

THE IMPORTANCE OF WATER IN HUMAN LIFE AND ITS CHARACTERISTICS***B.B.Umarov****Assistant of Andijan Institute of Agriculture and arotechnology****Abdullayeva Ziyoda Dilshodbek kizi,******Olimjonova Muzayyana Xamidullo kizi****AQXAI student*

Annotation: This article explores the invaluable importance of water in human life and its unique characteristics. The biological, physiological, and ecological significance of water, its role in life processes in the human body, as well as the main aspects of water use in everyday life, are considered. The article analyzes the chemical and physical properties of water, including solubility, heat capacity, surface tension, and others. Issues of water pollution and its consequences, protection and rational use of water resources are also covered. The article is aimed at increasing the understanding of the importance of water for human life and the environment.

Keywords: Water, human life, characteristics, significance, biological, physiological, ecological, water resources, protection, water pollution

Аннотация: В данной статье рассматривается неопенимое значение воды в жизни человека и ее уникальные особенности. Рассматриваются биологическое, физиологическое и экологическое значение воды, ее роль в жизненных процессах в организме человека, а также основные аспекты использования воды в повседневной жизни. В статье анализируются химические и физические свойства воды, включая растворимость, теплоемкость, поверхностное натяжение и другие. Также освещаются вопросы загрязнения вод и его последствий, охраны и рационального использования водных ресурсов. Статья направлена на повышение понимания важности воды для жизни человека и окружающей среды.

Ключевые слова: Вода, жизнь человека, характеристики, значение, биологические, физиологические, экологические, водные ресурсы, охрана, загрязнение воды.

Water is widely used in industry; it serves as a raw material, heat carrier, solvent, and, where necessary, a source of oxygen and hydrogen, a dye, and a purifying carrier for necessary work in industries. Water is considered the most essential mineral in terms of its function, because where there is no water in the biosphere, there is no life, and where there is water, microorganisms show signs of living life in the soil. Water is such a necessary mineral that,

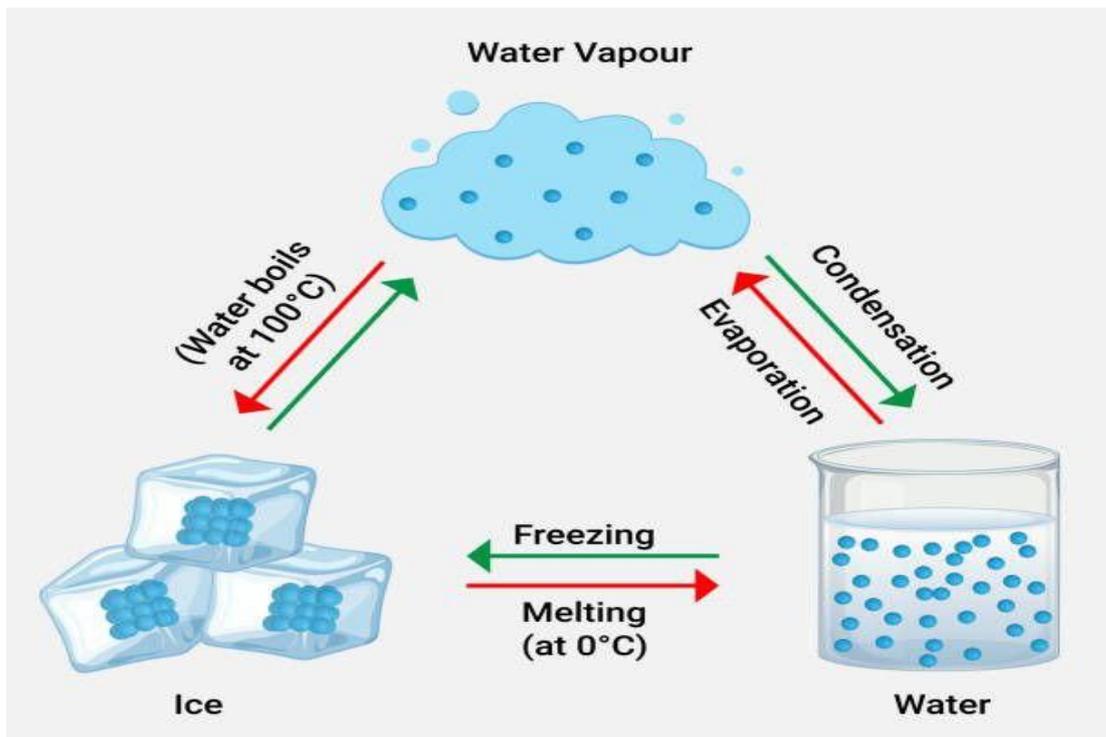
first of all, in the life process of a person, it belongs to the category of essential things, in addition to its consumption, it also cooks necessary food products with water, and in cleaning work, water plays the primary role. In addition, water plays a key role in the growth and development of plants, which are the source of life. In addition, in industry, water plays a key role in the operation of many industries. Water consumption in industry is very high, therefore its purification and reuse is advisable. If water is not used sparingly, the cost of the obtained products will certainly increase, along with this, the amount of toxic substances released into the atmosphere through water will increase, and the ecological balance will be disrupted.

The composition of drinking water must be absolutely clean and harmless and comply with state regulations 2874-82. Technical water is cheaper than clean water because it is contaminated and unfit for drinking. It is impossible to drink flowing water without purification, but it is possible to irrigate agricultural crops. Energy water should be clean and salt-free, forming steam. In central heating pipes, water must be clean for free circulation in the form of steam and water. Hot water moves through pipes and batteries. If the water is clean and contains salts, sediment will settle on the pipe walls. Pipes are always cleaned so that water can easily pass through them. In industry, circulating water is used several times.

Process water must also meet special requirements. In industrial enterprises, clean water is often added to technical water because maintaining water contamination standards by adding water is cheaper and easier than purifying it, but there is negligence in water usage. Regardless of how water is used in enterprises, whether heated or cooled, water disappears and decreases due to evaporation, spraying, dripping, and other causes. Water pollution affects its quality as follows:

- if water is contaminated by sulfuric or nitric acid from the atmosphere, the amount of N in its composition decreases, while the amount of sulfates and nitrates increases; if there is an increase in calcium, magnesium, and silicon in groundwater and river waters, they are washed away quickly. Bitter acid rain melts rocks;
- presence of heavy metals lead, cadmium, mercury, arsenic, and phosphate nitrates and nitrites in ordinary water; - increase in salts in groundwater and surface water through wastewater;
- the presence in water of organic compounds or biologically stable substances preserved as pesticides, super ecotoxicants, carcinogens and mutation-inducing substances;
- depletion of oxygen in clean drinking water.
- the presence of viruses, fungi, and infectious disease-causing bacteria in water bodies.
- contamination of clean natural water with radioactive substances;

- petroleum products, phenol, organic substances, fuels and lubricants; the most dangerous toxic substances are sources of water pollution from industrial enterprises (multiple factories, pulp and paper plants, wastewater from transport organizations, etc.).



There are several methods of water purification, which we will consider in order.

1. Water purification by settling or precipitation. Runoff, rivers, canals, and large irrigation ditches are rapidly polluted due to the release of gaseous dust and soot from the atmosphere. Agricultural import into flowing waters according to the law of parallelograms, the particles either settle to the bottom of the settling tank or escape from the settling tank with the water flow. This, in turn, is discharged from the settling tank by two streams of water. This, in turn, depends on the ratio of the two velocities. Vertical settling tanks are cylindrical, rectangular, conical, inverted pyramidal in shape, where water enters from the central pipe, turns 180° downward, and then moves upward. The clarified water flows down through circulating channels to the filtration chambers. In closed settling tanks, the water flow velocity is usually 2-4 mm/sec, while in vertical settling tanks it is 1 mm/sec, and the time it takes for water to pass through the settling tank lasts 4-8 hours. The economic efficiency of the clarifier does not meet modern requirements. Filter. This method is used to capture small particles in running water. Water passes under pressure through a porous barrier or a layer of sand. This method of water purification is called mechanical purification. In this method, water is removed from harmful compounds by means of heating and evaporation. During heating or heating, many residues present in the enterprise are heated after water is placed in special condensates. By strongly heating the flowing water, it is possible to extract colystyrene from it, but this is a very difficult and high-mobility technological process. Water purification using ozones Ozone is an acute oxidizing agent with strong bactericidal properties. Ozone

(O₃) is a blue gas, emits an unpleasant odor, and dissolves well in water. Ozone has a strong effect on microbes, breaking them down and destroying their structure; ozone neutralizes water very quickly, depending on its properties. After mixing with water, it does not emit any odor, colorlessens it, and eliminates natural and artificial odors. Such properties as pH, turbidity, and temperature do not matter in the water to which ozone is added. Ozone can be produced at industrial enterprises. For this, it is sufficient to have special nitrogen at the enterprise. The advantage of ozone over chlorine is that it does not form harmful compounds and can purify large amounts of water in a very short time. Cleaning with ultraviolet rays. When treating wastewater with ultraviolet rays, it acts as a bactericide against bacteria and microorganisms. Ultraviolet rays break down the oxide of the cell protoplasm of microorganisms, which disrupts the processes of metabolism in the cell. In these few seconds, the water can be disinfected. Specific requirements for water disinfection using this method. This method is effective when the water is clean and transparent; if the water is cloudy or colored, the effect of ultraviolet rays is eliminated. The economic efficiency of wastewater treatment varies depending on the methods: hydromechanical method-50-70%, physicochemical method-90-95%, chemical-80-90%, biochemical-85-95%. Each industrial enterprise chooses a purification method based on its capabilities, the amount of water disinfection, and the conclusion that specialists consider the most profitable and inexpensive method.

CONCLUSION:

This article revealed the incomparable importance of water in human life and its unique characteristics. Water is a vital necessity for the human body and plays an important role in all biological and physiological processes. Water pollution poses a serious threat to human health and the environment. Therefore, the protection and rational use of water resources is the responsibility of every person.

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