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Contact:

Christopher White, Active Spectrum, Inc.

[cjwhite@activespectrum.com](mailto:cjwhite@activespectrum.com)

**Active Spectrum, Inc. Receives Prestigious R&D 100 Award for Micro-ESR Spectrometer**  
*Active Spectrum Micro-ESR Spectrometer Recognized Among the 100 Most Technologically Significant Products of 2009*

SAN CARLOS, Ca. (July 21, 2009) - [Active Spectrum, Inc.](#) is the winner of a prestigious [R&D-100 award](#) for the development of the world's smallest electron spin resonance (ESR/EPR) spectrometer, called Micro-ESR.

An independent judging panel and the editors of *R&D Magazine* selected the Active Spectrum Micro-ESR spectrometer as one of the 100 most technologically significant products introduced into the marketplace last year. The award will be formally presented during a gala awards ceremony in Orlando, Florida on November 12, 2009.

ESR is the only direct method to measure free radicals, reactive molecules found in the body, in food, and even in motor oil. "The pioneering work was funded by the [Army TARDEC](#) SBIR program to make an online oil condition monitor using ESR," said James White, President of Active Spectrum, Inc. "This work continues with advanced Micro-ESR systems under evaluation by the Army, [Naval Surface Warfare Center](#), and several customers in the oil industry."

Applications of Micro-ESR extend into many areas of science & technology, including biomedical research. The NIH [National Center for Research Resources](#) (NCRR) sponsored a project to create a low-cost, general purpose Micro-ESR spectrometer for biomedical research. Scientists use a technique call 'spin-tapping' to catch short-lived radicals. Measuring these free radicals helps to explain the health benefits of antioxidants and to understand how free radicals damage cells in disease. "The same free radical process that causes food to go bad, also causes fats to accumulate in a patient's arteries," according to Christopher White, the investigator on the NIH project. "That's why taking an antioxidant like Vitamin E could have health benefits."

Since 1963, the R&D 100 Awards have identified revolutionary technologies newly introduced to the market. Many of these have become household names, helping shape everyday life for many Americans. James White, Christopher White, and Colin Elliott developed the Micro-ESR at Active Spectrum with funding from the Small Business Innovation Research (SBIR) program.

## **About Active Spectrum, Inc.**

Since its founding in 2005, Active Spectrum, Inc. has pioneered technology for the measurement of free radicals. Applications include analysis of crude oil, on-line monitoring of lubricants, the shelf life of food products and biomedical research.

<http://www.activespectrum.com/>