ACB Yogurt Dermal Respiratory Factor PF

BACKGROUND
The health benefits associated with dairy were recognized by many ancient cultures and it has been said that Cleopatra used to bathe in milk so that her skin would be smooth and soft. Although the practice of fermenting milk into yogurt for preservation is thought to predate recorded history, anthropologists have found evidence suggesting that Middle Eastern civilizations as early as 2,000 B.C.E. consumed yogurt, and in 76 B.C.E., the Roman historian, Plinius, suggested the use of “fermented milk products for treating gastroenteritis”. Today, there is a growing consumer awareness regarding the benefits of probiotics and yogurt, which has resulted in the use of probiotics in the personal care and cosmetics industries.

The method used to make yogurt has changed little since ancient times, today production typically begins by inoculating milk with L. bulgaricus and S. thermophilus. Unlike ancient cultures, we understand that yogurt is a powerful probiotic and there are specific mechanisms that make yogurt capable of inhibiting virulent microbial growth and improving the health and texture of our skin. The definition of probiotic has changed since the term was originally coined, and may be defined as “a live microbial culture or cultured dairy product which beneficially influences the health and nutrition of the host”.1

SCIENCE
The probiotic benefits of yogurt include an increase in oxygen uptake for more efficient cellular metabolism, fibroblast migration, collagen production, increase in cellular messengers and heat shock protein production. Cellular metabolism is dependent upon oxygen uptake, and glycolysis (the metabolic pathway used by our cells for ATP production) cannot occur without the presence of oxygen. By increasing oxygen uptake, one may increase cellular ATP production, which may in turn improve cellular functions, such as protein synthesis.

ACB Yogurt Dermal Respiratory Factor PF is produced by prompting live Lactobacillus bulgaricus cells to secrete synergistically active compounds, by striking the Lactobacillus cells with specific wavelengths of UV radiation. Through the use of biofermentation and various filtration techniques, such as tangential flow filtration, this secretion is then isolated and extracted from the live bacteria cell. It is these extracts also known as heat shock proteins that are capable of protecting the scalp and follicle from thermal stress. ACB Yogurt Dermal Respiratory Factor PF is intended to increase cellular respiration, cellular...
ACB Yogurt Dermal Respiratory Factor PF

**BENEFITS**

*ACB Yogurt Dermal Respiratory Factor PF* is derived from the Lactobacillus used to make yogurt, and is believed to act as a probiotic capable of stimulating collagen synthesis, increasing oxygen uptake and increasing intracellular ATP production. Furthermore, increasing oxygen uptake may help alleviate the potential damage caused by reactive oxygen species by reducing oxygen availability. The heat shock proteins isolated from the bacteria during the fermentation process have anti-irritant properties and are also capable of modulating wound healing which is beneficial in preserving epidermal integrity.

**Benefits of ACB Yogurt Dermal Respiratory Factor PF**

- Promotes Homeostasis
- Increases Collagen Synthesis
- Improves Cellular Respiration and Energy Production
- Soothing
- Capitalizes on Marketability of Probiotic Trends

**EFFICACY DATA**

In vitro analysis was used to determine *ACB Yogurt Dermal Respiratory Factor PF*’s effect on increasing cellular oxygen uptake. Cultured human dermal fibroblasts maintained in culture flasks were prepared by replacing the culture media with PBS supplemented with magnesium, calcium, and succinate.

The cells were incubated for 4 hours and then harvested and resuspended in PBS with magnesium and calcium. The 2.0 x 10⁶ titers of cells were transferred to an oxygen electrode chamber where the basal oxygen consumption was measured by means of an oxygen electrode. (Hansatech DW3) Untreated cells were used to obtain a baseline oxygen consumption measurement. The cells were then cleared and recharged with a fresh titer of cells to which was added 0.25 % (w/w) of *ACB Yogurt Dermal Respiratory Factor PF*. Results are expressed relative to the number of viable cells recovered from the electrode chamber. Clearly, *ACB Yogurt Dermal Respiratory Factor PF* produced an increase in oxygen uptake comparable to yeast derived LYCD.

**Increased Oxygen Uptake**

![Bar chart showing increased oxygen uptake](chart.png)

*Figure 1. Oxygen uptake of *ACB Yogurt Dermal Respiratory Factor PF* compared to LYCD*
ACB Yogurt Dermal Respiratory Factor PF

Increase in Collagen I Production

![Graph showing increase in collagen I production](image)

**Figure 2.** Increases in collagen production following application of ACB Yogurt Dermal Respiratory Factor PF

Increase in ATP Synthesis

![Graph showing increase in ATP synthesis](image)

**Figure 3.** Increases in ATP Synthesis following application of ACB Yogurt Dermal Respiratory Factor PF

Information contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the customer. The company, however, cannot assume any liability or risk involved in the use of its chemical products since the conditions of use are beyond our control. Statements concerning the possible use of our products are not intended as recommendations to use our products in the infringement of any patent. We make no warranty of any kind, expressed or implied, other than that the material conforms to the applicable standard specification. Freedom from patent infringement is not implied. All information is for investigatory purposes only.