

## Papaya Powder Fruit Extract Research Paper

### APPEARS INS



Three Ship's Papaya Powder is gently refreshing with a very mild fragrance. It is also one of the hero ingredients in the well-loved Three Ships' [Refresh Foaming Cleanser](#). Papaya is a fruit that originates from Central America and is currently cultivated in various tropical and subtropical regions. On the skin, it helps to gently exfoliate, and provide skin benefits with vitamins A and C. This makes it the perfect ingredient for cleansing the skin, to slough off dead skin cells and condition bare skin.

### THE PERFECT INGREDIENT FOR CLEANSING THE SKIN, TO SLOUGH OFF DEAD SKIN CELLS AND CONDITION BARE SKIN

Papaya Powder is a free-flowing powder that ranges in colour from cream to a pale yellowish-orange. It is excellent for balancing the oiliness of the skin and for exfoliating dry areas. Papaya Powder also promotes the appearance of a rejuvenated complexion when used in skincare products.

It contains some amounts of vitamin A, which help to reveal the next layer of skin and promote the complexion's natural radiance. It also contains some amounts of vitamin C, an antioxidant with soothing and softening qualities.



Traditionally, Papaya fruit is macerated into a pulp and then put through a cad mill. The product from the cad mill is mixed with maltodextrin for micro-encapsulation and homogenized together to keep the Papaya Powder in suspension with the maltodextrin.

It is then pasteurized and then spray dried to achieve a dry, flaky powder. The powder is then sieved to get rid of large flakes and produce a more uniform texture.

However, the exact process of extraction method for the Papaya Powder that Three Ships sources is proprietary information.

## **PAPAYA CONTAINS PROTEASE ENZYMES SUCH AS PAPAIN, CHYMOPAPAIN, AND PAPAYA-PROTEINASE III**

Due to the manufacturing process for the Papaya Powder, the Papaya-proteinase III is essentially denatured. The papain and chymopapain have keratolytic action, meaning they can degrade dead cells in the outermost skin layer, therefore improving skin health, hygiene, and brightness.

On the skin, vitamin A has antioxidant properties. Vitamin A also helps to support the skin's overall health and elasticity. Vitamin C is a potent antioxidant. An antioxidant is a molecule that helps to block oxidative stress. Oxidative stress comes from factors like the sun, pollution, smoking, and more. These stressors create reactive oxidative species (ROS) which break down the skin's collagen and continuously create more ROSs in the making. Antioxidants like vitamin C neutralize those ROSs to simultaneously prevent them from breaking down the collagen in our skin and stop the chain reaction from producing more ROSs. Vitamin C can also help decrease the amount of sun damage to the skin by minimizing the level of inflammation and redness caused by overexposure to the sun.

### **SCIENTIFIC STUDY**

#### Topical Use of Papaya in Chronic Skin Ulcer Therapy in Jamaica

This study was conducted to observe the wound healing effect of topical Papaya ulcer dressings. A ten-item pre-tested self-administered questionnaire was distributed to 285 randomly selected registered nurses at hospitals.

There was a 72% response rate, and the prevalence of topical Papaya use among the correspondents was 75%. Comments from the users of Papaya suggested that topical application of the unripe fruit promoted desloughing, granulation and healing, and reduced odour in chronic skin ulcers.

Papaya dressing is also cost-effective since the climate in Jamaica allows for the year-round growth and harvest of Papayas. Some concerns about the use of Papaya were that there was difficulty in the preparation of the fruit and occasionally a sensation of burning was reported by patients. There were also concerns about the use of non-sterile, non-standardized procedures; however, there were no reports of wound infection from its use.

Papaya Powder contains enzymes and vitamins that promote skin health through actions such as antioxidant activity, skin regeneration, and sloughing off dead skin cells. In addition, research has shown Papaya's use and potential benefits in wound healing applications. Papaya Powder can be found as a hero ingredient in Three Ships' Refresh Papaya + Salicylic Acid Foaming Cleanser.