

KUALITAS ARANG ENAM JENIS KAYU ASAL JAWA BARAT SEBAGAI PRODUK DESTILASI KERING (*Charcoal Quality of Six Wood Species from West Java as Dry Distillated Product*)

Novitri Hastuti, Gustan Pari, Dadang Setiawan, Mahpudin, Saepuloh

Pusat Penelitian dan Pengembangan Hasil Hutan, Bogor,
Jl. Gunung Batu No. 5, Bogor 16610, Telp. 0251-8633378, Fax. 0251-8633413
E-mail: novienov3@yahoo.com, gustanp@yahoo.com

Diterima 28 Nivember 2014, Direvisi 6 April 2015, Disetujui 3 Agustus 2015

ABSTRACT

Six wood species from West Java which are ki hiur (Castanopsis acuminatissima A.DC.), tunggeureuk (Castanopsis tunggurut), huru pedes (Cinnamomum iners Reinw.Ex Bl.), huru koja (Litsea angulata Bl.), ki kanteh (Ficus nervosa Heyne) and kelapa ciung (Horsfieldia glabra Warb) have been distilled by dry distillation at temperature 450°C-500°C for five hours in the retort distillation. Distillates from the dry distillation in form of charcoal, tar and liquid are calculated. The results exhibited charcoal quality of six woods meet the standards of Indonesia for charcoal and charcoal briquettes with calorific values ranging from 6743-6795 cal/g, fixed carbon ranging from 79.42 % - 82.37 %. Charcoal yield ranging from 27.43 % -33.55 % . Pearson correlation analysis on the lignin content and wood gravity to charcoal calorific value indicates that the lignin content has a significant correlation to the calorific value of charcoal.

Keywords: Wood, distillate, dry distillation, charcoal

ABSTRAK

Enam jenis kayu asal Jawa Barat yaitu ki hiur (*Castanopsis acuminatissima* A.DC.), tunggeureuk (*Castanopsis tunggurut*), huru pedes (*Cinnamomum iners* Reinw.Ex Bl.), huru koja (*Litsea angulata* Bl.), ki kanteh (*Ficus nervosa* Heyne) dan kelapa ciung (*Horsfieldia glabra* Warb) di destilasi kering pada suhu 450°C -500°C selama lima jam di *retort* destilasi. Destilat dari destilasi kering berupa arang, ter dan asap cair dihitung rendemennya. Hasil penelitian menunjukkan kualitas arang dari enam jenis kayu memenuhi standar Indonesia tentang arang kayu dan briket arang kayu dengan nilai kalor berkisar 6743-6795 kal/g, kadar karbon terikat berkisar 79,42 %-82,37 %. Rendemen arang berkisar 27,43 %-33,55 %. Hasil analisis korelasi *Pearson* atas kadar lignin dan berat jenis kayu terhadap nilai kalor arang menunjukkan bahwa kadar lignin memiliki korelasi yang signifikan terhadap nilai kalor arang.

Kata kunci: Kayu, destilat, destilasi kering, arang