

## **KAJIAN KUALITAS DAN AKTIVITAS ANTIOKSIDAN BERBAGAI FORMULA MINUMAN JAMU KUNYIT ASAM**

**Oleh:**

**Nur Arifah Qurota A'yunin  
13/354010/PTP/01303**

### **INTISARI**

Minuman jamu kunyit asam adalah minuman herbal khas Indonesia yang terbuat dari rimpang kunyit, buah asam jawa, gula kelapa, air dengan atau tanpa penambahan sari jeruk nipis dan ekstrak daun sirih. Proses produksi dilakukan secara tradisional dan banyak dilakukan oleh industri rumah tangga dengan formula dan prosesnya beragam dan belum standar. Penelitian bertujuan 1) mengetahui formula, metode proses, dan kualitas mikrobiologis minuman jamu kunyit asam di sentra jamu tradisional Kiringan-Canden-Jetis-Bantul, 2) mengetahui aktivitas antioksidan dan kualitas mikrobiologis variasi waktu perebusan proses dan formula minuman jamu kunyit asam. Waktu perebusan terdiri atas 2,5 dan 7,5 menit serta variasi formula yaitu minuman jamu kunyit asam (KA), KA dengan penambahan sari jeruk nipis, dan KA dengan penambahan ekstrak daun sirih. Pengujian terhadap sampel meliputi pH, total padatan terlarut, total fenolik, total flavonoid, total curcumin kasar, aktivitas antioksidan (metode DPPH '*Radical Scavenging Activity*' dan *Ferric Reducing Antioxidant Power*), dan total mikrobial. Hasil penelitian menunjukkan bahwa formula dan proses pembuatan minuman jamu kunyit asam di sentra jamu Kiringan masih beragam dan belum standar. Kualitas mikrobiologis minuman jamu kunyit asam di Kiringan bervariasi dengan total mikrobial mulai  $10^3$  sampai  $10^7$  CFU/ml. Perebusan 7,5 menit menyebabkan kualitas mikrobiologis dan total flavonoid minuman lebih tinggi dan total curcumin lebih rendah dibandingkan perebusan 2,5 menit. Sedangkan aktivitas antioksidan, total fenolik dan pH antara perebusan 2,5 dan 7,5 menit tidak beda nyata. Adanya penambahan sari jeruk nipis pada formula minuman jamu kunyit asam menyebabkan kenaikan total flavonoid. Penambahan ekstrak daun sirih menyebabkan total fenolik, aktivitas antioksidan, dan kualitas mikrobiologis minuman jamu kunyit asam sirih lebih tinggi dibandingkan formula minuman lainnya. Secara umum, perlakuan panas dan penambahan ekstrak daun sirih dapat meningkatkan aktivitas antioksidan dan kualitas mikrobiologis minuman jamu kunyit asam.

Kata kunci : jamu, kunyit asam, antioksidan, perebusan, jeruk, sirih

## **JAMU KUNYIT ASAM DRINK: THE ASSESSMENT ON QUALITY AND ANTIOXIDANT ACTIVITY OF SEVERAL FORMULA**

**Submitted by:  
Nur Arifah Qurota A'yunin  
13/354010/PTP/01303**

### *ABSTRACT*

*Jamu kunyit asam* drink is a typical Indonesian herbal drink, one of the most widely consumed that made from turmeric, tamarind fruit, palm sugar, and water with or without the addition of lemon juice or betel leaf extract. The production process is done traditionally and mostly done by the home-industry with the formula and process varies that are not standard yet. The research was to 1) know the formula, method, and the microbiological quality of *jamu kunyit asam* traditionally in Kiringan District-Bantul as jamu center in Yogyakarta, 2) determine quality and antioxidant activity of the boiling time and formula variation. The boiling time consisted of 2.5 and 7.5 minutes, and the formula consist af *jamu kunyit asam* (KA), KA with the addition of lemon juice, and KA with the addition of betel leaf extract. The sample of *jamu kunyit asam* drink were evaluated for pH, total soluble solids, total microbial (total plate ciunt), antioxidant activity using 2-2-diphenyl-1-picrylhydrazyl (DPPH) and ferric reducing power methods, total phenolic content, total flavonoids content, total crude curcumin. The results showed that the formula and process of making *jamu kunyit asam* drink in Kiringan still diverse and not yet standardized. Microbiological quality of *jamu kunyit asam* in Kiringan had varied with total microbial number ranging  $10^3$  to  $10^7$  CFU / ml. Boiling for 7.5 minutes caused microbiological quality and total flavonoid were higher and total curcumin was lower than the boiling for 2.5 minutes. While antioxidant activity, total phenolic and pH between 2.5 and 7.5 minutes boiling was not significantly different. The addition of lemon juice on the formula of *jamu kunyit asam* drink caused an increase in total flavonoids. The addition of betel leaf extract on jamu kunyit asam formula caused the total phenolic, antioxidant activity and microbiological quality were higher than others. In general, the heat treatment and the addition of betel leaf extract may improve the quality and antioxidant activity of *jamu kunyit asam* drink.

Keywords: jamu kunyit asam, antioxidant, boiling, citrus, betel leaf