

ILHAM DWI APRIYAN. NPM 200331100022. Karakteristik Fisikokimia dan Aktivitas Antioksidan Minuman Fungsional Wedang *Pokak* Instan Khas Jawa Timur. Di bawah bimbingan **Dr. Supriyanto, S.TP., M.P.** dan **Dian Farida Asfan, S.T., M.T.**

ABSTRAK

Wedang *pokak* merupakan minuman rempah-rempah lokal yang berasal dari Jawa Timur. Wedang *pokak* terbuat dari jahe, serai, cengkeh, kayu manis, daun jeruk, pandan wangi dan gula aren yang direbus lalu kemudian disaring dan disajikan. Perpaduan antara berbagai rempah-rempah yang kaya akan bioaktivitas dan senyawa alami, membuat wedang *pokak* cocok dijadikan minuman fungsional berbasis kearifan lokal. Namun, perlu dilakukan pengembangan lanjutan agar hal tersebut dapat tercapai. Mengingat wedang *pokak* konvensional masih berbentuk cair serta berumur pendek. Kondisi tersebut mendorong berbagai inovasi agar wedang *pokak* dapat dikembangkan potensinya, salah satunya membuat wedang *pokak* instan dalam bentuk serbuk. Tujuan penelitian ini yaitu mengetahui pengaruh proporsi bahan penyalut (maltodekstrin : gum arab) dan suhu *inlet spray dryer* terhadap karakteristik fisikokimia, aktivitas antioksidan dan sensoris wedang *pokak* instan, serta mengetahui kombinasi perlakuan proporsi bahan penyalut (maltodekstrin : gum arab) dan suhu *inlet spray dryer* untuk menghasilkan karakteristik wedang *pokak* instan terbaik. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dua faktor, yaitu variasi konsentrasi bahan penyalut dan suhu *spray drying*. Faktor pertama terdiri dari : P1 (maltodekstrin 70 : gum arab 30), P2 (maltodekstrin 50 : gum arab 50) dan P3 (maltodekstrin 30 : gum arab 70) serta faktor kedua terdiri dari suhu *spray drying* S1 (160°C) dan S2 (180°C). Parameter penelitian yang diuji meliputi: fisikokimia (waktu larut, kadar air, pH); aktivitas antioksidan; dan sensoris (warna, rasa, aroma, keseluruhan). Hasil penelitian menunjukkan proporsi penyalut maltodekstrin dan gum arab berpengaruh nyata terhadap waktu larut, kadar air, pH, aktivitas antioksidan, kesukaan warna, kesukaan rasa, kesukaan aroma, dan kesukaan keseluruhan wedang *pokak* instan. Suhu berpengaruh nyata terhadap kadar air, pH, aktivitas antioksidan, kesukaan warna, kesukaan rasa, kesukaan aroma, dan kesukaan keseluruhan wedang *pokak* instan. Sementara itu, interaksi antara kedua faktor berpengaruh nyata terhadap fisikokimia (waktu larut, kadar air, pH); aktivitas antioksidan; dan sensoris (kesukaan warna, kesukaan rasa, kesukaan aroma, kesukaan keseluruhan) wedang *pokak* instan. Berdasarkan pengujian yang dilakukan sampel terbaik adalah sampel P3S1 dengan hasil waktu larut 11,04 menit, kadar air 6,83%, pH 7, dan aktivitas antioksidan 94,67% RSA, nilai kesukaan warna 3,44 (suka), nilai kesukaan rasa 3,24 (suka), nilai kesukaan aroma 3,28 (suka), serta nilai kesukaan keseluruhan 3,44 (suka).

Kata kunci: Gum arab, Maltodekstrin, Suhu, Wedang *pokak* instan.

ILHAM DWI APRIYAN. NPM 200331100022. *Characteristic Physicochemist and Antioxidant Activity of Functional Beverage East Java Instant Wedang Pokak.* Under supervised by **Dr. Supriyanto, S.TP., M.P.** and **Dian Farida Asfan, S.T., M.T.**

ABSTRACT

Wedang pokak is a local spice beverage from Jawa Timur. Wedang pokak is made from ginger, lemongrass, cloves, cinnamon, lime leaves, fragrant pandan and palm sugar which are boiled then filtered and served. The combination of various spices which are rich in bioactivity and natural compounds, makes wedang pokak suitable as a functional beverage based on local wisdom. However, further development needs to be carried out so that this can be achieved. Considering that conventional wedang pokak is still in liquid form and has a short shelf life. These conditions encourage various innovations so that wedang pokak's potential can be developed, one of which is making instant wedang pokak in powder form. The aim of this research is to determine the effect of the proportion of coating material (maltodextrin: arabic gum) and the spray dryer inlet temperature on the physicochemistry characteristics, antioxidant and sensory activity of instant wedang pokak, as well as to determine the combination of treatments of the proportion of coating material (maltodextrin: arabic gum) and the inlet spray dryer temperature. to produce the best characteristics of instant wedang pokak. This research used a Completely Randomized Design (CRD) with two factors, namely variations in coating material concentration and spray drying temperature. The first factor consists of: P1 (maltodextrin 70 : arabic gum 30), P2 (maltodextrin 50 : arabic gum 50) and P3 (maltodextrin 30 : arabic gum 70) and the second factor consists of spray drying temperature S1 (160°C) and S2 (180°C). The research parameters tested include: physicochemistry (dissolution time, moisture content, pH); antioxidant activity; and sensory (color, taste, aroma, overall). The results of the research showed that the proportion of maltodextrin and arabic gum coating had a significant effect on dissolution time, air content, pH, antioxidant activity, preferred color, preferred taste, preferred aroma, and overall preferred instant wedang pokak. Temperature has a significant effect on air content, pH, antioxidant activity, color preference, taste preference, aroma preference, and overall preference of instant wedang pokak. Meanwhile, the interaction between the two factors has a significant effect on physicochemistry (dissolution time, moisture content, pH); antioxidant activity; and sensory (color preference, taste preference, aroma preference, overall preference) of instant wedang pokak. Based on the tests carried out, the best sample was the P3S1 sample with a dissolution time of 11.04 minutes, moisture content of 6.83%, pH 7, and antioxidant activity of 94.67% RSA, color preference value of 3.44 (like), taste preference value 3.24 (like), aroma liking value 3.28 (like), and overall liking value 3.44 (like).

Keyword: Arabic gum, Maltodextrin, Temperature, Instant wedang pokak.