ABSTRACT

Cow's milk is the result of livestock whose properties are undoubtedly, considering it contains protein, carbohydrates, fats, minerals and vitamins. Pure cow's milk is certainly favored for the entire consumer society, especially not mixed with other ingredients, such as sweeteners and preservatives. Now in fact many traders sell cow's milk from stores to the roadside. Need to be understood, because the cow's milk material is liquid, then the purity condition is not easy to be guaranteed. Relying on seeing, smelling the smell, even feeling it if not the expert is very difficult to be accountable. Therefore, the purity of cow's milk becomes an important thing in risking quality assurance for every devotees.

In an effort to detect pure or mixed cow's milk, a technological module is required that can reveal the significance of its difference in quality. Therefore, a design is required through the video signal processing technique. As for the video in question is, do the recording droplets of cow's milk then processed by the Local Binary Pattern (LBP) feature extraction method by summing the local structure of the image working in the greyscale color mode and using 8 circularly-split neighborhoods as well Classify it using the Learning Vector Quantization (LVQ) method by approaching the input vector based on the proximity of the input vector distance to the weights.

After performing some test scenarios on the system of idetification and classification of cow's milk purity with form and color parameters, the highest accuracy for form identification was 67.5% with 36 seconds computation time and the color identification was 55% with a computation time of 75 seconds.

Keyword ; Cow's Milk, Video Signal Processing, Feature Extraction, Local Binary Pattern, Learning Vector Quantization