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Pharmaceutical Applications of Newton's Second Law and Disc Inertia

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Abstract : As the effort to create new drugs to treat rare conditions cost-effectively intensifies, there is a need to ensure maximum efficiency in the manufacturing process. This includes the creation of ultracompact treatment forms, which can best be achieved via applications of fundamental laws of physics. This paper reports an experiment exploring the relationship between the forms of Newton's 2nd Law appropriate to linear motion and to transversal architraves. The moment of inertia of three discs was determined by experiments and compared with previous data derived from a theoretical relationship. The method used was to attach the discs to a moment arm. Comparing the results with those obtained from previous experiments, it is found to be consistent with the first law of thermodynamics. It was further found that Newton's 2nd law violates the second law of thermodynamics. The purpose of this experiment was to explore the relationship between the forms of Newton's 2nd Law appropriate to linear motion and to apply torque to a twisting force, which is determined by position vector r and force vector F. Substituting equation alpha in place of beta; angular acceleration is a linear acceleration divided by radius r of the moment arm. The nevrological analogy of Newton's 2nd Law states that these findings can contribute to a fuller understanding of thermodynamics in relation to viscosity. Implications for the pharmaceutical industry will be seen to be fruitful from these findings.

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