

Name

Instructor's name

The course

The date

### Article Critique

The article under consideration is titled *The Differences between Diffusion and Osmosis*. The aim of this article is to show how these two central concepts in biology differ from each other.

Both diffusion and osmosis relate to equilibrium. The process of diffusion is based on the tendency of molecules to move from an area of higher concentration to an area of lower concentration until equilibrium is reached. Based on the phenomenon of random motion, molecules always tend to move chaotically away from a concentrated area rather than move into it from areas of lower concentration. Osmosis is considered to be a specific type of diffusion when the mobility of molecules is restricted by a semi-permeable barrier. Osmosis limits the normal diffusion flow by letting only certain types of molecules pass. In other words, during osmosis, smaller molecules pass through a semi-permeable membrane, which is like a thin wall, while larger molecules are blocked. As well as in diffusion, the effect of random movement is also present in osmosis. In order to make the concentration equal on both sides of the barrier, water molecules will get through the barrier until equilibrium is achieved. Also, with regard to osmosis, it is essential to keep in mind the fact that the concentration of water has to be considered rather than the concentration of a chemical. Finally, there is another difference between diffusion and osmosis. While diffusion is based on random motion of molecules, osmosis can be called a more selective type of diffusion, as it

requires a semi-permeable membrane and it somehow controls the movement of certain molecules.

Generally, the article is clear, precise and easy to read. It provides definitions of both diffusion and osmosis; it explains what these processes are; it shows how these processes differ from each other. What is more, the article gives two vivid examples of diffusion. These examples are so illustrative that even if the reader is not much into chemistry, they will be able to understand what diffusion is. Not only does the article describe the process of diffusion from a scientific point of view, but it also describes this process in simple terms. The example of pouring a drop of green food coloring into a glass of water gives the reader a perfect understanding of this process. Unfortunately, no vivid example of osmosis was given in the article. Thus, a reader without any special background knowledge may not understand this process and how it works in real life. In the article, all the main points are supported by evidence and explanation. The language of the article is coherent and logical; it is not too scientific or overcomplicated. One citation was used while defining the process of diffusion. It might be also helpful if the author had summarized all the differences between these two processes at the end of the article.

First of all, while reading this article, I learnt what diffusion and osmosis stand for. With the help of straightforward examples, I understood how these two processes work. Secondly, I learnt about the main differences between diffusion and osmosis. Although these two processes may seem similar to some extent, there are still some crucial differences between them. Moreover, I came to realize that both diffusion and osmosis are present in our daily life, which had never occurred to me before reading the article. For example, you can observe the phenomenon of diffusion when you spray some perfume in a room and the smell gradually permeates the air; or when you are painting a picture and dip your brush into a cup of water and you can see how the water changes its color. With regard to osmosis, the article

made me realize that this process plays an important role in our body, as it helps to transfer water between cells.