**Abstract**

Production of Hydroxylethyl cellulose from cotton fibre as a thickener for emulsion paint was carried out. The raw materials used for its production were alkaline cellulose, which is composed of cotton linter pulp, 25% sodium hydroxide solution, 90% acetone solution and liquefied ethylene oxide. The materials were used in their specified proportions thus: 23 mL of cotton linter pulp, 31 mL of acetone, 34 mL of NaOH, and 50 mL of ethylene oxide. The raw samples were splitted into six according to pH 6-8.5 variations and their viscosity, specific gravity, refractive index, and flash point in the course of the experiments. The best sample’s properties were found to be within standard limit with minimal errors observed. The study showed that the possibility of producing hydroxyethyle cellulose is very high with little adjustments on the process variables and better selection of equipment.