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Available Technologies

Functionalized Mesoporous Thin Films for Preconcentration and Analysis: PPB Heavy Metal Detection Using XRF

SUMMARY

Preconcentration of analytes prior to testing is a long recognized technique for increasing the analyte concentration while often removing interfering species. Traditional methods of preconcentration tend to be laborious and often reagent intensive or generate large waste volumes.

Presented here is a functionalized mesoporous thin film tailored to be selected to the species of interest, and useable in an aqueous environment. The thin film is formed via screen printing, and is readily combined with XRF instrumentation. Use of actual field samples shows ppb detection of mercury (Hg) and other heavy metals via this method.



Patents & Intellectual Property

- » Patent #: 7,955,574

Technology Portfolio(s)

- » Other
- » Materials Synthesis and Functionalization

Potential Industry Applications

- » Chemicals

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