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Cerilliant Introduces New Certified Spiking Solutions[®] of 2C Amine Internal Standards

SAINT LOUIS, MO – August 14, 2014 – Sigma-Aldrich Corporation (NASDAQ: SIAL) is pleased to announce that the Cerilliant[®] brand within its Applied Diagnostics and Testing business segment now offers nine new stable isotope-labeled internal standards of 2C amines including deuterium and ¹³C labeling. These Certified Reference Materials (CRMs) represent the latest addition to Cerilliant's extensive CRM line of New Psychoactive Substance CRMs.

The stable-label substitutions of each internal standard correspond to suitable locations for conserving a minimum [M+3] separation from the unlabeled in the major ion fragments used in GC/MS or LC-MS/MS phenethylamine analytical methods.

"Internal standard design is an important consideration during the early stages of product development to ensure the label placement is suitable for our customers' methods," said H. Kenan Yaser, Manager, Synthesis Operations. "Our design process includes an evaluation of the native compound's major ion fragments by mass spec to understand the preferred locations for placement of the stable-label ensuring accurate and reliable results for laboratories."

For added convenience, Cerilliant's 2C amine internal standard reference solutions are supplied as USDEA-exempt preparations since these compounds are classified as controlled substances in the U.S. These solution CRMs are suitable for use in isotope dilution methods or other quantitative applications in clinical toxicology, urine drug testing, forensic analysis, or workplace drug screening. Cerilliant Certified Spiking Solutions[®] are manufactured and certified to the highest industry standards including ISO Guide 34, ISO/IEC 17025, ISO 15194 and ISO 13485.

Phenethylamines are a class of compounds with documented psychedelic and stimulant effects. The 2C series of phenethylamines has been well known since the 1970s from the synthetic work and authorship of Alexander Shulgin. Over the last few years, abuse of 2C amine designer drugs has increased worldwide from Asia to the United States and Europe as legal and illicit alternatives to MDMA or Ecstasy.¹

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 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, certified to ISO 13485 and ISO 9001:2008, and are compliant with ISO 17511 and ISO 15194. Cerilliant Corporation is a subsidiary of Sigma-Aldrich[®]. For more information about Cerilliant, please visit www.cerilliant.com.

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About Sigma-Aldrich: Sigma-Aldrich, a leading Life Science and High Technology company focused on enhancing human health and safety, manufactures and distributes more than 200,000 chemicals, biochemicals and other essential products to more than 1.4 million customers globally in research and applied labs as well as in industrial and commercial markets. With three distinct business units – Research, Applied and SAFC Commercial – Sigma-Aldrich is committed to enabling science to improve the quality of life. The Company operates in 37 countries, has more than 9,000 employees worldwide and had sales of \$2.7 billion in 2013. For more information about Sigma-Aldrich, please visit its website at www.sigma-aldrich.com.

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1. Dean BV, Stellpflug SJ, Burnett AM, Engebretsen KM. 2C or not 2C: phenethylamine designer drug review. *J Med Toxicol*. 2013;9(2):172–178.