This paper raises two different methods for synthesizing silver NPs. synthesis by assisted radiation and chemical reduction under constant stirring, using an aqueous based solution AgNO3 to 1 mmol as a precursor agent. In both cases the solutions were stabilized with PEG keeping a ratio of 1:10, manipulating a variable defined as stabilization time the solutions were obtained and subsequently subjected to different methods. the solutions were submitted varying the mixing times and temperature for the first method while for the second were subjected to radiation in the microwave spectrum varying the radiation power and maintaining the exposure time to radiation in 60s. sem microscopy was used as a first step to characterize morphologically the silver [Ag] NPs obtained as colloidal solutions were evident clusters hemispherical particles with sizes between 60 nm-190 nm in addition to amorphous particles of these clusters could calculate a particle size of 30-50 nm variable. Besides this method, optical characterization by absorption spectrophotometry were used for NPs silver that were analyzed in an interval of wavelength from 200 to 1000 nm showing a resonance plasmon located (RPL) between 318-325 nm, whereby a plasmon shift were demonstrated caused by each method used to synthesize and its own parameters. Analyzing the average bandwidth (FWHM) of each plasmon obtained significant variation giving indications of a variation in the sizes and distribution for each colloidal solution is evident, this could be corroborated by taking micrographs tem for each sample.

Keywords: Localized Plasmon, Parameters, Chemical reduction

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