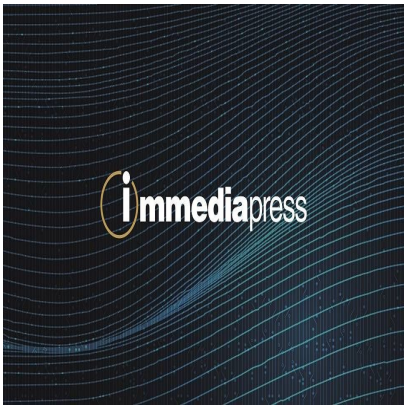


New Peer-Reviewed Study Confirms Innovative Technology Shatters ESRâ??s Four-Hour Deadline

Descrizione

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ALCOR Scientificâ??s iSEDÂ® analyzers reshape lab logistics and improve patient care for one of medicineâ??s most widely used tests

SMITHFIELD, R.I., Sept. 17, 2026 /PRNewswire/ â?? For a hundred years, one number has quietly governed erythrocyte sedimentation rate (ESR), a test doctors rely on to diagnose and monitor infections, autoimmune conditions and other diseases: four. As in four hours, the narrow window in which a traditional ESR sample had to be tested or refrigerated before its result could no longer be trusted. A new peer-reviewed study published in Diagnostics says that deadline belongs to the past.

The study found that ESR samples measured by photometric rheology on ALCOR Scientificâ??s iSEDÂ® analyzers remained accurate for up to 28 hours at room temperature and 48 hours refrigerated, seven times longer than the traditional Westergren methodâ??s four-hour room-temperature limit.

The impact is significant. One of the most widely used tests in medicine is no longer bound by a four-hour deadline. As clinical labs contend with scattered blood collection sites, longer courier routes and staffing shortages, the extended sample stability delivers immediate benefits to labs and the patients they serve.

The full study â??Measuring Erythrocyte Sedimentation Rate Using Photometric Rheology Technology Demonstrates Superior Sample Stability as Compared to the Westergren Method,â?• is available at https://www.mdpi.com/2075-4418/16/16/2648.

The problem hiding in the back of a courier van

ESR is one of the oldest tests in medicine, and one of the most widely ordered, with millions performed every year. Itâ??s a fast and affordable marker of inflammation that helps detect and monitor a range of conditions, from infections and autoimmune diseases like rheumatoid arthritis to inflammatory conditions like giant cell arteritis, as well as certain cancers. Unlike tests that measure a specific molecule, ESR measures a behavior: how quickly red blood cells aggregate and settle in a tube, which makes it acutely vulnerable to time and temperature.

That vulnerability collides head-on with how modern labs operate. At the same time, labs are consolidating into centralized, high-volume centers, theyâ??re navigating growing blood collection sites and staffing shortages. Between the needle and the analyzer sits a courier network that batches specimens onto multi-stop routes, often carrying them for hours in vehicles with no meaningful temperature control. Meeting a strict four-hour clock across that chain is often impossible. Worse, the failure is invisible because a degraded sample doesnâ??t arrive flagged. It arrives looking perfectly normal, and its result gets reported and acted on like any other.

Beyond gravity: a new way to measure inflammation

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The iSED analyzer takes a fundamentally different approach to ESR testing. Using photometric rheology technology, it optically captures red blood cell aggregation, the earliest and most critical step of erythrocyte sedimentation, inside a temperature-controlled flow cell, generating a result in less than 20 seconds. Because it reads the very beginning of the aggregation process in a controlled environment, the iSED analyzer is largely insulated from the time-sensitive changes that undermine traditional readings, extending sample stability seven times longer than traditional testing.

From four hours to 28: a breakthrough for labs

Extending sample stability from four hours to 28 in ESR is a breakthrough for laboratory logistics, offering labs and the patients they serve immediate, tangible benefits, including:

â??For decades, labs have been forced to build their entire ESR workflow around limited sample stability. Extending room temperature stability by an additional 24 hours is a game changer, not only improving logistics but truly improving patient care by ensuring reliable results. Giving labs a full day of reliable stability isnâ??t a convenience. Itâ??s better medicine,â?• said Jim Post, CEO, Alcor Scientific.

About the study

The study, â??Measuring Erythrocyte Sedimentation Rate Using Photometric Rheology Technology Demonstrates Superior Sample Stability as Compared to the Westergren Method,â?• was published in Diagnostics (2026;16(16):2648) by Koshy, Lamazares, Evans, and Jortani. The research was conducted under Institutional Review Board (IRB) approval at two hospital sites and funded by ALCOR Scientific.

About ALCOR ScientificALCOR Scientific develops diagnostic technologies that optimize laboratory efficiency. Founded in 2011, the company leverages its deep understanding of bioscience and state-of-the-art manufacturing techniques to design transformational solutions that help health care providers save time and improve patient care. ALCOR Scientific is one of the only providers to offer a fully automated solution for Erythrocyte Sedimentation Rate (ESR) testing for all laboratory throughputs and

workflows. For more information, visit alcorscientific.com.

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