The relevance of this work relates to the problems of dispersion systems investigation and improvement of the experiment accuracy. These problems’ solution requires new experimental methods. Trends of modern science, its orientation to new technologies require a differentiated approach to conducting experiments and training. Using the latest experimental methods is intended to provide clear and sufficiently accurate results that can be used in the future. In this regard, the authors of the article discuss the goals, objectives and requirements posed to the experimenter working in modern science.

This article presents one of the methods of dispersive analysis for improving the data accuracy and comparative analysis of the described method with other popular methods of mathematical statistics.

The methods of dispersive analysis are widely used for food raw material analysis. There are several methods of dispersive analysis at the modern stage of the development of science. A microscopic technique allows analyze the shape, texture and surface structure of the considered samples of food raw materials. This fact is of high importance in cases, when the powders are used for further preparation of reactive heterogeneous mixtures, which are used in food industry. The calculation of dispersion for modelling powder sample is shown and the optimal size of its particles is determined. The most optimal approximating curves for powders of different dispersion are chosen.

The authors of the article give a number of conclusions and recommendations for the analysis of food powders.

Keywords: microscopic method, dispersion of powders, screen analysis of powders, differentiated distribution function.