The context for computational purposes of cell turbidity focuses on optimization results. It is an adaptation-related process of an input, and the selection of equipment characteristics, mathematical processes, and testing [1]. Furthermore, the optimization algorithm is a problem-solving process that aims to discover the most beneficial conditions from a certain point of view, addressing real-world problems and numerical applications to advance the discipline with mathematicians, and to better understand these phenomena.

Computation is defined as "to compute", and refers to a process [2]. The "computer" verb version of the term is a machine to process calculations using digits, and the computational behaviour depends the system. The results of the analysis and diagnosis optimization would be prepared for the processing phase of machine learning adaptation. This is an interdisciplinary method which refers to artificial intelligence and statistics for computer applications. Moreover, researchers can develop algorithms based on expertise, e.g. a model for linear regression analysis [3]. The analysis and diagnosis of linear regression testing and computation can provide solutions with the help of computer simulation. The model of cells is a behaviour, and has been explored and related to systemized methods to understand [4] the reality.

The focus on *Saccharomyces cerevisiae* turbidity in computational modelling is performed in procedural algorithms. However, the cell turbidity model in the medium and computational efficiency of modelling, estimation method and using the turbidity data for cell number estimation are not yet available [5]. The correlation between particle, e.g. bacteria and organisms with larger cells, and turbidity, are also not yet completely understood, such as the McFarlan method using photometry for the turbidity. The principles of spectrometric absorbance are at 600 nm for aqueous solution, but the suspended substance occurs, which means the absorbance parameter is not suitable.

Computational models utilize other types of particles whose object differs from this research, such as formulating, modelling, adapting, or determining the results of analysis and diagnosis. In the first year, research on *Saccharomyces cerevisiae* cell turbidity modelling was applied as a standard curve of turbidity method, referred to as turbidimetry, on cell quantity in the medium of purified water. The statistical procedures can be used for simulation of selected models. By utilizing computer simulation, time management can be effective and efficient when facing a complex system [6]. However, its implementation is not only a program execution. The analysis results and the significance of diagnosis can also be simulated to determine a model's suitability. Simulation is a heuristic method used to solve optimization problems [7].

There are no computer programs available for simulating and assessing errors of the model candidates, and computational optimization is a necessity to generate the model [8]. The research to obtain and examine the model of *S cerevisiae* cell turbidity in purified water and liquid medium of cell growth, required two years. Computation in this context is certain analysis and model diagnosis, which must be optimized. Optimization performs computational procedures and generates test results [9]. A hybrid algorithm allows us to solve complexity problems, i.e. the process stages presented [10]. Performing experiments of cell models in liquid media is a problem solving system, and that is clear and understood [6]. This paper aims to construct the computational structure in studying the turbidity model of homogeneous cell particles of *Saccharomyces cerevisiae* in pure water, and to test a consistent model in liquid nutrients medium.

A model can be seen as a point-view to parameterized mathematical equations and a physical point-view for consistency [11]. This research investigates the microbe's discipline. Researchers look the beyond the role of the model, which is useful in preparation of fermentation process of biofuels; a part of the renewable energy and environmental preservation.