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Formulating mixed variety of lotion prepared by standard *Hypericum perforatum*- Q and *Calendula officinalis*- Q with definite proportion with quality control by HPTLC and UV visible spectrophotometer

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Abstract
Background: The Formulation of Prepared Mixed variety of *Calendula officinalis* lotion with *Hypericum perforatum* lotion as drug and Vehicle ratio is (1:1), which was prepared by Standard *Calendula officinalis* Mother tincture (Q) in distilled water (DW) and Standard *Hypericum perforatum*- Q in distilled water (DW) as drug and vehicle ratio is (1:9).
Methodology: The formulation was prepared as drug and vehicle ratio (1:9). Where drug is taken as 1 part and vehicle is taken as 9 part. Thereafter *Calendula officinalis*- Q and *Hypericum perforatum*- Q is procure from GMP Certified pharmaceutical Pvt. Ltd., Which was taken as a 1 part in 9 ml of distilled water as a base line sample medium Seperately. Afterwards Mixed 1 part of *Calendula officinalis* lotion in 1 part of *Hypericum perforatum* lotion as (1:1) Quality assessment of mixed variety of *Calendula officinalis* and *Hypericum perforatum* lotion were done by the UV- visible spectrophotometer and HPTLC (High performance Thin layer Chromatography).
Result: While sample passing under UV- visible spectrophotometer, maximum absorption of *Calendula officinalis*- Q is 0.998 at 496 nm, *Calendula officinalis* lotion is 0.869 at 440 nm and *Hypericum perforatum*- Q is 0.994 at 642 nm, *Hypericum perforatum* lotion is 0.999 at 473 nm. On other hand, In HPTLC the Rf value under *Calendula officinalis*- Q is 0.744 with Value of X is 20 mm And Y is 61.6 mm and Rf value under *Calendula officinalis* lotion is 0.719 with X is 72.8 mm and Y is 59.8 mm, the Rf value under Standard *Hypericum perforatum*- Q is 0.804 with X is 46.4 mm and Y is 65.9 mm, *Hypericum perforatum* lotion is 0.761 with X is 99.2 mm and Y is 62.8 mm, whereas Rf value under Mixed Variety of *Calendula officinalis* and *Hypericum perforatum* Lotion (aqueous base) is 0.821 with X is 152 mm and Y is 67.1 mm.
Conclusion: Formulation prepared by mixed variety of *Calendula officinalis*- Q and *Hypericum perforatum- Q* gives a good result in quality control done by the UV- visible spectrophotometer and HPTLC (High performance Thin layer Chromatography).

Keywords: *Hypericum perforatum*, *Calendula officinalis*, HPTLC

Introduction
A Lotion is a low-to medium-thickness sedated or non- medicated effective planning, expected for application to whole skin. Salves are normally applied to outside skin with uncovered hands, a perfect material, cotton fleece, or dressing. Strong particles consolidated in creams ought to be in a finely partitioned state to keep away from lumpiness.
Most lotion are o/w emulsions, yet w/o creams are likewise formed. The vital parts of a salve are the watery and slick stages, an emulsifying specialist to forestall partition of these two stages, and, whenever utilized, the medication substance or substances. A wide assortment of different fixings, for example, scents, glycerol, petrol jam, colors, additives, and balancing out specialists are usually added to salves for improved organoleptic and conservation qualities.
Lotion can be utilized for the skin conveyance of drugs like anti-microbials, disinfectants, antifungals, corticosteroids, antiacne specialists, and alleviating/defensive specialists (like calamine). Beside clinical use and skin health management, salves are frequently utilized as accomplices to help rub, masturbation, or sex. Noncomedogenic salves, items that don't hinder the natural pores of the skin, are suggested for use on pimples or skin break out inclined skin. These creams are additionally named as no occlusive. In this way, they might diminish skin break out or potentially lessen the frequency of pimples.

A similar medication substance can be figured out into a moisturizer, cream, and salve. Lotions are the most helpful of the three however are inappropriate for application to districts of bristly skin like the scalp; though a salve is less gooey and might be promptly applied to these areas. Many sedated shampoos are, as a matter of fact, moisturizers. Moisturizers likewise enjoy a benefit that they might be spread daintily contrasted with a cream or balm and may monetarily cover a bigger area of skin.

Through this formulation we used two different varities of drugs, the descriptions are given below; such as;

Hypericum perforatum

Hypericum perforatum L. (St. John's Wort, Hypericaceae) is an individual from the variety Hypericum, of which there are 400 species around the world (Mabberley, 1987) [1]. It is local to Europe, West Asia, North Africa, Madeira and the Azores and is naturalized in a large number areas of the planet, remarkably North America and Australia. The plant spreads quickly through sprinters or from the huge seed creation and can attack pastures, upset destinations, back roads, the sides of streets and parkways, and meager woods. As of late, the utilization of H. perforatum-inferred items has expanded emphatically, and it is by and by quite possibly of the most consumed restorative plant on the planet (Wills *et al*., 2000) [2]. The plant has a wide scope of restorative applications, including skin wounds, dermatitis, consumes, infections of the wholesome plot and mental issues (Butterweck, 2003) [3].

The current survey includes the writing on the antimicrobial movement of unrefined concentrates of H. perforatum and antimicrobial compounds disconnected from these concentrates. For the antibacterial action, just reports depicting separates with least inhibitory focuses (MIC) of 1 mg mL-1 (1000 g mL-1) or on the other hand less were chosen. The writing teems with papers portraying separates showing antibacterial action with MIC values north of 1 mg mL−1, which has little importance according to a clinical point of view, as it is reasonable that various moderately inactive substances might show antibacterial movement at such a high focus.

Calendula officinalis

India is known as the professional flowerbed of the world for its rich regular assets. Over 6,000 plants in India are utilized in conventional, fables and natural medicine [1]. The Indian arrangement of medication has distinguished 1500 therapeutic plants of which 500 are generally used [4]. Calendula officinalis Linn. is utilized therapeutically in Europe, China, US and India. It has a place with the family, Asteraceae, and is normally known as Zergul (Hindi), African marigold, Calendula, Normal Marigold, Garden Marigold, Marigold, Pot Marigold (English), Butterblume (German), Jawline Chan Ts'ao (Chinese), Galbinele (Romanian) and Ringblomma (Swedish) [5, 6].

Habitat

The plant is native to Central and Southern Europe, Western Asia and the US [7].

The main embodiment of the present invention is preparing Mixed variety of lotion by Standard Hypericum- Q and Calendula officinalis- Q

Formulation prepared by

1. Standard *Calendula officinalis*-Q
2. Standard *Hypericum perforatum*- Q
3. Distilled water

Site of Study

Centre of Research and Development of Parul University CR4D

Investigational tool

UV- Visible spectrophotometer (Double beam)

HPTLC (High performance thin layer Chromatography)

Drug and Vehicle Ratio

While formulation the drug and vehicle ratio were made as (1:9)

1. Standard - *Calendula officinalis*- Q 1 Part (1ml) Distilled water- 9 Part
2. Standard *Hypericum perforatum*- Q 1 part (1 ml) Distilled water- 9 Part
3. Mixed Variety of *Hypericum perforatum* + Calendula officinalis Lotion (1:1) *Hypericum perforatum* lotion- 1 Pat Calenudla officinalis lotion- 1 Part

Medicinal product

Calendula officinalis- Q were purchase from Pharmaceutical Pvt. Ltd.

Hypericum perforatum- Q were purchase from Pharmaceutical company Pvt. Ltd.

HPTLC (High Performance Thin Layer Chromatography) Analysis

Table 1: Plate layout of Chromatography

Plate layout	
Stationary phase	Merck, HPTLC Silica gel 60 F_{254}
Plate format	200 x 100 mm
Application type	User
Application	Position Y: 8.0 mm, length: 8.0 mm, width: 0.0 mm
Track	First position X: 20.0 mm, distance: 26.4 mm
Solvent front position	80 mm
Notes	

Table 2: Chamber Preparation

Plate layout	
Stationary phase	Merck, HPTLC Silica gel 60 F_{254}
Plate format	200 x 100 mm
Application type	User
Application	Position Y: 8.0 mm, length: 8.0 mm, width: 0.0 mm
Track	First position X: 20.0 mm, distance: 26.4 mm
Solvent front position	80 mm
Notes	

Table 3: Standard *Calendula officinalis*- Q and *Calendula officinalis* lotion- Q

Substance STd Calendula (*RF* 0.711 +/- 0.040):			
Track	**R_F**	**X (mm)**	**Y (mm)**
1	0.744	20.0	61.6
3	0.719	72.8	59.8

Table 4: Standard *Hypericum per*- Q and *Hypericum per lotion*- Q

Substance Hypericum std (*RF* 0.761 +/- 0.044):			
Track	**R_F**	**X (mm)**	**Y (mm)**
2	0.804	46.4	65.9
4	0.761	99.2	62.8

Table 5: Standard *Hypericum perforatum*- Q

Peak #	Start		Max			End		Area		Manual peak	Substance Name
	R_F	H	R_F	H	%	R_F	H	A	%		
1	0.000	0.0000	0.029	0.4519	30.51	0.192	0.1191	0.04029	20.62	No	
2	0.463	0.1257	0.729	0.4805	32.44	0.750	0.4473	0.06331	32.41	No	
3	0.750	0.4473	0.836	0.5487	37.05	1.000	0.0001	0.09177	46.97	No	

Table 6: Standard *Calendula officinalis* and *Hypericum perforatum* lotion (Aqueous base)

Peak #	Start		Max			End		Area		Manual peak	Substance Name
	R_F	H	R_F	H	%	R_F	H	A	%		
1	0.000	0.0000	0.028	0.4376	51.93	0.104	0.0685	0.01869	18.95	No	
2	0.289	0.0748	0.739	0.4051	48.07	0.807	0.3184	0.07994	81.05	No	

Table 7: Standard *Calendula officinalis* and *Hypericum perforatum* lotion

Substance calendulla + hypericum lotion (*RF* 0.818 +/- 0.047):			
Track	**R_F**	**X (mm)**	**Y (mm)**
5	0.864	125.6	70.2
6	0.821	152.0	67.1

UV- visible spectrophotometer Analysis

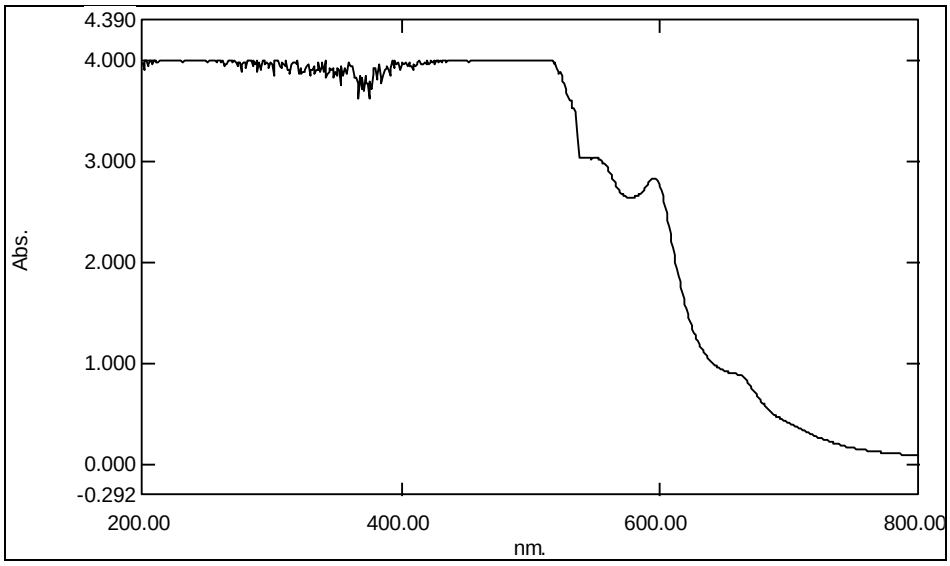

Fig 1: Absorbance of Standard *Hypericum perforatum*- Q

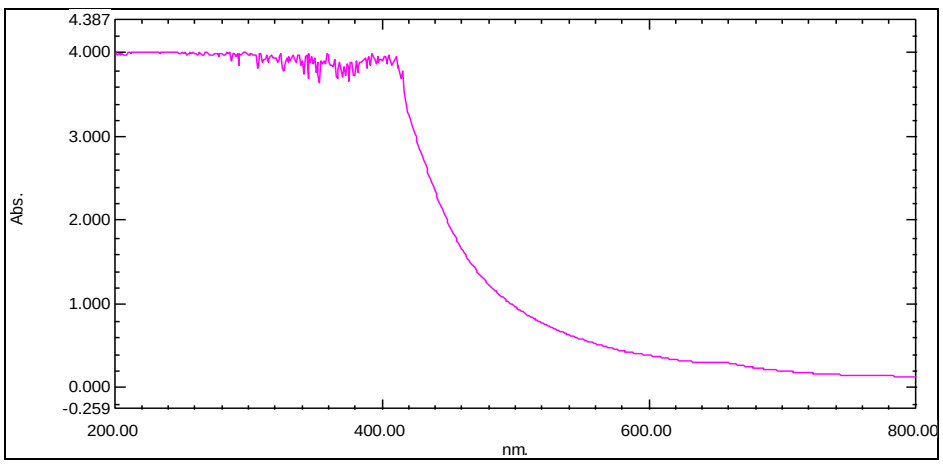

Fig 2: Absorbance of Standard *Calendula officinalis*- Q

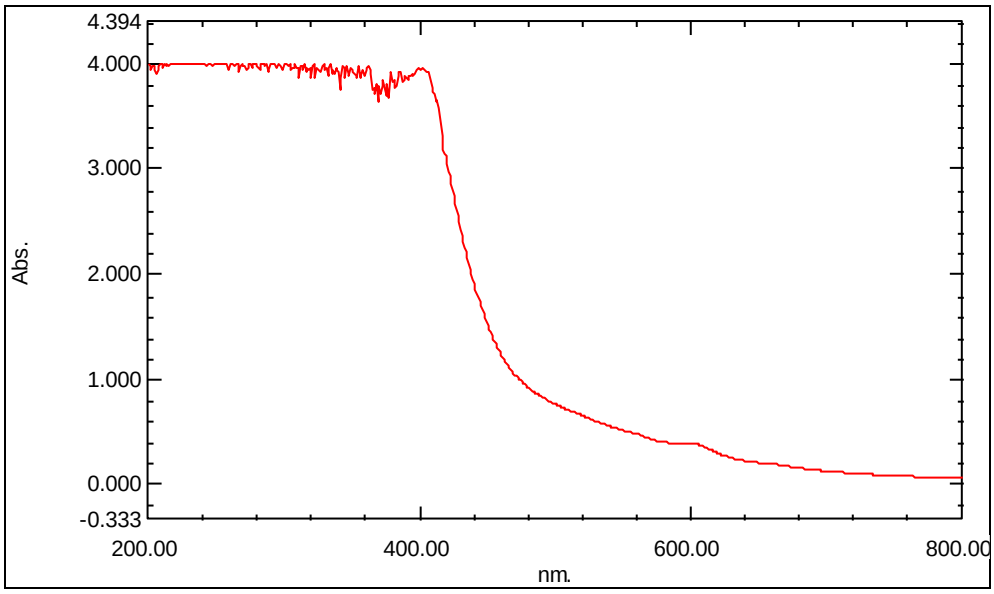

Fig 3: Prepared *Hypericum perforatum* lotion (aqueous base)

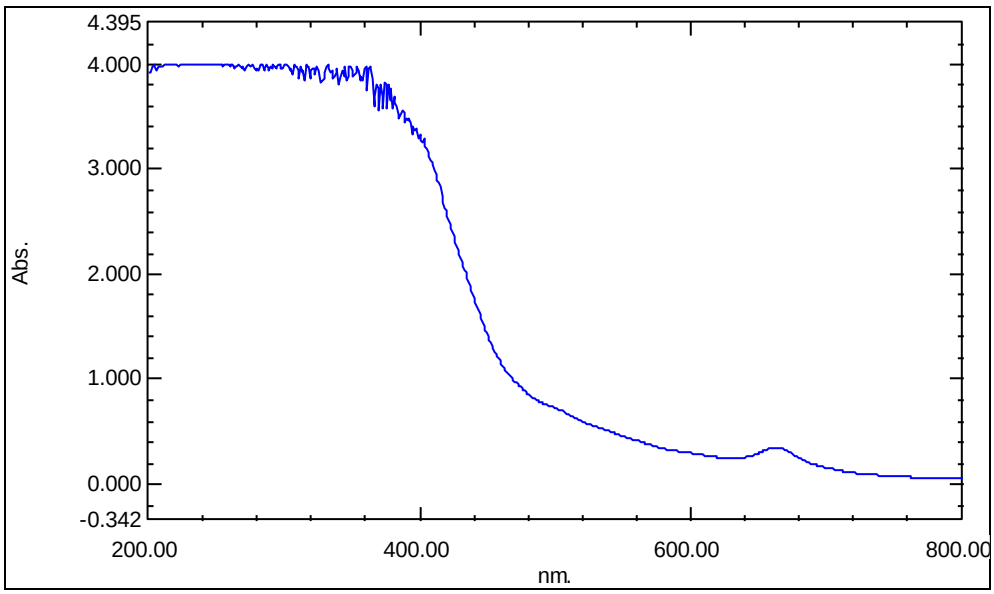

Fig 4: Prepared *Calendula officinalis* lotion (aqueous base)

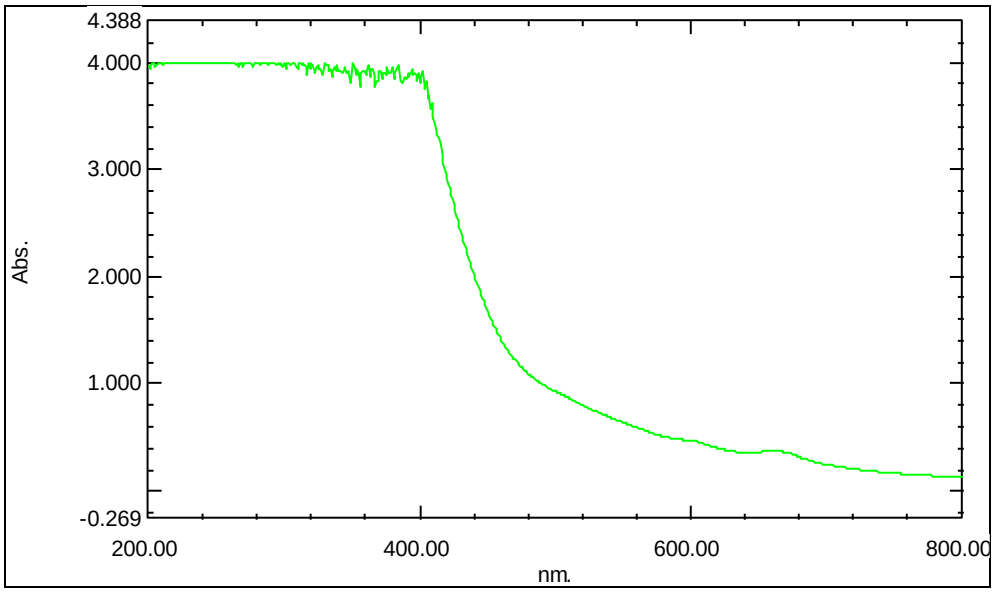

Fig 5: Absorbance of Mixed variety (*Hypericum perforatum lotion + Calendula offficinalis lotion*) aqueous base

Benefits of the Present Invention

1. For preparation of such formulation the cost effective is chipper.
2. Easy to use and dispensed.
3. Calendula officinalis lotion shows excellent result in the various wound as antiseptic, antibiotic, anti-inflammatory also.

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