

July 17, 2018

After eight years of dedicated research and persistent work, the Humic Products Trade Association has succeeded in **establishing an international standard for the analysis of humic acids and hydrophobic fulvic acids in commercial humic products**. The analytical standard will be published by the International Organization for Standardization (ISO)<sup>1</sup>.

The effort to establish standardized testing of humic products goes back ten years, when humic industry representatives met with an International Humic Substances Society (IHSS) committee to initiate the development of an analytical standard. One year after the Humic Product Trade Association (HPTA) was formed in 2010, primarily to address standardization, HPTA presented research data that was based on the IHSS method of analysis to the Association of American Plant Food Control Officials (AAPFCO). In 2014, AAPFCO approved the analytical method jointly developed by HPTA and IHSS<sup>2</sup> as the only officially recognized method of analysis for commercial humic materials.<sup>3</sup>

Soon after that, HPTA petitioned ISO for an international analytical standard based on Lamar et al., 2014. The requirements set forth by ISO for an international standard included rigorous testing in eleven laboratories in seven countries, robust statistical analysis of the analytical data generated by the laboratories, and critical reviews by expert chemists and statisticians sitting on ISO committees. As a result of that thorough process, the precision of the original analytical procedure<sup>2</sup> was substantially improved.

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<sup>1</sup> ISO 19822:2018(E), *Fertilizers and Soil Conditioners – Determination of Humic and Hydrophobic Fulvic Acids Concentrations in Fertilizer Materials*.

<sup>2</sup> Lamar, R., D. Olk, L. Mayhew, P.R. Bloom, 2014. A New Standardized Method for Quantification of humic and Fulvic Acids in Humic Ores and Commercial Product. *Journal of AOAC International* Vol. 97, No. 3, pp 721-730.

<sup>3</sup> Laboratories were encouraged to reference the analytical procedure as the HPTA Method, but some labs called it Lamar et al., 2014 or JAOAC 97(3):721-730.