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# Can you trust your data? Sample integrity and radiation exposure

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With increased resolution and extra dimensional imaging, an increased radiation dose is delivered to the specimen. After some point, the integrity of the specimen will be compromised, and therefore so will the data. Here we present a method for assessing the radiation induced changes in the specimen, taking into account variations in noise and resolution between measurements. We apply this method to X-ray fluorescence microscopy of the nematode, *Caenorhabditis elegans*, providing data that sets elemental specific limits for an acceptable radiation dose.

**Primary author(s) :** JONES, Michael (QUT); DE JONGE, Martin (Australian Synchrotron); Dr MCCOLL, Gawain (Florey Institute of Neuroscience and Mental Health); Dr HARE, Dominic (Florey Institute of Neuroscience and Mental Health)

**Presenter(s) :** JONES, Michael (QUT)

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