

OPEN-ENDED EXPERIMENT 2015/2016**Instructions**

- 1) Choose one of the experiments below. Proposed a flow chart for the experiments.
- 2) The total sampling done in total is 10 samples (Compulsory)
- 3) Make sure you consult your supervisor before starting the experiments.

TASK 1

The shelf-life of pasteurized milk is traditionally estimated by microbial counts. However, the values of microbial populations and the end of sensory shelf life of milk vary, and are not consistent. Construct an experiment that to correlate the sensory shelf life of milk product with microbial growth.

Make sure you consult your supervisor before starting the experiments before 31st of October with your proposal.

TASK 2

Cellulose is one of the components in plants that vary in different plants. Cellulose degradation is feasible for production of reducing sugar and eventually use as precursor for biofuel production. In addition, biological degradation is preferable due to its green nature in process and less toxic waste is produced. You are given different source of cellulose to choose from and instructed to evaluate the yield of reducing sugar produced using mixed culture that you isolate.

- i) Do an enrichment culture to produce mix culture containing cellulolytic bacteria.
- ii) Analyze cellulose degradation in terms of reducing sugar production.