Independent Study Title The Clinical Efficacy of Sodium *L*- ascorbyl-2-phosphate, Retinol, and Their Combination Application in Acne Treatment

Author Ms. Chonchanok Ruamrak

Degree Master of Science (Cosmetic science)

Supervisory Committee Assoc. Prof. Dr. Surapol Natakankijkul Chairperson
Lecturer Dr. Nattaya Lourith Member

ABSTRACT

This study examines the clinical efficacy of sodium L-ascorbyl-2-phosphate, retinol, and their combination in acne treatment. The period of experiment was 8 weeks.

Acne vulgaris has multifactorial causes and steps of pathogenesis. The previous studies show that Sodium *L*- ascorbyl-2- phosphate (SAP), a stable form of vitamin C, has antimicrobial and anti-lipid peroxidation effects. Retinol also known as retinoic acid precursor has a similar effect to retinoic acid in 10 fold higher concentration. Comparing the efficacy of SAP, retinol, and combination use of SAP and retinol show that SAP reduced inflammatory acne 20.14% at week 4 and 48.82% at week 8, retinol reduced inflammatory acne 21.79% at week 4 and 49.50% at week 8 and the combination use of SAP and retinol reduced inflammatory acne 29.28% at week 4 and 63.10% at week 8. The efficacy when combine SAP and retinol was significantly increased compared with single SAP or retinol at p. value < 0.05 at week 4 and 8.

Keywords: Acne/ Sodium *L*- ascorbyl-2-phosphate/ Retinol/ Clinical Efficacy