ABSTRACT

Cow's milk is a very nutritious drink to be consumed daily, because it contains fat, mineral and protein that is needed by the body. Many of people wants to buy pure milk but some pure milk seller tries to gain more profit by reducing the number of pure milk and mixing it with other substances to increase the milk's volume and making the milk last longer, this methods usually lowers the quailty on that raw milk. Usually the simplest way that is used to identify the pureness of milk is by seeing the difference in color and smelling its odor then compare it with milk which pureness already known, but this methods is hard to be done and the success rate to differ those milks is very low. As food technology advances there is a need of technology that could ease us to pick pure milk to be consumed by knowing that the milk has the best purity.

This final Project is identification and classification of cow's milk pureness based on video signal processing through several steps acquisiton, pre-processing, feature extraction and classification. In feature extraction gabor wavelet method will be uses and support vector machine method will be used to classify it. The system is applied through a software called MATLAB by identify and classify in shape, color and speed of cow milk droplets, performing shape testing scenarios that produces 90% average accuracy at best with 2.60785 s average computing time and performing color testing scenarios that produces 60% average accuracy at best with 0.0523 s average computing time

Keyword: Cow's milk, Gabor Wavelet, Support Vector Machine