ABSTRACT

Fatah, Hairul. **Bioprospek Nyamplung** (*Callophyllum inophyllum* L) **and Kapuk Randu** (*Ceiba pentandra* Gaetn) **For Biodiesel Raw Materials**. Advisor: Dr. Eko Budi Minarno M.Pd; Ach.Nasichuddin M. Ag

---

Keywords: Nyamplung, Kapuk Randu, Biodiesel

Biodiesel is an alternative diesel oil which is generally defined as monoalkil esters from plant oils. With the advantage of more environmentally friendly with a very low CO emissions versus 200ppm 1ppm with diesel fuel. Exploration Nyamplung plants (Callophyllum inophyllum L) and Kapuk Randu (Ceiba pentandra Gaetn) to compare the content of its oil and that will be adjusted in terms of quality standard value of raw material quality biodiesel Indonesia. Based on this background research conducted for the purpose of: (1) To know nyamplung seed oil content (Callophyllum inophyllum L) and kapuk (Ceiba pentandra gaetn), (2) To determine suitability nyamplung seed oil (Callophyllum inophyllum L) and kapok (Ceiba pentandra gaetn) with standard quality of raw material of biodiesel Indonesia

This research was conducted at the Laboratory of Chemical UMM on 18 August to 18 September 2010. This type of research is descriptive ekssploratif by exploring and Kapuk seed Nyamplung Randu using hydrolysis and distillation techniques known to contain oil soxhlet so from each seed, the oil obtained in chemical tests include acid number, iodine and saponification numbers.

Data obtained from this study is descriptive exploratory study. The results of this study indicate that the oil content of plants nyamplung higher than the kapok -44.983% 36.743% while the content of the kapok ranged 17.744% -24.813%. In terms of quantity nyamplung more potential to use its oil content. As for the number acidity nyamplung 1.234 mg KOH / g, iodine number 9.078, and saponification number 217, while for the kapok has a number of acidity 0.895 mg KOH / g, iodine number 9.122 g I / g, and saponification number 231, 481 mg KOH / g. While the tentative standard raw material for biodiesel Indonesia is the acidity number 0.8 mg KOH / g, iodine number 115 g I / g, and max Saponification number 202 mg KOH / g, of the ISO standard is produced enough oil to meet even though the rate of acidity nyamplung exceeded. Nyamplung and kapok has a fairly high oil content, but some requirements as raw material for biodiesel or less met, such as acidity figure that exceeds the quality standard of raw material for biodiesel in Indonesia.