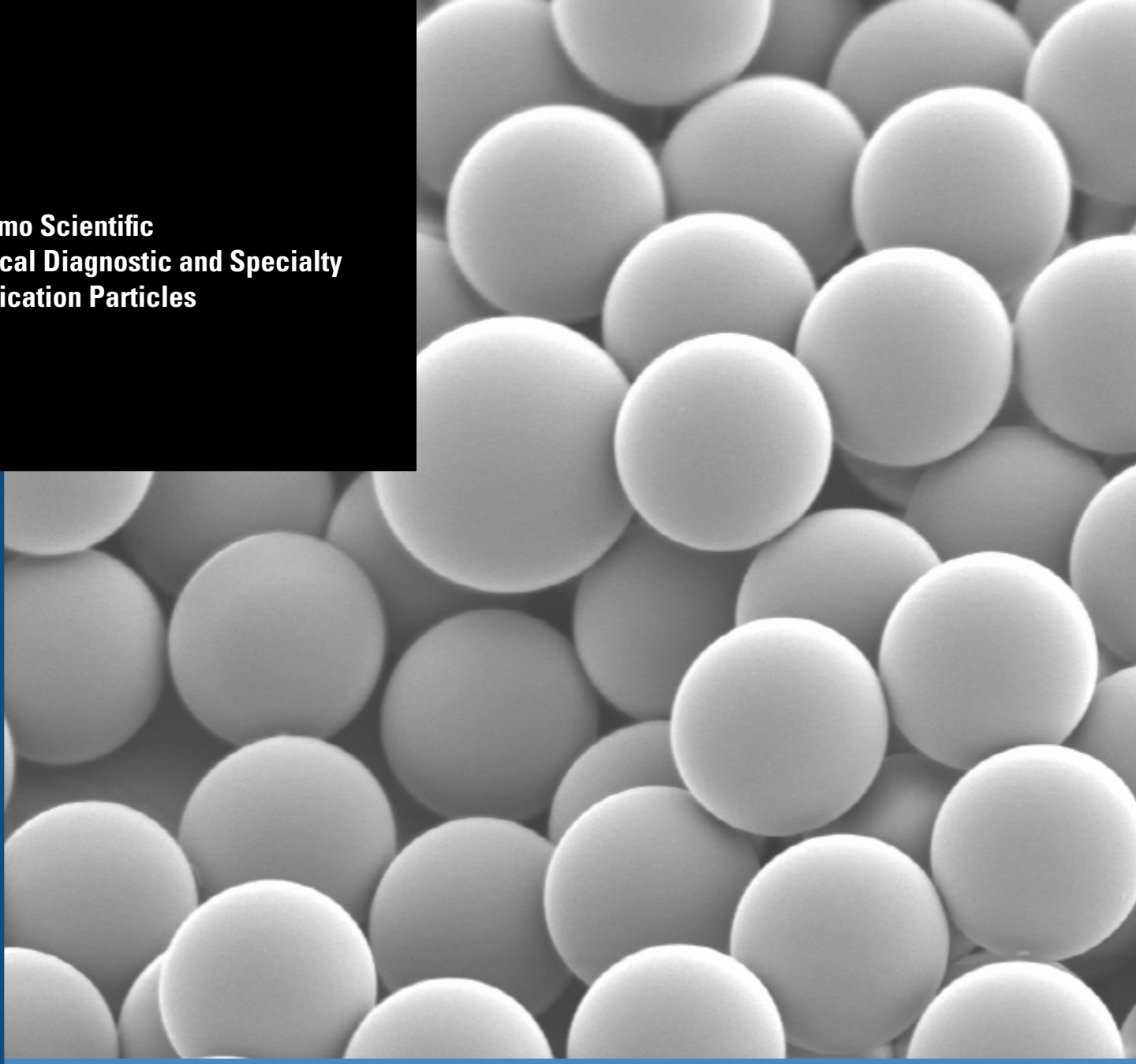
Thermo Scientific Clinical Diagnostic and Specialty Application Particles



We offer a variety of clinical diagnostic and specialty application particles manufactured in our ISO 13485 certified and FDA registered facilities for superior precision, accuracy, reproducibility and uniformity.

Thermo Scientific Opti-Bind sulfate, Opti-Link carboxylate-modified and PowerBind streptavidin polymer particles are used in diagnostics for lateral flow chromatographic strip tests, latex agglutination assays, suspension array tests, turbidimetric tests, and nephelometric assays.

Our 5000 and 7000 Series particles meet the need for particulate materials with various sizes and applications. While not intended for use in instrument calibration or diagnostic reagents, they are ideal for filter evaluation, fluid mechanics research, dispersion studies, light scattering research, aerosol particle generation, and more.

Thermo Scientific Clinical Diagnostic Particles

Opti-Bind® Sulfate Particles

• 15 mL , 100 mL • 10 % solids • Nominal diameter ~ 0.1 µm to 2.5 µm

Opti-Bind sulfate particles can be used directly from the bottle without any pre-cleaning for most applications. Our production does not utilize SDS, Tween 20, Triton X-100 and other common surfactants that can interfere with protein binding to particle surfaces. Additionally, our proprietary anionic surfactant does not interfere with the binding of proteins, nor cause proteins to desorb from particle surfaces.

Opti-Bind particles are available in a wide range of diameters from 0.1 µm to 2.5 µm for use in a variety of applications including turbidimetric assays. Sulfate surfaces are very hydrophobic and adsorb proteins almost instantaneously. Opti-Bind particles have been optimized for maximum reactivity in many diagnostic applications.

Opti-Link® Carboxylate-modified Particles

• 15 mL, 100 mL • 4 %, 10 % solids • Nominal diameter ~ 0.04 µm to 0.3 µm

Opti-Link carboxylate-modified particles contain carboxylic acid groups for covalent coupling and can be used in a variety of applications. The various acid content available within the Opti-Link product line enables you to control such important parameters as sensitivity, specificity and stability.

For most applications, Opti-Link particles can be used directly from the bottle without any pre-cleaning. Our proprietary anionic surfactant does not interfere with the binding of proteins, nor cause proteins to desorb from particle surfaces. Various surface acid concentrations are available to help optimize reagent development efforts.

Power-Bind™ Non-Magnetic Streptavidin-Coated Particles

• 1 mL, 5 mL , 100 mL • 1 % Solids • Nominal diameter ~ 0.3 µm to 0.85 µm

Power-Bind non-magnetic streptavidin-coated particles improve and simplify the binding of ligands to particles. They combine the advantages of a high surface area along with easy, high affinity and high specific activity binding. They can also be used in a variety of diagnostic and molecular biology applications.

These monodisperse particle suspensions feature streptavidin covalently bound to the surface of Opti-Link carboxylate-modified particles in a highly active form, resulting in high biotin-binding capacity and long shelf life.

From clinical immunoassays and molecular biology sample preparation to research applications, Thermo Scientific particles are critical components for many of the world's leading diagnostic and molecular biology companies.

Thermo Scientific Specialty Application Particles

5000 Series Particles - Polymer Particle Suspensions

• 15 mL • 10 % solids • Nominal diameter ~ 0.03 µm to 3.2 µm

The 5000 Series of polymer particle suspensions meets the need for particulate materials with a variety of properties and sizes from 0.03 to 3.2 µm. They are useful for such applications as filter evaluation, checking and testing, light scattering research, fluid mechanics research, aerosol particle generation, dispersion studies, and many other research and development projects.

Note: They are not intended for use in instrument calibration or diagnostic reagents because they lack the exacting specifications needed for these applications.

The polystyrene particles have a density of 1.05 g/ cm^3 and a refractive index of 1.59 @ 589 nm (25°C). Particle diameters are measured by optical microscopy, photon correlation spectroscopy or light scattering. They are packaged as aqueous suspensions at 10% solids by weight.

7000 Series Particles - Copolymer Particle Suspensions

• 15 mL • 10 % solids • Nominal diameter ~ 3.2 µm to 222 µm

The 7000 Series of copolymer particle suspensions are useful as model systems for fluid mechanics experiments and as challenge particles for large pore filtration systems.They are designed to meet the need for particulate materials with a variety of sizes and properties, and are useful for such applications as filter evaluation, filter testing, fluid mechanics research, dispersion studies, and many other research and development projects.

Note: They are not intended for use in instrument calibration or diagnostic reagents because they lack the exacting specifications needed for these applications.

The 7000 Series is also useful as experimental particles for acoustical and optical analytical systems. Composed of polystyrene polymer cross-linked with 4-8% divinylbenzene, these particles are chemically inert and can be washed with alcohol, and then vacuum or air dried.

The polymer density is 1.05 g/cm^3 and the index of refraction is 1.59 @ 589 nm (25°C). They are packaged as aqueous suspensions at 10% solids by weight.

Smoke Check - Smoke Detector Challenge Particles

• 10 mL • 0.5 % solids

Smoke Check is a complete testing kit for checking the transport time of air sampling smoke detectors as required by the United States NFPA Standard 72. A suspension of polystyrene particles in high purity water is nebulized using a handheld ultrasonic atomizer to mimic natural smoke, thereby eliminating residues caused by traditional oil-based sprays or real smoke. This makes Smoke-Check especially useful in cleanrooms and other critical environments.

The particle size and concentration have been optimized to consistently trigger the smoke detector. In addition, the particles will not pass through HEPA filters, ensuring the integrity of the cleanroom environment.

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