



**ANTI-DIABETIC ACTIVITY OF HYDROGEN-RICH WATER AND
ALKALINE-IONIZED WATER ON TYPE 1 DIABETES
MELLITUS STREPTOZOTOCIN-INDUCED MALE
Rattus norvegicus (ALBINO RATS)**

A Research Study to the
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ABSTRACT

Diabetes mellitus in the present decade has developed as a major health problem worldwide with accompanied serious health-related and socioeconomic impacts on individuals and society. Previous researches suggest that hydrogen-rich water and alkaline-ionized water may have an anti-diabetic property. Hence, this study examined the anti-diabetic potential of hydrogen-rich water and alkaline-ionized water on the pancreas histology of Type 1 Diabetes Mellitus streptozotocin-induced male *Rattus norvegicus* (Albino rat). This study employed five treatment groups: T0 (negative control), T1 (positive control), T2 (Diabetic induce, insulin), T3 (Diabetic induce, hydrogen-rich water), and T4 (Diabetic induce, alkaline-ionized water). All treatment group are made in duplicates. After six weeks of treatment the results of the study showed that both hydrogen-rich water and alkaline-ionized water have no significant effect in lowering the blood glucose levels. The study recommended the use of immunohistochemical techniques to further examine the pancreas, to use other test organism, and further examination of other organs for the effects of HRW and AIW.

Keywords: Anti-diabetic, Alkaline-ionized water, Hydrogen-rich water, Streptozotocin, Type 1 Diabetes Mellitus