Cocoa Butter-Based Pain Relief Ointment

**METHYL SALICYLATE OINTMENT**

Methyl salicylate can be found naturally in several plants such as wintergreen (from the leaves) and birch (from the bark). It is also present in the oil of ylang-ylang, cassia, Polianthes tuberoase and in fruits such as peaches and strawberries. Apart from the above natural sources, methyl salicylate can also be obtained by chemical organic synthesis.

Methyl salicylate has been extensively used in balm and liniment as an active ingredient in pain relief. It is used to treat minor aches and pains of the muscle and joints such as arthritis, backache and sprains. Methyl salicylate is known as a counterirritant. It works by causing the skin to feel cool and then warm, and this feeling on the skin will cause the user from feeling the aches and pain deeper under the muscles, joints and tendons.

The present invention has come up with a methyl salicylate ointment using cocoa butter base. In-vitro and in-vivo studies shows that the existence of cocoa butter is able to enhance the release rate of methyl salicylate and percutaneous absorption by the skin.

**THE INNOVATION**

The development of cocoa-based methyl salicylate ointment has been found to enhance its established public usage. Methyl salicylate is found naturally in plants and can also be chemically produced. Used widely in balm and liniment as an active ingredient in pain relief, the application of cocoa butter-based methyl salicylate has been found to offer consistent and higher rates of absorption and moisture among users. The protected processing technology is readily available.

**COMPETITIVE ADVANTAGES**

A cocoa butter base improves the properties of methyl salicylate ointment as illustrated below:

- The desired release rate of methyl salicylate from the ointment base
- The percutaneous absorption of methyl salicylate
- The occlusion of moisture from the skin by the base
- The short term and long term stability of methyl salicylate in the ointment base
- The influence, if any, of the methyl salicylate on the consistency or other features of the ointment base

**COMMERCIAL POTENTIAL**

Medicaments like methyl salicylate has been widely used by the public as an emergency pain relief agent. Almost every individual keeps one with them. With the Malaysian population totalling almost 22 million, a sale of 5,000 units per month can be easily achieved. From this figure, investments in cocoa butter methyl salicylate ointment will generate a pre-tax profit of RM8,153.34 per month or 97.8% return rate yearly.

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