

## CUP QUALITY, PHYSICAL AND CHEMICAL PROPERTIES OF ROBUSTA COFFEE BEAN PRODUCED BY WET PROCESS METHODS

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### Abstract

The quality of smallholder coffee could be improved by wet process method. Natural fermentation method (removing mucilage by fermentation) produced good quality of coffee bean, but it need long time process (24-36 hours). Removing mucilage by chemical could be reduced processing time. The aim of this research was to obtain the wet process method which easy, safe and applicable on smallholder coffee. This research had 4 (four) treatments of coffee bean wet process, they were soaking in 1% sodium bicarbonates solution for 1.5 hours, soaking in 0.3% lime solution for 0.5 hour, without fermentation and natural fermentation. The parameters observed were lightness of dry parchment coffee and coffee bean, moisture and ash content of coffee bean, cup pH, cup quality. The best of wet coffee processing yielded by natural fermentation and followed by soaking in 1% sodium bicarbonates solution for 1.5 hours. Nevertheless the preference score and the most of cup quality score yielded by soaking in 1% sodium bicarbonates solution for 1.5 hours better than natural fermentation. Soaking in 1% sodium bicarbonates solution for 1.5 hours as wet process method which easy, safe and applicable on smallholder coffee.

Key words: *cup quality, physical, chemical properties, robusta, wet process*

### Introduction

A most of Indonesian coffee as smallholder coffee (about 95.9%). Generally the smallholder coffee produced by dry process and without selectively of ripe fruit, so the quality of smallholder coffee is low, bad appearance, low flavor, sometimes contaminated by Ochratoxin A (OTA). The OTA content 0.1- 5 µg/kg coffee bean [2, pp 673-675] [9]. This is as reason that the export value of Indonesian coffee is low and Indonesia just on fourth position in the world as producer and exporter of coffee. Indonesian on 2010, production coffee was 684,046 tons (78.3% as robusta coffee) and export volume was 494,664 tons [1] [3].

The solution of this problem can be conducted by wet process method. On wet process only choose of ripe fruits with good quality. The green or coffee bean produced by wet process had higher aromatic oil, smooth, mellow, fine aromatic and acidity [13]. The variations of wet process method for example are without fermentation, removing mucilage by fermentation and by chemical. The compositions of mucilage consist of 85% moisture and 15% solid, while the content of solid consist of 80% pectinic acid and 20% sugars. The mucilage must be removed because it had viscous and sticky properties, inhibit

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