small black flies have developed and become expelled as the chickpeas are cooked (photo at right). The X-ray inspection has been accomplished at 20 kV at a speed of 20 m/min.