

[Using Py-GC/MS to fingerprint additives associated with paper mill effluent toxicity episodes](#)

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Abstract:

Understanding the cause of effluent toxicity is an important requirement for its prevention, remediation and return to compliance. One component of the strategy entails identification and fingerprinting of additives or components in additives that may be the cause of the toxicity episodes. A number of additives used in pulp and papermaking are polymeric compounds that are suspect in effluent toxicity. Their analysis and detection is difficult as they are not amenable to analysis by normal techniques applicable to mill effluents such as gas chromatography. Py-GC/MS is a powerful analytical technique that can be used to fingerprint these additives. The presence of the additives is confirmed by fingerprint pyrograms of the additives (or components in the formulations of the additives) in conjunction with mass spectrometry. The technique has been used to fingerprint and quantify polymeric additives associated with mill effluent toxicity episodes.

* Excerpted from online journal website (Click the title)

Frontier Labs products used:

Multi-functional Pyrolyzer