

CD Bioparticles Launches Custom Services for High-Throughput Multiplex Cytokine Detection

CD Bioparticles has announced the expansion of its specialized custom services for Multiplex Cytokine Detection.

NEW YORK, NY, UNITED STATES, July 27, 2026 /EINPresswire.com/ -- With years of experience in the pharmaceutical and life science sectors, [CD Bioparticles](#) has announced the expansion of its specialized custom services for [Multiplex Cytokine Detection](#). Utilizing state-of-the-art magnetic particle-based multiplex assays, these services, including sample detection, custom conjugation, and the whole magnetic particle-based multiplex assay development, can advance biomarker discovery, clinical diagnostics, and drug development by enabling researchers to quantify dozens of cytokines simultaneously from a single, low-volume sample.

Cytokines are small protein molecules that are secreted by cells in order to coordinate intercellular communication in response to inflammation or infection. These molecules therefore play a vital role in the innate immune response to infection and contribute to the activation of the adaptive immune response. Therefore, characterizing cytokine responses is crucial for understanding the dynamic relationship between the host and the pathogen. As cytokines are typically secreted locally in trace amounts and have short half-lives, they are not routinely detected during disease progression. However, new technologies capable of detecting cytokines in diseased hosts or tissue culture systems will provide valuable insights into immune regulation.

Using a flow cytometer as the detection platform and magnetic microspheres as the solid-phase carrier, magnetic particle-based multiplex assay is a novel, high-throughput detection technology. Microspheres from different groups are assigned unique "barcodes" (for example, based on characteristics such as particle size or fluorescence) and are then combined with specific capture agents for different analytes. This allows multiple targets to be captured and analyzed simultaneously in a single reaction. The advantages of this technology include high throughput, a wide linear range, high accuracy and good reproducibility.

CD Bioparticles has launched magnetic fluorescent-coded microspheres that can be used to develop multiplex detection assays, allowing the definition of up to 50 cell populations. These particles possess stable, long-lasting fluorescence intensity, enhancing the accuracy of the assay. They are highly functionalized, enabling strong binding to antibodies and other ligands and improving assay sensitivity. Their uniform particle size and superparamagnetic properties make

them ideal for automated detection. Magnetic particle-based multiplex assays offer high sensitivity and throughput, enabling the simultaneous detection of multiple cytokines and significantly improving assay efficiency and accuracy.

CD Bioparticles offers a comprehensive range of custom services, including cytokine assay services, cytokine assay kit development services (magnetic particle-based multiplex assays), customized conjugation of antibodies/antigens to multiplex microparticles and assay validation. These services help users to accelerate the application of cytokine assays in areas such as identifying disease biomarkers, diagnosing inflammatory and infectious diseases, evaluating drug efficacy and safety, analyzing immune responses and adjuvant development, and evaluating the tumour microenvironment.

Multiplex immunoassays help advance vaccine development, drug discovery, basic research, and clinical trials. For more details on CD Bioparticles' Multiplex Cytokine Detection services, or to request a project consultation and custom service questionnaire, please visit the official website at <https://www.cd-bioparticles.com/services/detecting-cytokines-with-magnetic-particle-based-multiplex-assays.html>.

About CD Bioparticles

CD Bioparticles is a leading manufacturer and supplier of various nanoparticles, microparticles, and coatings for R&D as well as commercialization across different application areas, including in vitro diagnostics, biochemistry, cellular analysis, cell separation, and immunoassay. The company also offers various custom services, including chemical surface-functionalization, fluorescent modification, antibody immobilization, as well as nucleic acid and oligo conjugation to meet client specifications.

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