

SANITARY CHEMICAL AND BACTERIOLOGICAL ANALYSIS OF DRINKING WATER FROM WELLS IN KOCANI

Gordana Panova^{1*}, Blagica Panova¹, Nenad Panov¹

¹Faculty of Medical Sciences - Stip, Goce Delchev University - Republic of Macedonia, Krste Misirkov 10A, 2000 Stip, Republic of Macedonia

*e-mail: gordana.panova@ugd.edu.mk

Abstract

Acute diseases occur as a result of contamination of drinking water with microorganisms (causes gastrointestinal disease) or contamination with nitrates causes methemoglobinemia in children), pesticides or other chemicals. The occurrence of water-borne infections due to inadequate sanitation, disposal of manure decomposition processing operating system or contamination during distribution. Harmful chemical pollution due to accidents or inadequate distribution system layout.

Purpose of for conducting these two year trials (2010 and 2011) was: to test how much water from wells used for drinking is contaminated, to establish reasons for it, to pinpoint sources of water pollution and to enable the reconstruction of possible defects, in order to provide access to high-quality, chemical and bacteriological safe water.

Drinking water physical properties as: turbidity, odor, color, chemical parameters as: presence of nitrate, iron and organochlorine compounds, and the presence of bacteria, were examined in laboratory and in field trials.

Results showed that 7.1% of the samples in 2010 and 10.6% of the samples in 2011 were contaminated with bacteria. Chemical contamination in the drinkin water during this period rised from 1.2% to 1.5%, and as specifics was shown that manganese content in certain wells is higher than legal limit.

Drinking water has hygiene - epidemiological and socially - medical significance. Water quality should be checked constantly and its sanitation and regulation of waste materials in the environment should be done in a manner that does not present a threat to human health and not to endanger aquatic ecosystems. If the drinking water is contaminated can lead to hidrichnite epidemics that spread quickly and cause severe health problems.

Key words: *Method, Research, Laboratories, Contamination.*