Hyaluronic Acid Production Study

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Tradename: ABS Viola Tricolor Extract PF

Code: 10346PF

CAS #: 9015-54-7

Test Request Form #: 2054

Lot #: 55174P

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Study Director: *Maureen Danaher*
Principle Investigator: *Jennifer Goodman*

Test Performed:
Hyaluronic Acid Production Assay

Introduction

Hyaluronic acid is capable of improving epidermal elasticity by maintaining the water content of the intercellular matrix of epidermal tissue. Although most believe that the presence of hyaluronic acid is limited to the body's joints, it is actually found throughout the body with a surprisingly high concentration in subcutaneous tissue. It is suspected that the viscous hyaluronic acid acts as a natural guard against subcutaneous desiccation. An ELISA assay was used to measure the synthesis of Hyaluronic Acid by cultures of human keratinocytes. The assay is based on the specificity of hyaluronic acid to a hyaluronic acid-binding protein.

Materials and Methods

Human Keratinocyes were cultured in KSFM medium and incubated for a period of 24 hours at a constant temperature of 37°C with the concentration of carbon dioxide in the incubator being limited to 5%.
The keratinocytes were then treated with **ABS Viola Tricolor Extract PF** at 0.5% and 1.0% in diluted culture medium. The cells were then incubated under the same conditions as before for a period of 72 hours.
The cultured supernatant was stored at -80°C before assays were performed. An ELISA kit purchased from Biogenic (Cat. No. O29001) was used for the assay. Results are relative to biological control.

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Results

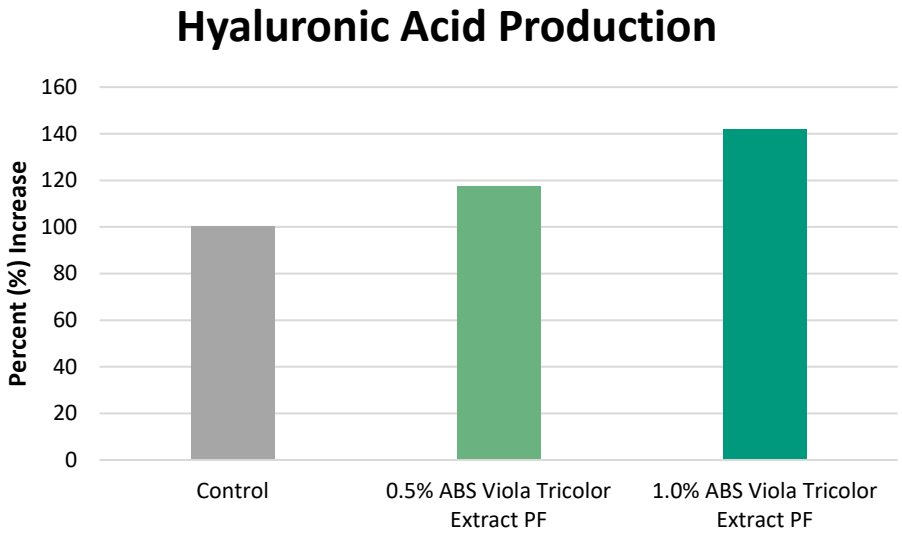

Figure 1. Comparative hyaluronic acid production.

Discussion

The results indicate that **ABS Viola Tricolor Extract PF** is capable of increasing the percent concentration of hyaluronic acid by approximately 42%. Therefore, **ABS Viola Tricolor Extract PF** may be useful for retaining epidermal moisture.