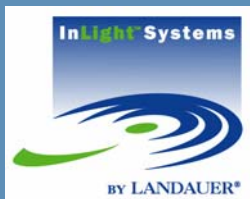


LANDAUER®

## Back to Basics



26th Annual International Dosimetry Symposium

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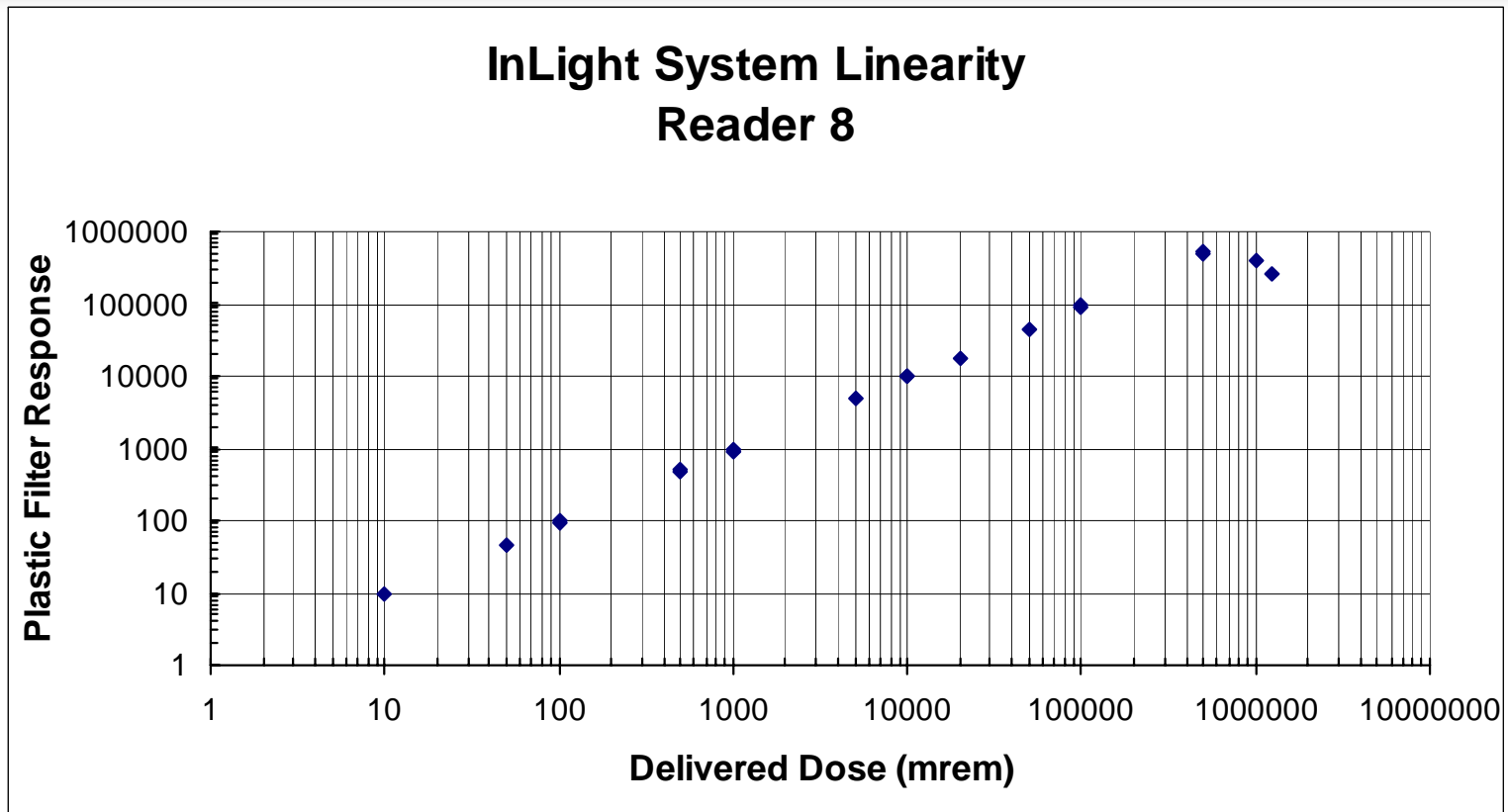
# System Linearity



# System Linearity

- Document total system linearity.
  - Reader through algorithm
- Document linearity of each element.
  - Element Response verses Delivered Dose
- Know your limitations, system crossover, effects of material, and algorithm performance for accident doses.
  - If material is not tissue equivalent you need know the “X-ray” equivalent response.

# Linearity & Saturation Counts



- System linear within +/- 5% from 10 mrem to 500R with an  $R^2$  of 0.9997.
- Saturation tested up to 1250R for each reader.
- Dynamic range of system can be shifted to enhance performance for higher doses.

# Linearity Based on Dose

