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Development of safe baby gums gel for the pain relief

First teeth of babies, when it comes out, cause an intense pain since the gums are swelled and burst. Most products developed for this pain relief are medicines and contain pharmaceutical active ingredients, such as lidocaine etc., with a topical anesthetic action. We have developed a gel which is considered as a medical device product with natural actives such as Arnica extract, Sage, and Myrrh and Licorice extracts with anti-irritant, anti-inflammatory, hydrating and soothing properties. The main natural pain-relieving activity is attributed to Clove essential oil (*Syzygium aromaticum*) at concentration of 0.12% w/w. Clove oil contains eugenol and is considered safe at low concentrations, but when it is used at higher concentrations, it may cause adverse events, such as irritations and allergies. Sodium benzoate and potassium sorbate were used for the gel preservation and tasteless and odorless cellulose gum was used for the formulation. Toxicological study was carried out in order to evaluate the possible irritating effects of this case-sensitive product. A specific oral mucosa irritation test was performed according to ISO 10993-10:2010 for five consecutive days on six male hamsters. Three (treated group) treated with test product and three (control group) treated with sodium chloride injection. The test product was inserted directly on the right oral cavity of every animal. Twenty-four (24) hours after the last treatment, all the animals were sacrificed; then the oral cavity mucosa was taken to perform the histological examination. The results obtained during the study proved that the above natural baby gums gel for the pain relief is non-irritant and can be considered safe for the use by babies.

Biography

Maria Chatzimarkaki an enthusiastic and highly motivated individual who has a clear understanding of the role and responsibilities associated with being an aesthetician-cosmetologist. Having the ability to provide support for multiple concurrent priorities, she is able to establish, maintain and develop effective working relationships with clients, patients and individuals. At the age of 14 she wanted to be an Aesthetician. She was a top student so she ended up at the National Technical University of Athens, studying Civil Engineering. Years passed by, she got married and I gave birth to two wonderful children. Exactly at that time, full of stress and anxiety she realized how much she wanted to be an Aesthetician in her life. So she looked for private institution and had one year lessons in all the fields. This wasn't enough for her, so she gave examinations in order to maintain a place at the University of Athens, starting from scratch, exactly as it had to be done. Now she is in 4th (and last) year of her studies in West Attica University.

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