



## **NEWS RELEASE**

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### **Cerilliant Introduces $^{13}\text{C}$ -Labeled Internal Standards for Thyroid Hormone Testing by LC-MS/MS**

ROUND ROCK, TEXAS – January 29, 2013 – Cerilliant introduces Certified Spiking Solutions® for use in preparation of calibrators and controls of T4- $^{13}\text{C}_6$ , T3- $^{13}\text{C}_6$ , and reverse T3- $^{13}\text{C}_6$  for monitoring free and total thyroid hormone levels in serum or plasma by LC-MS/MS. These products offer clinical and endocrinology labs the full range of stable-labeled internal standards necessary for accurate quantitation of T4, T3, and reverse T3 using LC-MS/MS methods. Cerilliant's new thyroid hormone internal standards complement their current offering of native T4, T3, and reverse T3 Certified Reference Materials (CRMs) at concentrations suitable for dilution to the desired concentration in the laboratory's matrix of choice.

Disorders of thyroid metabolism affect millions of patients worldwide. Clinical diagnosis and treatment requires testing and monitoring of patient thyroid hormone levels. Currently most thyroid hormone assays are by radioimmunoassay (RIA) which has limited shelf life and lack specificity.<sup>1</sup> In recent years there has been significant push to develop LC-MS/MS methods for quantitation of thyroid hormones with the potential for higher accuracy, better specificity, and the ability to quantitate the different thyroid hormones separately. The choice of internal standard in these LC-MS/MS methods is critical for accurate quantitation of analytes, especially those at low concentrations or where matrix effects are an important consideration such as in thyroid analysis. "Using  $^{13}\text{C}$ -labeled internal standards for thyroid analysis can eliminate potential issues such as isotopic exchange and minimize separation of later-eluting analytes from a higher substituted deuterium-labeled internal standard." comments Josh Cooper, PhD and Cerilliant analytical scientist specializing in LC-MS/MS analysis.

Cerilliant offers a wide selection of Certified Spiking Solutions® for use in clinical or diagnostic testing, endocrinology, toxicology, and therapeutic drug monitoring including Snap-N-Spike® solutions of immunosuppressants; B, D and E vitamins; catecholamines; and steroids and hormones; from parent drugs and metabolites to internal standards.

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### **About Cerilliant**

*Cerilliant Corporation, located in Round Rock, Texas, is a global leader in providing certified reference standards for critical applications. The company has been providing certified reference materials for over 30 years. Cerilliant offers more than 3,000 catalog products and a full range of custom products and services that address the stringent and complex requirements of the pharmaceutical, clinical diagnostic, clinical/forensic toxicology, natural products, and environmental industries. Cerilliant sustains a modern, robust quality system which incorporates cGMP, GLP, and ISO requirements. We are accredited to ISO Guide 34 and ISO/IEC 17025 and certified to ISO 13485 and ISO 9001:2008.*

*Cerilliant Corporation is a subsidiary of Sigma-Aldrich®. For more information about Cerilliant, please visit [www.cerilliant.com](http://www.cerilliant.com).*

### **References**

*<sup>1</sup>Wang, Dongli and Stapleton, Heather M., Analysis of Thyroid Hormones In Serum by Liquid Chromatography-Tandem Mass Spectrometry, Anal Bioanal Chem. 2010 July; 397(5): 1831–1839.*

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