

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
КАФЕДРА ІНОЗЕМНИХ МОВ
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ ЦЕНТР

**МАТЕРІАЛИ ХІ ВСЕУКРАЇНСЬКОЇ
НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ
СТУДЕНТІВ АСПІРАНТІВ ТА ВИКЛАДАЧІВ
ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО
ЦЕНТРУ КАФЕДРИ ІНОЗЕМНИХ МОВ**

“TO MAKE THE WORLD SMARTER AND SAFER”

(Суми, 23 березня 2017 року)

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY STATE UNIVERSITY
FOREIGN LANGUAGES DEPARTMENT
LANGUAGE CENTRE

**MATERIALS OF THE ELEVENTH
ALL UKRAINIAN SCIENTIFIC PRACTICAL
STUDENTS', POSTGRADUATES' AND INSTRUCTORS'
CONFERENCE OF LANGUAGE CENTRE OF THE
FOREIGN LANGUAGES DEPARTMENT**

“TO MAKE THE WORLD SMARTER AND SAFER”

(Sumy, March 23, 2017)

HARDNESS OF WATER AND ITS IMPACT ON THE HUMAN BODY

D. Shvachko – Sumy State University, group LS – 503
Y.S. Kozachenko – EL Adviser

We all know that water is one of the most important molecules in the earth and the human body, so our work is dedicated to the research of the physical parameter as water hardness and its impact on the human body. It is known that hard water can have a negative impact not only on the technical and communication devices, but also on living beings. Therefore, the research of the effect of this indicator, depending on its quantitative value to the organism in any region is very important.

First of all under water hardness we understand the presence in it of magnesium and calcium ions. Hard water is considered if it contains salts of these metals in concentrations greater than 6 mEq / L. There are constant and temporary (carbonate) hardness. Constant water hardness is defined by the presence of chlorides and sulfates of magnesium and calcium. Temporary hardness due to carbonates and bicarbonates of these metals can be eliminated by boiling.

The human body for normal functioning of all life support performance in specific norms that ensured homeostasis. In violation of water and electrolyte balance due to excess salts, magnesium and calcium ions changes permanent structure that can carry negative consequences. First of all, hard water has a negative effect on human skin - there it dry. This is due to the closing of pores soap molecules that are unable to lather in hard water. Also hard water can promote the development of dermatitis. With an excess hardness salts may stay in the kidney tubules, causing urinary stone disease. There is a theory that hard water may contribute to cardiovascular disease, but because water is composed of many components that interact with the body in the complex, it has not been proven. However, very soft water (less than 2 mEq / L) has effects on the body - may decrease calcium ions flow to the tissues.

In this research, we discovered the concept of water hardness, sustainable and temporary demonstrated the major impact of water hardness on the human body.