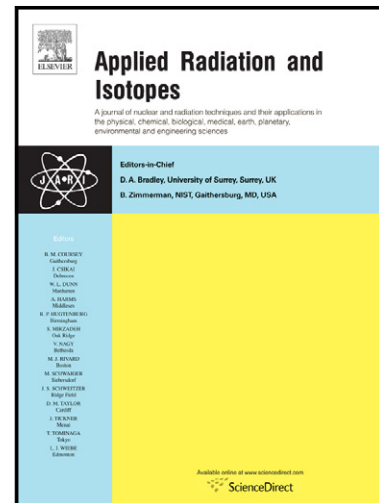


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## **A cleaning method to minimize contaminant luminescence signal of empty sample carriers using off-the-shelf chemical agents**

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### **Abstract**

Signals acquired during thermoluminescence or optically stimulated luminescence measurements must be completely free of any spurious and/or contamination signals to assure the credibility of the results, especially during exploratory research investigating the luminescence behavior of new materials. Experiments indicate that such unwanted signals may also stem from new (unused) and used empty sample carriers, namely cups and discs, which are widely used for such measurements, probably due to contamination from a fluorite and/or silica-related source.

Fluorite and/or silicone oil appear to be the most likely sources of contamination, thus, their removal, along with any other possible source that exhibits undesirable luminescence behavior, is necessary. Conventional cleaning methods fail to eliminate such contaminants from empty cups and discs. In this work a new cleaning method is proposed incorporating off-the-shelf chemical agents.

Results of thermoluminescence measurements highlight the efficiency of the new cleaning process, since it can completely remove any observed contaminants from both new and used

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