

Safety Assessment – 1 ppm Silver Ion Solution

The use of silver in various forms for water treatment, wound and burn dressings, ointment for the eyes of newborns reach back to ancient times. Today, silver ions are incorporated in water purification, surgical bandages, sanitizers for pool and spa waters and fabrics and clothing which suppresses organismal growth and consequent odors. Clinical applications include acne treatment, oral rinses and vaginal douches.

Elemental silver metal, Ag, may be oxidized to silver ion, Ag⁺, the soluble, biologically-active species of the element. Silver ion solution is colorless, odorless, tasteless and non-toxic.

For decades, silver ion solutions have been thoroughly tested for safety by way of standardized acute toxicity protocols which are widely accepted among chemical, consumer goods and pharmaceutical industries and U. S. government agencies.

Results for 1 ppm (1000 ppb) aqueous silver ion solution are:

- acute oral: > 5000 mg/kg
- skin Irritation: non-irritating
- eye Irritation: non-irritating
- dermal sensitization: not a contact sensitizer
- carcinogenicity: unlisted by: ACGIH, IARC, NIOSH, NTP, OSHA