

ABSTRACT

Cow's milk is a food that has high nutritional value because it contains complete nutrition. Cow's milk is an important part of production and trade. Based on the treatment, cow's milk has several types, such as pure cow's milk, cow pasteurized milk, and cow's milk sterilization.

Pure cow's milk is cow's milk whose natural content is not reduced or added anything and has not received any treatment. Many producers of pure cow milk are mixing ingredients or other components so that the pure cow's milk has increased in terms of quantity. With mixing, traders allow for more profits.

It is difficult for consumers to distinguish pure cow's milk and which has been mixed with other ingredients. In recognition of its purity, the authors propose systems for the identification and classification of cow milk purity based on video signal processing using Discrete Wavelet Transform (DWT) and Learning Vector Quantization (LVQ) methods applied through MATLAB software. The steps taken are acquisition, pre-processing, feature extraction, until the last stage of classification. Based on the identification and classification, 62,5% accurate to droplet color of cow milk, 70% accurate to cow's milk droplets, and 4 frames to cow milk droplets time.

Keywords: Pure cow's milk, Discrete Wavelet Transform (DWT), Learning Vector Quantization (LVQ)