Measuring Ultra-Low Phosphorus in Gasoline

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Phosphorus in gasoline will damage catalytic convertors used in automotive emission control systems and its level therefore is kept low[1]. The current standard testing method requires several reagents, some of them toxic.

This talk shows the capabilities of measuring ultra-low amounts of P in gasoline spotted on filters using WD- and ED-XRF instruments. XRF not only simplifies the sample preparation as well as the measurement but also significantly speeds up the whole process.

This method is intended to show an alternative approach to measuring liquids with XRF. The approach can be applied to other applications, where light elements are to be measured in liquids.

[1] ASTM D3231-13, Standard Test Method for Phosphorus in Gasoline