



## ACB Yogurt Dermal Respiratory Factor PF Code: 20224PF

### Abstract

The purpose of this study is to determine the effects of **ACB Yogurt Dermal Respiratory Factor PF** on collagen I synthesis. Collagen I is a major component of the dermis and provides structure and elasticity to the skin. Our technical staff conducted a series of tests *i-vitro* within an amino acid deficient medium to determine the supplemental effects of **ACB Yogurt Dermal Respiratory Factor PF** on fibroblast cellular metabolism and collagen I synthesis. Three dose levels were compared to a control, and the results were determined by an ELISA assay. These results showed that all dose levels are effective at increasing collagen I synthesis, though it is most effective at 4% because **ACB Yogurt Dermal Respiratory Factor PF** is dose-dependent.

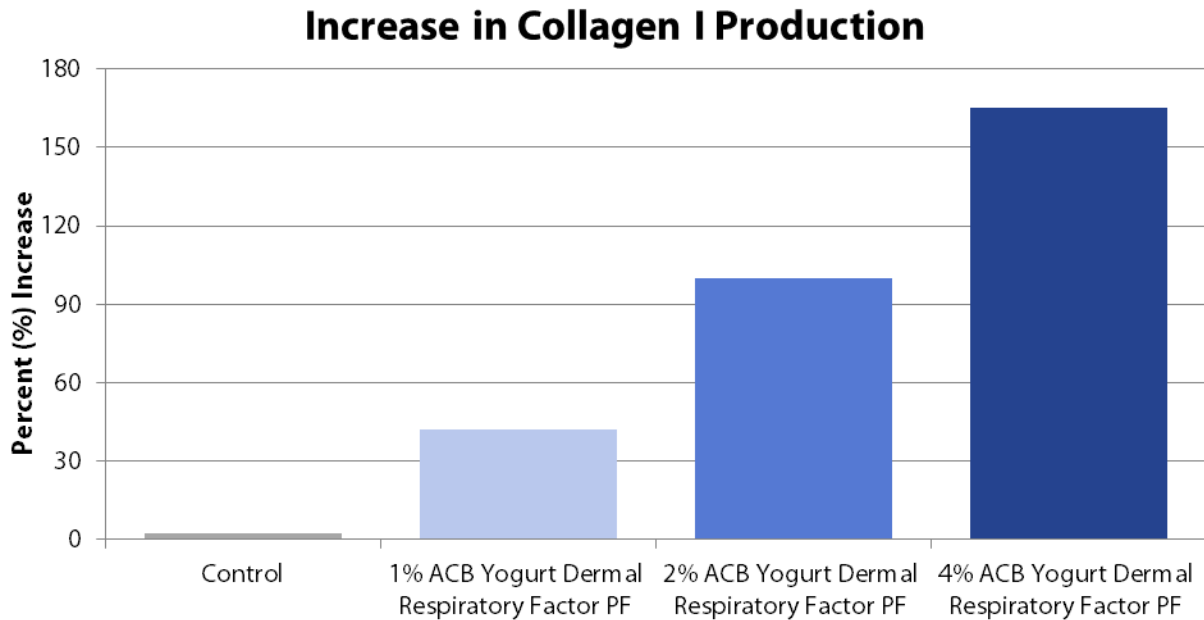
### Materials and Methods

Human fibroblasts were grown in a medium containing 10% fetal calf serum and inoculated at a concentration of approximately 6000 cells per dish. They were incubated in a humid atmosphere containing 5% CO<sub>2</sub> at 38°C for 24 hours. These cells were then removed and placed into an amino acid deficient medium and supplemented with **ACB Yogurt Dermal Respiratory Factor PF** at levels of 1%, 2%, and 4%. These samples were compared to a control that was placed in an amino acid deficient medium and given no supplement. Collagen I synthesis was then checked 48 hours later. Collagen I synthesis was determined by immunolabeling with primary and secondary antibodies (murine anti-collagen I monoclonal antibody and murine anti-IgG antibody) in a peroxidase/ TMB substrate (3,3',5,5'-tetramethylbenzidine) visualization system.

### Results

Increase in collagen I synthesis is expressed by the following formula:

$$\frac{(\text{ACB Dermal Respiratory Factor PF} - \text{Control})}{\text{Control}} \times 100 = \% \text{ Increase in Collagen I}$$



**Figure 1.** Increased collagen I synthesis due to the application of **ACB Yogurt Dermal Respiratory Factor**.

## Discussion

Collagen I is a major component of the human dermis and provides stability and elasticity to the skin. According to the results, **ACB Yogurt Dermal Respiratory Factor PF** shows that all three levels (1%, 2%, and 4%) significantly increase collagen I synthesis in comparison to the control sample. 1% **ACB Yogurt Dermal Respiratory Factor PF** increased collagen I synthesis by 48%; 2% **ACB Yogurt Dermal Respiratory Factor PF** increased collagen I synthesis by 105%; and 4% **ACB Yogurt Dermal Respiratory Factor PF** increased collagen I synthesis by 167%. The data displays that a 4% concentration is the most effective in boosting synthesis of collagen I by fibroblast cells, as the results are dose-dependent. Therefore, we can assume that **ACB Yogurt Dermal Respiratory Factor PF** may increase cellular metabolism and in turn enhance collagen I synthesis, improving the overall health of the skin.