IS 11673 (Part 2) : 2019 SODIUM HYPOCHLORITE SOLUTION - SPECIFICATION PART 2 WATER TREATMENT USE

This standard (Part 2) prescribes the requirements, methods of sampling and tests for sodium hypochlorite solution intended for water treatment meant for drinking purpose.

This standard was originally published in 1986. It was first revised in 1992 to correct the formulae for various requirements and to modify the method of test for determination of sodium chlorate. In first revision, two grades of sodium hypochlorite are prescribed – Grade 1 for household use & Grade 2 for industrial use.

Sodium hypochlorite solution is used in textile and paper bleaching, laundry trade, sterilization of swimming pools, disinfection of drinking water, treatment of cyanide wastes of electroplating industry and treatment of sewage effluent. It is also used as a sanitizer and deodorizer for floors, sinks and toilets, as a therapeutic adjunct in the treatment of certain skin diseases and as a safe antiseptic.

Commercial sodium hypochlorite solution prepared by chemical process usually contains 10 to 15 percent of available chlorine at ambient temperatures. The stability of hypochlorite solution is greatly affected by heat, light, *p*H and presence of heavy metals (which may be present in caustic soda). The optimum stability is attained at a *p*H close to 11 and with the heavy metal cations content not more than 5 ppm. Storage temperatures should not exceed 32°C, above which the rate of decomposition becomes too high and the available chlorine content is rapidly depleted. At temperatures above 38°C, sodium chlorate formation becomes appreciable resulting in loss of sodium hypochlorite.

Sodium hypochlorite is also used for treatment of water meant for drinking. Thus, keeping in view the public health concern, the Committee decided to formulate a separate standard intended for treatment of water meant for drinking by prescribing limit of heavy & toxic metals requirements additionally. Hence the committee decided to bifurcate the standard in two parts as follows:

i) Part 1 for household use and industrial use
ii) Part 2 for water treatment for drinking purposes

In this revision, standard has been bifurcated and in this Part 2, requirements and methods of tests for sodium hypochlorite for water treatment for drinking purposes has been stipulated.

Due to the use of Sodium hypochlorite in the treatment of water for drinking purpose, it concerns the health of millions of people and holds an immense significance. Besides, it is very much relevant to various stakeholders such as Manufacturers and Exporters of Sodium hypochlorite, Jal Boards across various states, Testing Laboratories, Consumers etc.