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DIFFUSION IN TUBE DIALYZER

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N owadays kidney failure is a problem of many peoples in the world. We know that the main function of kidney is maintaining the chemical quality of blood particularly removing urea through urine. But when they malfunction the pathological state known as uraemia results in which urea is retained in the body. Failure of the kidney results in building up of harmful wastes and excess fluids in the body. Kidney diseases (failures) can be due to infections, high blood pressure (hypertension), diabetes and/or extensive use of medication. The best form of treatment is the implantation of a healthy kidney from a donor. However, this is often not possible due to the limited availability of human organs. Chronic kidney failure requires the treatment using a tube dialyzer called dialysis. Blood is taken out of the body and passes through a special membrane that removes waste and extra fluids. The clean blood is then returned to the body. The process is controlled by a dialysis machine (Tube dialyzer) which is equipped with a blood pump and monitoring systems to ensure safety. So this paper investigates the real application of Mathematics (Diffusion) in Medical science it also contain the Mathematical formulation and interpretation of Tube dialyzer in relation to Diffusion.

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