

June 21-22, 2018
London, UK

Endang Purwati et al., Clin Pediatr Dermatol 2018, Volume: 4
DOI: 10.21767/2472-0143-C1-002

EFFECT OF HALAL PROBIOTIC ADDITION (*PEDIOCOCCUS PENTOSACEUS*, ISOLATED FROM DADIH, WEST SUMATRA) TOWARDS WATER CONTENT, PH VALUE, TOTAL BACTERIA COLONIES OF AEROBES, TOTAL LACTIC ACID BACTERIA COLONY, SHELF LIFE, FOAM POWER, SKIN IRRITATION, AND VISCOSITY OF LIQUID SOAP FROM GOAT MILK

Endang Purwati, Indri Juliyarsi, Hendri Purwanto, Puji Hartini, Arfina Yuneza and Tony Adeputra

University of Andalas, Padang West Sumatera, Indonesia

This research was aimed to determine the effect of *Pediococcus pentosaceus* isolated from dadih, West Sumatra on water content, pH value, total bacteria colonies of aerobes, total lactic acid bacteria colonies, shelf life, foam power, skin irritation, and viscosity. This research uses 2,000 ml of PE goat milk (Peranakan Etawah) obtained from Sathersun Air Dingin Padang farm. Materials needed for this study include probiotics of 120 ml where 1 ml of *Pediococcus pentosaceus* has a dose of 2.4×10^9 CFU/mL, KOH of 60 g, stearic acid as much as 140 g, 180 ml aquadest, 200 ml virgin coconut oil (VCO). The research method using randomized block design (RBD) consisted of 4 treatments with 5 groups as replicates where a formula of soap consists of: 100 ml goat milk, probiotics *Pediococcus pentosaceus* according to treatment (A = 0 ml, B = 1 ml, C = 2 ml, D = 3 ml). The results showed that the addition of *Pediococcus pentosaceus* to the probiotic liquid soap was significantly different ($P < 0.01$) lowered the water content, pH value, the total colonies of aerobic bacteria, increased the total lactic acid bacteria colonies, and shelf life, but gave no significant different effect ($P > 0.05$) to foam power, skin irritation, and viscosity. The conclusion of the study showed that the best addition of *Pediococcus pentosaceus* in treatment of 3 mL with a dose of 2.4×10^9 CFU/mL was able to lower water content by 75.56%, pH to 6.11, total colonies of aerobic bacteria - 16.40×10^3 CFU/ mL, total lactic acid bacteria colonies - 8.52×10^9 CFU/ mL, foam power 2.36, skin irritation 0.05, viscosity 0.82, and increasing shelf life for 32 days is the best in producing goat milk liquid soap.

Biography

Endang Purwati has completed his PhD from University Putra Malaysia in Biotechnology Molecular Probiotic/ Food Safety/ Molecular Microbiology and Post-doctoral studies from Bogor Agricultural Institute of Sains Veteriner/ Parasitologi. She has been Professor in University of Andalas from 2005. She is the Head of Program Study of Post-graduation in Biotechnology, University of Andalas, and she is Chairman of the Regional Commission of Genetic Resources Organization, and Head of Laboratory Biotechnology/ Technology of Product Husbandry Faculty of Animal Science, University of Andalas. She has published more than 20 papers in reputed journals Scopus. She has achieved award of Program Researcher from the State Minister of Research and Technology of the Republic of Indonesia.

purwati17@ansci.unand.ac.id
purwati17@yahoo.co.id