To whoever is interested in reading this and thinking about it.

Definition of a colloid: a homogeneous non-crystalline substance consisting of large molecules or ultramicroscopic particles of one substance dispersed through a second substance. Colloids include gels, sols, and emulsions; the particles do not settle, and cannot be separated out by ordinary filtering or centrifuging like those in a suspension.

When considering the much used description "Colloidal Silver" and considering what groups of atomic silver clusters at pico and nano metre size actually are, the description of it being liked to a colloid is incorrect.

Local collections of pico and nanometre sized atomic silver clusters can only exist in water as an electrical suspension caused by a natural occurring interfacial static electrical charge between the silver and the water referred to as the Zeta potential. The combined negative electrical charge and the negative static electrical charge created are responsible for a sufficiently high repelling action between the clusters to overcome that attractive action of the van der Waals Force inherent in most materials at the so-called 'Skin depth'. In addition, silver is hydrophobic (water hating) and interfacially, the water and silver do not meet or touch, hence the Ionic Stern layer and the Zeta potential.

If nevertheless pico and nanometre sized atomic silver clusters were indeed spoken of being colloidal, they could never be filtered or centrifuged out. In fact the contrary of these methods is true and played out in many instances in the production of this substance. In fact also nano silver due to aggregation does eventually settle out.

Conclusion: Colloidal Silver is not a true colloid and should not be referred to that as such!

Comments welcomed