

## **SRM 2855 Additive Elements in Polyethylene WDXRF Analyses and Certification Approach**

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New SRM 2855 Additive Elements in Polyethylene was designed and developed in collaboration with U.S. manufacturers of virgin polymers through the auspices of ASTM International Subcommittee D20.70 on Analysis of Plastic. SRM 2855 was developed using an innovative approach in which the results of an interlaboratory study were evaluated using NIST statistics software to extract consensus values from industry XRF, INAA and ICPOES results. The industry consensus values were combined with NIST XRF and ICPOES results to certify Na, Si, P, S, Ca, Ti, Cr, and Zn in three different compositions of polyethylene. The presentation will show how NIST prepares and measures plastic samples by WDXRF, and how ICPOES analyses were performed. It will relate the performance of individual laboratories and methods to the uncertainty estimates provided on the certificate of analysis for SRM 2855.