

**Muxtaram Boboqulova Xamroyevna**

Asian International University Assistant of the "General Technical Sciences" department

Dear Mr. [Boboqulova607@gmail.com](mailto:Boboqulova607@gmail.com)

**ANNOSTATION.**

The term "thermodynamics of living systems" refers to "thermodynamics", a physical science devoted to the study of the behavior of living systems. It includes properties such as temperature, pressure, and volume, and describes their interrelationships, changes in them, and energy exchanges. The following are the basic laws of thermodynamics of living systems: Energy is conserved and conserved. It has average quality in law, energy management and manufacturing practices. The total entropy of the system shows how accurate the temperature is. This law is related to the structure and behavior of the system. Provides information about the accuracy of sources related to temperature and how energy is obtained and consumed from them. Thermodynamics of living systems studies energy exchange, temperature changes, work changes, and energy distribution. It is widely used in practice in chemistry, physics, administrative culture and other fields.

**ENTER.**

Organism tissues (biological systems) are also important in the study of thermodynamics. It supports the principles of thermodynamics to cover the study of energy exchange, work changes, and its reaction to changes in biological systems (for example, in human control). This law reflects the non-loss of energy. It is important to learn how much energy can be stored and how it is used. It regulates the energy exchange and consumption programs of biological systems to maintain their proper structure and function. Organisms increase entropy, and they operate with information about how correctly it is transferred. The correctness of sources related to the temperature and other properties of biological systems and energy extraction and consumption from them. It contains information about thermodynamics of biological systems, metabolism, production, temperature regulation, energy use and other processes that help in the study of species. It is important to support the principles of thermodynamics in medicine, ecology, food industry, biotechnology and other fields.

**LITERATURE ANALYSIS AND METHODOLOGY**

Heat is a critical factor that plays an important role in all basic processes of life. Metabolism includes the supply of energy necessary for the body's vital processes and heat for its consumption. The organism includes molecular changes, control systems, and assimilation processes for vital activity. All these processes require heat for energy exchange and consumption. In life processes, it is important to regulate, control and adapt to changes in temperature from the external environment. Organisms use temperature regulation mechanisms to maintain a stable and comfortable temperature for their lives. A lot of the work involved in the production and delivery of DNA molecules involves energy consumption. In these processes, DNA construction, replication and copying processes are known as complex life activities that require energy. Heat is important in regulating the energy, temperature and changes required for the functioning of several systems in life. Therefore, a good understanding of the principles of thermodynamics is necessary

to study and manage life in an understandable way. In organisms, the role of heat is determined through the following main manifestations of vital activity: Metabolic processes are the main source of the molecular structure and activity of the organism itself. These processes involve chemical reactions that provide heat. Through oxidation and addition reactions with the help of metabolism, glucose is used in these physical models. Temperature control is important for organisms to normalize their vital activities and adapt to changing environmental conditions. Anti-heating and anti-cold forces, organisms keep vital activities at optimal temperature. When the muscles of the body (myocardium, waves, etc.) are activated, they produce energy, and heat is generated through this process. Myocardial activity increases energy consumption and causes an increase in body temperature. Thermogenesis refers to all the processes of increasing physical heat. This process includes all of the metabolic, muscle, and heat response systems. Thus, the body's processes are critical in determining the location of heat. These processes include the energy and temperature needed to sustain life. Therefore, the study and management of heat transfer is an important information widely used in the field of biological systems and medicine. is the study of thermodynamics, which is concerned with the processes and energy exchange of organisms themselves. It helps to explain the principles of thermodynamics, the functioning of the systems of internal organs, temperature, energy consumption and laws. Metabolic processes include the production of necessary energy and substances to ensure the vital activity of the body, and the processes of obtaining energy from them. These processes include oxidation, addition, fermentation and other chemical reactions. Metabolic processes lead to the production and use of heat. Internal organs, muscles and movement changes require a lot of heat for energy production and consumption. These processes include physical temperature changes associated with work. Internal organs use mechanisms to allow adaptation, regulation and regulation of body temperature to maintain their vital functions. These mechanisms require energy to adapt to and respond to temperature changes. The chemical reactions carried out in the internal parts of the body change with the influence of heat and respond to its influence. These reactions are of great importance in ensuring energy exchange and consumption. They are of critical importance in understanding the thermodynamics of internal organs, biological systems and processes in the field of medicine. It helps to understand the concepts of processes, organic physical structure and activity and control of life processes. Cardiac system is the main part of life activity, and it is mastered from the processes of energy production, its consumption and energy exchange. : The heart, through its myocardium or muscles, is activated myocardially. These processes require the use of oxygen and glucose to provide energy through oxidative metabolism. Cardiac activity is an important source of energy production. The heart muscle ensures the warm transmission, growth and proper distribution of blood. These movements help the myocardial work of the heart and require energy. The heart contains the energy to control changes in electrical impulses. Electrical impulses are necessary to change blood flow and blood flow. This process is of great importance in regulating and controlling the activity of the heart. Thermodynamics of internal organs is thermodynamics devoted to the study of temperature changes between the internal parts of the body and the movements and activities carried out in them. related to their working processes and energy exchanges. It helps to explain the principles of thermodynamics, the functioning of the systems of internal organs, temperature, energy consumption and laws. Internal organs use mechanisms to allow adaptation, regulation and regulation of body temperature to maintain their vital functions. These mechanisms require energy to adapt to and respond to temperature changes. The chemical

reactions carried out in the internal parts of the body change with the influence of heat and respond to its influence. These reactions are of great importance in ensuring energy exchange and consumption. They are of critical importance in understanding the thermodynamics of internal organs, biological systems and processes in the field of medicine. It helps in understanding the concepts of processes, organic structure and activity and managing life processes. The human body needs to exchange and consume energy to carry out its vital activities. These processes of energy production and consumption are based on the basic laws of thermodynamics (first and second laws).

#### Summary.

Thermodynamic principles help to determine laws and show ways of spending energy. Heat helps the body to exchange temperature with the external environment. Temperature regulation is necessary to regulate body temperature and adapt to changes in the external environment. Heat plays a big role in muscle and movement changes. Heat is expended through movement and muscles working and producing energy. Heat is necessary for biological processes. These processes use heat to ensure the activation of reactions and other biological processes. For these reasons, heat is of great importance in human activity. Heat is necessary for maintaining vital processes and plays a major role in the normal functioning of the body. The importance of heat in human life is in reaching the normal place of vital activity, important systems of the body, such as metabolism, temperature regulation, muscles and movements, biological processes and critical for others. The importance of energy balance for the human body is of great importance in ensuring the stability of the amount of energy supplied and consumed. It is critical for the normalization of metabolic processes, proper maintenance of activity and adaptation to changes in the external environment.

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