

A-03 Products of *Aloe vera* with special emphasis on burn applications

L S R Arambewela¹, R M Kulasena¹, P Samarasinghe¹,

L M Amarasinghe², T Barthelot

(¹*Ceylon Institute of Scientific & Industrial Research,*

P O Box 787, Colombo 7, ²Burns Unit, General Hospital, Colombo)

Aloe belongs to the family Liliaceae, *Aloe vera* (var. *littoralis*) (S Komarika) is reported to be present in Sri Lanka. The leaves consist of 2 products: the yellow exudate (aloe juice) and white gel (aloe gel). The aloe gel is used in the medicinal and cosmetic industry.

Development of aloe based burn cream, stabilized gel, sun protection cream and cosmetics was undertaken by CISIR.

Stabilised aloe gel was prepared using a preservative, an antioxidant and heat treatment. This serves as a ready source of aloe for the cosmetic industry.

Sun protection cream consisting of aloe, carrots and *Centella asiatica* (gotukola) was prepared and compared with commercial creams. The aloe based cream showed higher uv light absorption.

Burn cream was prepared at low temperature under sterile conditions using aloe gel. The clinical studies were carried out in the Burns Unit of the General Hospital to compare the healing actions of aloe cream and silver sulphadiazine (Flamazine). 10 out of 15 patients used in the clinical trial with burn creams had better healing action with *Aloe vera* cream than with flamazine, while the other 5 patients showed similar action. Analysis by HPLC indicated that methyl salicylate was absent in the cream. The *Aloe vera* burn cream is an effective treatment for burns. This will save valuable foreign exchange spent on imports and provide added income to farmers who cultivate aloe.

In addition to the above products, cosmetics such as aloe creams, shampoos, moisturizers, gels etc. were formulated.

The Research grant provided by CARP is acknowledged.