

## QUANTITATIVE DETECTION OF MELAMINE ADULTERATION IN MILK POWDER USING $\gamma$ -RAY SPECTROSCOPIC TECHNIQUE

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### ABSTRACT

We have used a non-destructive  $\gamma$ -ray spectroscopic technique for the detection of melamine contamination in solid milk powder. The attenuation characteristics of melamine, milk powder and the mixtures of melamine and milk powder were examined. The results indicate that the linear attenuation coefficient increases with increase in the quantity of melamine contamination in milk powder. The results demonstrate that the above technique can be used for the non-destructive qualitative and quantitative detection of melamine in adulterated milk powder.

**KEYWORDS:** Melamine, Milk Powder, Linear Attenuation Coefficient,  $\gamma$  - Ray Spectroscopy