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ALOE VERA GEL:  
Efficacy Documentation via Cell Proliferation Rate Studies

The enclosed package of studies documenting the wound and burn healing efficiency of Aloe Vera is only a small portion of the work done over the last forty years on this very interesting material. All the work is positive...Aloe Vera has been shown to be an effective agent, although in a truly medical sense and as a concentrated material. The documentation is also very medical in context and presentation. Cosmetic marketers usually will not rely on surgically induced wound healing experiments to support claims, especially in the present antivivisectionist mood of the country.

Another problem facing marketer response to Aloe Vera efficacy claims is the fact that very few marketers will use the material at efficacious levels. Most believe that the recognition factor with the material will allow them to make "very dry Martinis" out of their formulae with the Aloe content statement alone being a product draw. An example of this trend are the Aloe Vera products marketed by companies which found materials such as this to be among the most recognized of all cosmetic ingredients and have produced a large success, irrespective of the fact that there are sub-clinical levels of Aloe Vera in the product.

The Tri-Dex Cell Proliferation Rate Study (CPRS) has been employed to develop efficacy ratings on commercial Aloe Vera Gel from Tri-K Industries. With the help and expertise of our supplier, a protocol was developed which is able to assess the efficacy of commercial product vs. freshly filleted Aloe Vera Gel. The results are valuable from two standpoints...first, the claim that commercial Aloe Vera Gel is producible in quality comparable to that of fresh leaves is proven. As the following graphs prove on HUMAN DERMAL CELLS, our gel is a vast improvement over earlier production material and is at least as active in the stimulatory response as fresh gel. This improvement is not "magic," but the result of our development of a non-fillet process of obtaining low-Aloin Aloe Vera Gel.

GRAPH I shows the proliferative action of fresh fillet. . .  
The 1:10 dilution factor reveals a strongly stimulatory response, while 1:100 & 1:100 are non-stimulatory and even slightly inhibitory. This makes a good case against those marketers using low levels of Aloe.

GRAPH II reveals the response of the same fillet, but one

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week later. This was done to test the hypothesis that Aloe Vera "oxidizes." While it may be true that the gel structure degrades in time, it is not true that the potency at the cellular level is lost. The proliferative response is nearly identical to the fresh gel.

GRAPH III illustrates commercial production quality Aloe Vera Gel from Aloe Mega's former production method. While somewhat confusing, the computer tells us that there is only stimulatory responses at high cell densities, and that stimulation is approximately 60% of that seen for fresh gel. This is not bad, but clearly not good enough to go to the dance with. Improvement was needed.

GRAPH IV is the test result for Aloe Mega's new production method material which is not produced by current fillet methods. The Aloe is stimulatory across all cell densities, and is between 100% and 110% of the rating at high densities. The implication of this result is that Mr. Queen's new method produces a gel which is a vast technical improvement over the competition and which is physiologically demonstrable in-vitro.

The second standpoint concerning the CPRS is that it is a nondestructive technique which correlates well with other in-vitro techniques and does not require the death of any laboratory animals. We have developed positive correlation with the Warburg Manometric evaluation, which is a cosmetically-acceptable technique, and deals with the characteristics of stimulation. Aloe Vera is also shown to be a Warburg "positive" material. The CPRS methodology is also able to assess the efficacy of ingredients in formulae, thereby adding another, but as yet undocumented, leg to the Aloe Vera Gel evaluation...that of in-vitro evaluation of stimulatory responses in formulae.

Tri-K and Aloe Mega feel that this work will provide even greater insight into the workings of Aloe Vera Gel. The Aloe industry has been one in which growth has not been as ethical as could be desired, and one in which no real data on the cosmetic efficacy has been available. Claims have been built on unrelated nutritional or medical evidence and by people who have no real interest in the long term viability of this industry. The Aloe Council has provided a basis for more ethical growth and has been supportive of work by companies such as Aloe Mega Labs.

This efficacy documentation is the first of its kind. More will come, especially the documentation of activity of the other forms of Aloe Vera on the ingredient market at this time...powder and concentrates. More work will be done on the delivery systems also, quantifying the levels needed for true activity of products as well as interactions which may either increase activity or inhibit product response.





