INTRODUCTION:

Dairy production is an important sector of the national economy countries in the world. India is the largest producer of milk producing more than 100 million tons of milk per annum. Also milk production is a livestock enterprise in which small-scale farmers can successfully engage in order to improve their livelihoods. Regular milk sales also allow them to move from subsistence to a market based income.

Milk contains protein, fat, lactose, a variety of vitamins, minerals and other nutritional elements, so it is looked at as one of the main food. The quality of milk is directly related to the health of consumers. To ensure the quality of milk and dairy products, dairy industry in several key areas such as cows scientific farming, the acquisition of raw milk, milk and dairy processing quality control, milk products qualified inspection, etc. need to repeatedly test the quality of milk. There are many indicators that value the quality of milk, but the most commonly used is the main nutrients in milk – fat, protein and lactose content. Lactose content relatively changes smaller, while fat and protein changes dramatically. So the standards require that the fat and protein content in milk quality testing mandatory monitoring indicators. As for these two components in the detection, the traditional method is chemical analysis methods, (which are complicated and requires chemical reagents to test a long time) such as the fat in milk is usually measured by Babcock method, and the protein content measure used Kjeldahl method.

Temperature has a great effect on the high-accuracy measure of ultrasonic / infrared spectroscopy technique etc. characteristic parameters. Temperature can cause the change of milk viscosity density, milk fat and protein particle size, shape and distribution patterns. The impact of temperature on the milk of physical existence morphology is very complex and it is difficult to make a precise model to express relationship between temperature and the existing forms of the milk, and thus it is difficult to establish a precise mathematical expression. Hence the Fuzzy Logic Inference System and / or Neuro – Fuzzy Inference System can be thought to control temperature of sample milk overcome above shortfalls and also would give better results as compared to that of conventional methods in use, for detection of Fat contents in milk.