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Vitamin c serum formulation pdf

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Vitamin C serum is a topical product that offers numerous benefits for the skin, including increased collagen production, reduced signs of aging, improved tone and texture, and protection against sun damage. However, vitamin C is an unstable molecule that can degrade easily when exposed to light, heat, or air. To maintain its stability and effectiveness, it's crucial to maintain a low pH level below 3.5 in serum formulations. The efficacy of vitamin C serum is directly proportional to its concentration, with 20% being the maximum effective level. Regular application of the serum can lead to long-lasting photoprotection by creating a reservoir in the skin. However, not all vitamin C derivatives used in skincare products are physiologically effective, as some may not be delivered adequately into the dermis or converted to its biologically active form. This project aims to develop a stable and effective vitamin C serum by improving extraction and quantification methods. The stability and penetration of the serum will be evaluated under different storage conditions and application methods. The findings of this project will contribute to the development of improved vitamin C-based skincare products with enhanced efficacy and stability. Nourishing the Skin with Natural Plant Oils The skin's hydration levels can be maintained through various natural plant oils rich in essential nutrients like vitamins A, C and E, antioxidants and minerals. These nutrients support healthy skin by providing nourishment and maintaining its natural functions. Vitamin C application has been proven to have several effects on the skin, including improving skin texture, collagen synthesis and keratinocytes, resulting in a healthier appearance. Regular use of vitamin C-containing products can address issues like uneven skin tone, fine lines and wrinkles. Vitamin C is present in different forms, such as L-ascorbic acid, which must be processed to become oil-soluble. Advanced forms of vitamin C derivatives have been developed and discussed in previous blog posts. Other essential oils that benefit the skin include sesame seed oil with its moisturizing, antibacterial properties; cotton seed oil for nourishment and protection; ascorbyl tetraisopalmitate which protects against free radicals; green coffee oil rich in antioxidants like chlorogenic acid; evening primrose oil to maintain moisture barrier; marigold CO2 extract for anti-inflammatory effects; tocopherol as an antioxidant; and manuka essential oil with its sweet scent. Perfumery formulation involves creating a fragrance formula that gives an appealing and subtle scent to products like vitamin C serums. The recommended trial batch size is 100g, and the process is considered beginner-level. To create this formulation, a cold process takes 15 minutes, involving blending oils in a specific order. The ingredients include: * A Fractionated coconut oil (61.25%) * Sesame seed oil (10%) * Cotton seed oil (10%) * Evening primrose oil (10%) * Green coffee oil (5%) * Ascorbyl tetraizopalmitate (3%) * Vitamin E (0.60%) * Manuka essential oil (0.10%) * Marigold CO2 extract (0.05%) The equipment required for this process includes scales, glass beakers, glass rods or stainless steel spoons, and pipettes. It's crucial to sanitise the utensils and work area while wearing appropriate PPE according to GMP guidelines. To blend the oils, weigh out each ingredient in Phase A into a large glass beaker, carefully taring the scales after each addition. Blend all the oils together well. For Vitamin C, weigh out the Phase B oil and add it to the beaker with the Phase A oils, blending them together well with a stirring rod. Finally, add the scented oils (manuka essential oil and marigold CO2 extract) and blend them in well. Decant and date the oil blend, transferring it to a suitable bottle with a dropper or an applicator top and label with the name, date, and batch number. Formulation notes include using antioxidants like tocopherol or rosemary extract to prevent oxidation when formulating with natural plant oils that are prone to oxidation. Since this is a waterless formula, we do not need to add a preservative. By giving us your info, you're agreeing to get more learning and promo emails from us that show off our course stuff! Don't worry, we'll never share or sell your details - check out our privacy rules for the scoop! We've got a huge community of over 100k fellow formulators who are already on this journey.