

## Effect of fluoride on human being in Bahraich distt. of U.P. India

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### Abstract

Bahraich is a tarai district of devipatan division which is very rich in forest and rivers; in this paper we analyzed the effect of fluoride ion on human being of different place. Fluoride in diet or drinking water above 1.5 ppm causes fluorosis. The maximum tolerance level in human body is 1.5 ppm (WHO slandered) fluoride does not concentrate in any tissues but only in the bones and teeth. Fluorosis affect bones, teeth, tissues and other organ of body, leading to death after prolonged illness. It also leads to dental discoloration and deformation of bones causing knock knees, bowlegs, stiffening of the joints, joint pains, back pain etc. in forest and river area and large percentage of people suffer from gastrointestinal complaints, diarrhea etc. the expectant and lactating mothers are vulnerable group-there is high incidence of stillbirths and abortion.

### Method & materials:

The fluoride compound that have widely been used for the fluoridation of municipal water supplies are sodium fluoride (NaF), sodium hexa fluoro silicate ( $\text{Na}_2\text{SiF}_6$ ) hexa fluoro silicon acid ( $\text{Na}_2\text{SiF}_6$ ). Naturally occurring fluorids present in water are Cryolite ( $\text{Na}_3\text{AlF}_6$ ), calcium fluoride ( $\text{CaF}_2$ ) and fluoropatite etc.

### Reference:-

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In Fluorodation process fluorides used and powder or sodium form of compounds. Some fluorides are usually added to water sepratively and along with chlorine which is a dopted to treat the water.

The amount of fluoride lon determine by following method.

### Ali Zarin-S Visual Mathod:-

Fluoride react with Fr, Alizarin, S lake to from colourless  $\text{ZrF}_6^{2-}$  and the dye. The colour of the dye lake becomes progressively weak with increase in amount of fluoride lons.

Take a 100 ml sample and add 1 drop of  $\text{NaAsO}_2$  solution to remove chloride if any. Add 5 ml. acid Zircolyl alizarin reagent (300 mg  $\text{ZrOCl}_2 \cdot 8\text{H}_2\text{O} + 50$  ml water + 70 mg alizarin reads/50 ml + 800 ml of 1.5 N.  $\text{H}_2\text{SO}_4$  upto make one liter) mix lastly and campare the solution and standard after one hours.

### Result and discussion:-

The survey of bahraich Distt. At different places fluoride Occurs in all natural drinking water when it present in small amount upto 1 ppm are generally considered to beneficial in water. But excess amount cause mottling of teeth or dental fluorosis which result in discoloration of Enamel. Chepping of teeth in children. When amount very large the bone fluorosis or crippling effect possible.