Prediction of Liquid Detergent Properties using Artificial Neural Network

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Abstract : Neural networks have the potential to derived meaning from complicated or imprecise data. They can be used to extract patterns and detect trends, which are too complex to be notice by either humans or other computer techniques. A trained neural network can be thought of as an "expert" in the category of information it has been given to analyse. This expert can then be used to provide projections of given new situations of interest and answer "what if" question. Artificial network can be effectively used in various fields for different purposes. In this study, liquid detergents based on polymeric surfactant alkyd resin were formulated, analysed for various properties like foam volume, percent detergency and surface tension. The generated experimental data was used for training of feed forward artificial neural network with back propagation technique. The trained artificial neural network model was used for prediction of detergent properties. The result shows that artificial neural network is an excellent option modeling of such experimental data.

Keywords : Artificial neural network, ANN, liquid detergent, properties.

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