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## Axiom Analytical, Inc. Announces Robust Spectroscopic Probes for Continuous Near-IR Monitoring of Hydrocarbon Process Streams

TUSTIN, Calif., February 24, 2014 – Axiom Analytical, Inc. has announced its FCP-020 near-IR spectroscopic probes for the continuous on-line analysis of hydrocarbon process streams. The new probes have been designed to provide for near-infrared (NIR) process analysis under the most demanding conditions, including continuous 24/7 outdoor operation in virtually any environment.

A key to the robust performance of the FCP-020 probes is the use of Axiom Analytical's proprietary window sealing technique involving a direct sapphire to metal welded pressure seal (U.S. Patent 6,587,195 B1). This approach provides significant advantages over other sealing techniques. A high degree of chemical resistance is assured by the fact that the only materials in contact with the process are sapphire, high nickel alloys, and a thin layer of either gold or PTFE (application dependant). The compliance required to withstand extreme temperature cycling is provided by the high nickel alloy seal which is compressed at high pressure prior to welding. This approach eliminates fatigue and stress failures common with brazed seals as well as the limited lifetime characteristic of elastomeric seals. The high reliability of the Axiom seal has been proven by many years of successful use in the company's FPT-850 Near-infrared and UV-Visible Transmission Probes. These probes are widely used for on-line process analysis in the chemical, petroleum, and pharmaceutical industries as well as in process development and PAT (Process Analytical Technology) applications.

The new probes are intended to be used in pairs in conjunction with standard Swagelok fitting technology for process line attachment. This enables them to be incorporated into existing process lines with little or no modification. The optical path length is determined in part by the design of the probes and in part by the nature of the particular Swagelok cross or other fitting employed The resultant transmission cell can be incorporated into near-IR analytical systems employing analyzers using diverse technologies such as Fourier transform infrared (FTIR), dispersive near-IR, or tunable diode laser (TDL) spectroscopy.

## About Axiom Analytical, Inc

Axiom Analytical, Inc. was founded in 1988 by Dr. Mike Doyle and Norm Jennings, pioneers in the field of process FTIR spectroscopy. The Company's mission is to develop and market the robust sampling equipment, software, and integrated systems required to fully realize the potential of vibrational spectroscopy for solving economically significant problems both in laboratory analysis and manufacturing processes. The Company's products are employed in diverse industries ranging from basic chemicals to pharmaceuticals, semiconductors, and polymer processing. In short, the Company's products are found wherever process analytical technology (PAT) is being applied. Its hardware products include ATR probes, transmission probes, diffuse reflectance probes, Raman probes, flow cells for gas and liquid analysis, and fiber-optic multiplexers. These cover the full range of molecular analysis including mid-IR, near-IR, UV-visible, and Raman spectroscopy.

More information about Axiom Analytical Inc. can be found at http://www.goaxiom.com/.