

## Synthesis of silver nanoparticles by borohydride method and determination of they size by photon correlation spectroscopy

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### Abstract

The article is devoted to obtaining silver nanoparticles by borohydride method using as stabilizer the polyvinylpyrrolidone (PVP), polyvinyl alcohol or poly-(4,9-dioxadodecane-1,12-guanidinium) chloride (PDDG). The size of the silver particles and their change during the time was determined; the influence on this feature of the synthesis conditions and the used stabilizer was evaluated.

It was found that the growth of nanoparticles occur during the time by using PVP, that may be connected with its recovering capability. A promising direction is the use of PDDG chloride that allows obtaining the size of the particles practically unchanged during the time and has the pronounced biocidal properties.