

DEVELOPMENT OF CHEESE WHEY BASED DRINKING YOGHURT INCORPORATED WITH PINEAPPLE (*Ananas comosus*)

C.N. Hitigedara¹, K.H. Sarananda², A.M.J.B. Adikari¹

¹*Department of Agricultural Systems, Faculty of Agriculture, Rajarata University
of Sri Lanka, Puliyankulama, Anuradhapura, Sri Lanka.*

²*Food Research Unit, Department of Agriculture, Gannoruwa, Peradeniya,
Sri Lanka.*

Cheese whey is a by-product produced during the manufacturing process of cheese and it is an excellent source of protein, mineral and lactose. It has been estimated that 90% of total milk used in cheese manufacturing is discarded as whey. Thus, there is a growing interest in utilization of cheese whey as a component in dairy product development. Therefore, present study was conducted to develop drinking yoghurt using cheese whey with pineapple pulp and artificial pineapple flavor. The trial and error method was used to develop the basic formula, and two different formulae for each were prepared. The levels of cheese whey incorporated were 80%, 90%, 100% as a volume of pineapple pulp drinking yoghurt and levels of whey incorporated were 85%, 90%, 95%, 100% as a volume of pineapple flavored drinking yoghurt. Drinking yoghurt prepared from 100% milk was used as the control. Treatments were arranged in Completely Randomized Design (CRD) with five replicates. Parametric data (pH,

acidity, Brix value) were analyzed using SAS. Sensory data were analyzed by Friedman test using MINITAB and shelf-life of most sensory scored samples were determined by evaluating organoleptic, microbial and chemical properties. Sensory evaluation results showed that there were no significant differences ($p > 0.05$) among treatments. Hence, drinking yoghurt produced by adding 90% whey and pineapple pulp and 95% whey and pineapple flavored drinking yoghurt were selected as the best treatments. Proximate analysis showed that 90% pineapple pulp added drinking yoghurt had 2.5% crude protein and 0.5% fat where as 95% whey incorporated pineapple flavored drinking yoghurt had 2.1% crude protein and 0.25% fat. Both

products could be kept for 15 days of storage period at 4°C without any quality deterioration. Therefore, cheese whey could be effectively utilized for the production of drinking yoghurt with value addition.

Key words: Cheese whey, Drinking yoghurt, Pineapple, Sensory evaluation