

Formulation and Evaluation of Marigold Antiaging Cream

Arya P.G¹, Fathima Raneesha², Nanditha Das P.M^{*3}, Noufira
P.N⁴, Dr.N.Tamilselvan⁵

(Department of Pharmaceutics Nehru College of Pharmacy, Pampady, Thiruvilwamala, Thrissur, Kerala-
680588)

Date of Submission: 14-06-2023

Date of Acceptance: 24-06-2023

ABSTRACT

In this study we present the development and evaluation of tegetes erecta antiaging cream by developing tegetes erecta extract using soxhlet apparatus and freeze dryer at a temperature of 65°C and -45° C. Further the cream is prepared using borax in liquid phase and beeswax in oil phase at a 70°C.

The evaluation parameters and test for flavonoids are also conducted in this study.

I. INTRODUCTION

In the United States, the FOOD AND DRUG ADMINISTRATION (FDA), which regulates cosmetics, defines cosmetics as products &”intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body’s structure or functions”.

Marigold, (genus Tagetes), genus of about 50 species of annual herbs of the aster family (Asteraceae), native to south-western North America, tropical America, and South America. Members of the genus Tagetes have attractive yellow, orange, or red composite flowers that are solitary on the stems or clustered. The leaves are arranged opposite each other on the stem and are usually finely cut. Characteristic bracts (leaf like structures) form a cup-shaped base below each flower head. Marigold flavonoids, extracted from marigold (Tagetes erecta L.) inflorescence residues, have attracted significant attention with respect to antioxidant, anti-inflammatory and chelating properties.

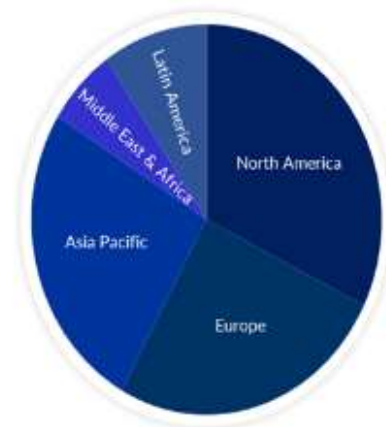
Aging is the process of becoming older. The term refers mainly to humans, many other animals, and fungi, whereas for example, bacteria, perennial plants and some simple animals are potentially biologically immortal. In a broader sense, ageing can refer to single cells within an organism which have ceased dividing, or to the population of a species'-aging creams are predominantly moisturizer-based skin care products marketed with unproven claims of making the consumer look younger by reducing, masking or preventing signs of skin aging. Anti-aging supplements are ingestible products promoted to diminish the effects of aging, including vitamin supplements, powders and teas. Aging is due to environmental and Lifestyle factors. The most common signs of premature aging appear in your skin, with wrinkles, age spots, dryness or loss of skin tone. Healthy lifestyle habits can help stop and prevent further Premature aging.

Marigold extract is also well-known for its rejuvenating and illuminating properties.

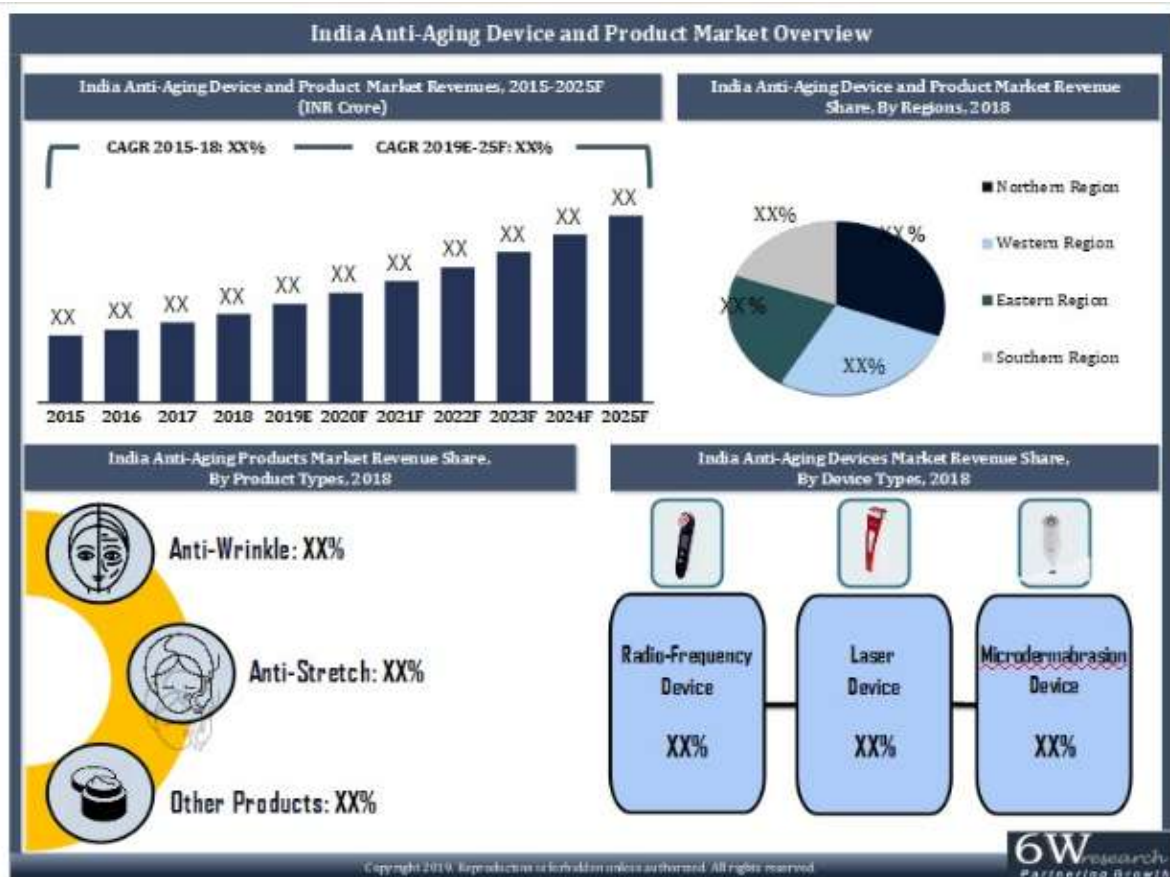
Flavonoids and carotenoids are powerful antioxidants that protect the skin from oxidative stress and promote cell regeneration. Terpenoids, which boost collagen production and skin elasticity, are also present in the extract. This can aid in the reduction of fine lines and wrinkles, giving the skin a more youthful and radiant appearance. The marigold extract can also help brighten the skin by lowering melanin production, which is responsible for skin Pigmentation. In order to lessen the appearance of dark spots, hyper pigmentation, and other types of discoloration, marigold extract is a great ingredient.



**Global Anti Aging Drugs Market Share
(in %), Segmented by Region, 2033**



www.researchnester.com | +1 646 586 9123 | info@researchnester.com



II. MATERIALS AND METHODS

MATERIALS USED:

INGREDIENTS	WORKING FORMULA
Marigold	20g
Marigold extract	0.5g
White beeswax	10g(50%)
Borax	4gm(20%)
Water	10ml(50%)
Ethyl alcohol	4ml (20%)
Liquid paraffin	14ml (70%)
Methyl paraben	0.02gm

III. METHADODOLOGY

Tagetes erecta antiaging cream was prepared by using Fusion method. Fusion method is a act or procedure of liquefying or melting by the application of heat. The following methods are used for the preparation of antiaging cream.

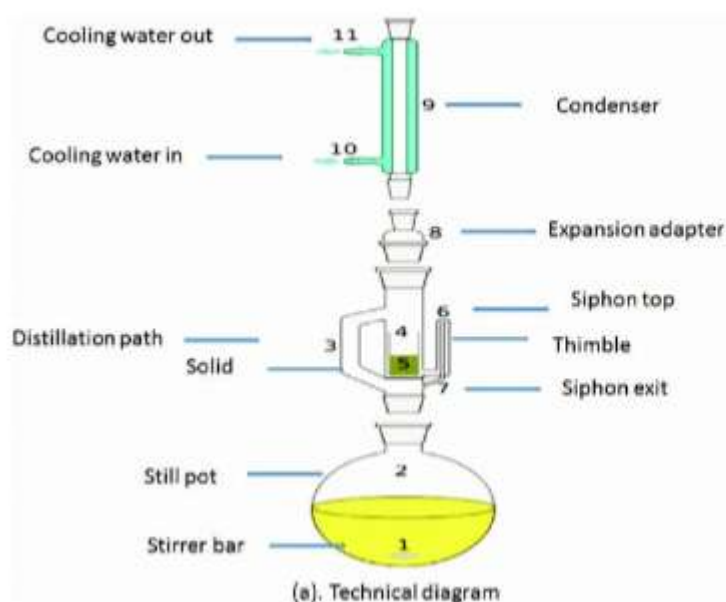
3.1) COLLECTION OF MARIGOLD: Marigold was collected by hand picking method,

cleaned petals were separated. The above taken petals were shade dried for 7 days



3.2) EXTRACTION OF MARIGOLD :

- Sun dried marigold was taken in a beaker
- Ethanol and petroleum ether is used as solvent. about 300ml of each is taken and filled in round bottom flask
- Dried marigold is filled in the soxlet apparatus
- Bottom is fitted in RBC flask and top is connected to condenser
- The RBC is fitted to a Heating mantle and temperature was set to be 65°C
- Complete the extraction until a thick viscous extract is obtained
- The extracted marigold is filled in a test tube and freeze dried until yellow crystals appeared



(b). Laboratory equipment

3.3) PREPARATION OF CREAM :

- 4g of borax is accurately weighed and transferred to a 100ml beaker
- 10ml of water is added to the above measured beaker
- 10gm of white bees wax is added to another 100ml beaker along with 14ml of liquid paraffin
- Boil 2 beakers in water bath with constant stirring until both of them dissolve completely
- At a temperature of 70°C mix aqueous phase and oil phase by pouring aqueous phase to oil phase using a motor and pistil
- Marigold extract is not completely soluble in water hence dissolve in ethanol with constant stirring
- Drop by drop add marigold extract to the cream
- Add 0.02gm of methyl paraben as preservative
- Stop stirring until a light yellow coloured cream appeared



3.4) STORAGE : Cream is stored at room temperature in a air tight container , don't freeze



IV. EVALUATION

3.5) TEST FOR FLAVANOIDS

4.1.1) Preparation of test sample: To small amount of extract equal amount of 2M Hydrochloric acid was added and heated for about 30 to 40 min at

100°C. The extract was cooled down and again extracted with ethyl acetate which was further concentrated to dryness and ready to be used as test sample

EXPERIMENT	OBSERVATION	INFERENCE
1) Shinoda test To the test solution add few magnesium turnings and concentrated hydrochloric acid was added drop wise	Crimson red color appears after few minutes	Presence of flavonoids
2) Alkali reagent test : To the test sample add few drops of NaOH solution	Intense yellow color changes to colorless on adding few drops of NaOH	Presence of Flavonoids
3) Zinc hydrochloride solution test : To the test sample add a mixture of zinc dust and concentrated Hydrochloric acid	Formation of red color after few minutes	Presence of Flavonoids

4.2) pH TEST

4.2.1) Calibration of pH meter: calibration of pH meter was done with buffer solution of pH 7

4.2.2) Testing of pH :2.5 G of cream is dissolved in 100 ml ethanol and its PH measured

4.3) APPEARANCE

4.3.1) color: color was found to be light yellow

4.3.2) Appearance: appearance was found to be good with no clogs and smooth to apply without any roughness.

4.4) IRRITANCY TEST

Mark a section on mitt dorsal surface. The cream is applied to desired space and time is noted and no allergic or deadly reaction is observed.

4.5) PATCH TEST

The cream square measure applied to patches that is placed within skin and no allergic or deadly reaction is observed.

4.6) SPREADABILITY TEST

Cream base should spread easily without too much drag and should not produce greater friction in the rubbing process. .

V. CONCLUSION AND DISSCUSION

Tegetes erecta antiaging cream is promising and innovative product that combines the benefit of marigold extract .Throughout this cream we have explored antioxidant property of

marigold that lead to antiaging .This cream represents a novel approach to anti-acne ,anti-aging,skin brighten,sunburn etc.

REFERENCE

- [1]. <https://www.yumpu.com/en/document/read/15326453/formulatin-and-evaluation-of-diacerein-cream-asian-journal-of-pharmaceutical-and-clinical-research>
- [2]. Ranjan Kumar Maji ; Sambit Maiti ; Sudip Pal ;Kishor Kumar Roy; Nitish Majhi , Formulation and evaluation of herbal cream of the flowers of calendula officinalis with anti-bacterial activity,IARJSET
- [3]. Maji Kr R ,Pal S,Maiti S,Formulation and evaluation of herbal cream from the latex of calotropis gigantea ,IRJMETS,2021;3:1265-1268
- [4]. Seyed Naser Ostad;Hamid Reza Monsef-Esfahani;Samira Taheri;Ebrahim azizi;Mohammed Ali Faramarzi. Iranian journal of pharmaceutical Sciences.2005,1(3),161-166