CD Bioparticles Announces Custom Synthesis Service for Magnetic Sodium Alginate Hydrogel Particles

CD Bioparticles announces new service for custom synthesis and drug encapsulation of Magnetic Sodium Alginate Hydrogel Particles.

NEW YORK, NY, UNITED STATES, April 28, 2025 /EINPresswire.com/ -- With years of experience in the pharmaceutical and life science sectors, CD Bioparticles announces its specialized service for custom synthesis and drug encapsulation of Magnetic Sodium Alginate Hydrogel Particles. This new offering allows scientists to synthesize particles of homogeneous size and desired loading such as small molecule drugs, peptides and proteins, applicable in drug delivery, biomedical implants, and tissue engineering.

Alginate is a polysaccharide derived from the cell walls of marine brown algae. The main feature that distinguishes alginate from other natural polysaccharides such as agarose and starch is its polyelectrolyte properties. The carboxyl residues in each monomeric unit are usually neutralized by metal cations. Polymeric alginate salt formed from monovalent cations such as Na+ and K+ can dissociate in water to form highly viscous solutions. Divalent cations such as Ca2+ and Mg2+ render the alginate insoluble and form an elastic hydrogel. In addition, composites containing magnetic particles can further enhance the magnetic response.

Magnetic particles based on sodium alginate have become one of the most popular drug delivery platforms due to their inherent properties, such as polyelectrolyte behavior, excellent biocompatibility, low toxicity, and biodegradability. They are highly attractive in the biomedical field. CD Bioparticles now offers custom synthesis of sodium alginate hydrogel magnetic particles and drug encapsulation services for researchers in the field of drug delivery, biomedical implants, tissue engineering, and regenerative medicine. With years of experience and sophisticated equipment, CD Bioparticles can help scientists to synthesize particles of uniform size and desired loading (e.g., small molecule drugs, peptides and proteins).

This new service line includes the synthesis of sodium alginate hydrogel particles or magnetic sodium alginate hydrogel particles with uniform sizes ranging from 20 to 1000 μm, encapsulation of desired cargoes, and production of other designated magnetic graft sodium alginate hydrogel particles, all QC-tested by microscopy. To initiate a project, CD Bioparticles requires information regarding the desired particle diameter, loading cargo, magnetic particle requirements, any modifications needed, quantity required, and any specific QC material

requirements.

CD Bioparticles offers drug targeting and delivery services based on ligand conjugated polymer particles and inorganic particles (e.g., sodium alginate hydrogel particles, magnetic particles, and gold nanoparticles). A variety of small molecule chemotherapeutics, nucleic acid drugs and therapeutic antibodies or proteins can be loaded into the nanoparticle delivery system and CD Bioparticles will make every effort to explore suitable and efficient drug delivery strategies for researchers.

Researchers who are interested in exploring the unique properties of Magnetic Sodium Alginate Hydrogel Particles for their projects, or who would like to discuss their specific requirements with the expert team at CD Bioparticles, please visit https://www.cd-bioparticles.com/services/magnetic-sodium-alginate-hydrogel-particles.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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