

## Why Are They Called Latex Particles?

The word *latex* is of Latin origin and may mean *liquid with milky appearance*, or just *liquid*. And in Italian, the word for milk is *latte*!

Natural latex is a sap harvested from several different rubber tree species; the most common is named *Hevea brasiliensis*. Today, natural latex is used to produce rubber for hoses, window profiles, boots, gloves, balloons, adhesives, etc.

Synthetic latex is man-made polymers from organic chemicals. Synthetic latex is mainly used to produce automobile tires (although some natural latex is also used for higher quality tires). Other uses for synthetic latex are paint coatings, glues, protective clothes, boots, etc.

Another use of synthetic latex is uniform micro particles for immunoassays. These are mainly polymers made from styrene, although other monomers are typically also blended in. A suspension of these micro particles looks just like milk, i.e. *latex*.

In a typical latex immunoassay (LIA), antibodies specific for an antigen of interest are attached to latex particles. When the latex particles are subsequently mixed with a specimen containing the specific antigen, the latex particles will adhere to one another via the antibody-antigen attractions. This process is called particle agglutination or aggregation. The extent to which the latex particles agglutination gives us information as to just how much of the antigen was present in the tested specimen.