

FOR IMMEDIATE RELEASE
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Sigma Introduces New ProteoMass™ Guanidination Kit



St. Louis, MO – Sigma, a division of Sigma-Aldrich Corporation (**NASDAQ: SIAL**), has launched a new ProteoMass™ Guanidination Kit (Product code MS0100) for enhancing MALDI-MS sensitivity. The innovative, new ProteoMass Guanidination Kit enables researchers to increase the sensitivity of their MALDI-MS analyses, achieve higher sequence coverage, and identify sample peptides with greater confidence.

MALDI-MS is the preferred analytical instrument for many proteomics researchers. Tryptic peptides are identified by characteristic masses; the more peptides identified, the greater the certainty of analytical accuracy. In typical analyses, peptides generated during proteolytic digestion with C-terminal Arginine residues are ionized preferentially over peptides with C-terminal Lysine residues, leading to compromised sequence coverage and limited confidence during peptide mass fingerprint analysis. The ProteoMass Guanidination Kit efficiently and conveniently converts C-terminal Lysine residues to homoarginine, increasing MALDI sigma strength and producing enhanced sequence coverage.

Using the ProteoMass Guanidination Kit, researchers have observed dramatic increases in peak intensity, often as great as 10-fold. Additionally, many peaks previously unobserved are easily detectable following treatment with this new kit. In 100% of proteins analyzed, sequence coverage increased using the kit.

“The ProteoMass Guanidination kit has made a major impact in proteomics-based analyses,” commented Steven Cockrill, Senior Analytical R&D Scientist at Sigma-Aldrich. “Within various research studies, we’ve experienced a vastly improved signal from lysine-containing peptides and the commensurate increases in sequence coverage and confidence in protein identification. Moreover, there have been instances where the kit was a true lifesaver, allowing the detection of crucial but low abundance or poorly ionizing peptides. The kit has demonstrated applicability for routine utility through robust and reproducible chemistry, and is now a mainstay product in our laboratory for those critical sample analyses.

Sigma-Aldrich Press Release

Sigma-Aldrich is a leading ***Life Science and High Technology*** company. Its biochemical and organic chemical products and kits are used in scientific and genomic research, biotechnology, pharmaceutical development, the diagnosis of disease and chemical manufacturing. Sigma-Aldrich has customers in life science companies, university and government institutions, hospitals and in industry. Over one million scientists and technologists use its products. The Company operates in 34 countries and has 6,000 employees providing excellent service worldwide. Sigma-Aldrich is committed to the success of its Customers, Employees and Shareholders through leadership in ***Life Science, High Technology and Service***.

This release contains forward-looking statements relating to future performance, goals, strategic actions and initiatives and similar intentions and beliefs and other statements regarding the Company's expectations, goals, beliefs, intentions and the like, which involve assumptions regarding Company operations and conditions in the markets the Company serves. The Company does not undertake any obligation to update these forward-looking statements.

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