JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

FORMULATION OF A NATURAL ANTISEPTIC SOLUTION

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Abstract: The use of Polyherbal formulation is increasing day by day due to several reasons that overcome it over recently using formulation. The formulations that contain the toxic substance absorbs through the different routes of administration and enter the blood circulation that finally leads to the altered biological activities. The work is an attempt to formulate a herbal formulation which can be used as Antiseptic solution. The problem in formulation of herbal formulation is the presence of color pigments and other compounds which are insoluble in the selected solvents for desired compounds. The optimization of the ratio of various ingredients gives the best transparency and potential of antiseptic solution. The present study is successfully formulating a clear, transparent solution of desired compounds having potential Anti-microbial activities.

IndexTerms **– Polyherbal formulation, blood circulation, Antiseptic solution, pigments, transparent.**

I. INTRODUCTION

Aromatic and medicinal plants are used in various formulations depending upon their activities. The biological activities depend upon the presence of compounds that are present in these plants. The technique of extraction and isolation depends on the solubility of these compounds. The selection of the solvent depends on the solubility of these compounds. The solvents and the groups of solvent is selected accordingly. If the solvents system is successfully selected then the next target is to remove the unwanted compounds or impurities.
Such compounds not only hinder the filtration, clearance and transparency of the formulation but also increase the bulk of the solution. The removal of these compounds is not a small task. The waxes, polysaccharides and other impurities make a solution translucent.

II. MATERIAL AND METHODS

Collection of Plant Materials

The plant material was collected required ingredients from herbal garden of Career Point University. Some plant material was collected from market and authenticated in Botany department of Career Point University and stored under specimen no.

Drying of Plant Materials

After collection the plant material was dried under 40^0C till constant moisture content**.** The dried plant material was suitable for drying.

Grinding

Grinding the ingredients to make coarse powder form.

Extraction: Percolation, Soxhlet.

The plant material is extracted with a hydroalcoholic solvent in the ratio of 80:20. In the first extraction the solvent in collected after an overnight time of extraction and marc was subjected to second wash. All the three washes were collected for all the plant materials.

Blending: Hydro-alcoholic (water + alcohol) in required amount.

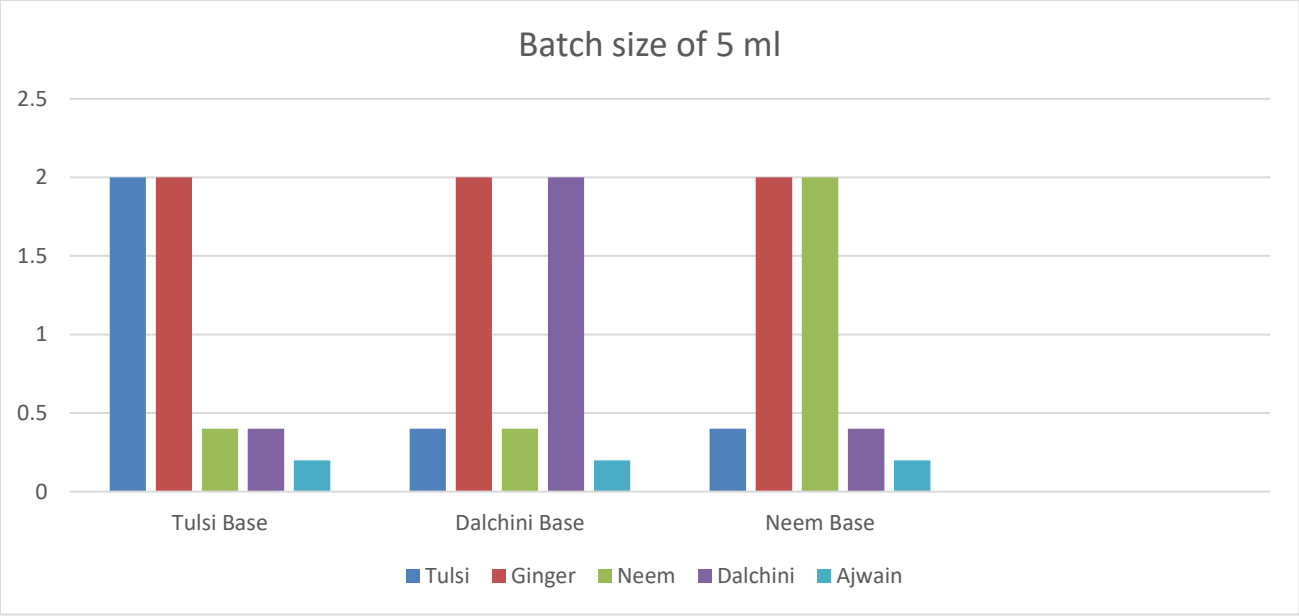
The process of Blending was followed to get the solution having the maximum transparency. Keeping this point of view the solvent collected as a result of all the three washes were subjected to blend in different ratio as per the table given in Initial trial and the solutions were observed for the transparency against a white background.

Packing and labelling: Use dark umber coloured bottle of 100 ml.

For dispensing of a Antiseptic solution a dispenser bottle was selected and filled upto 80 percent for proper dispensing.

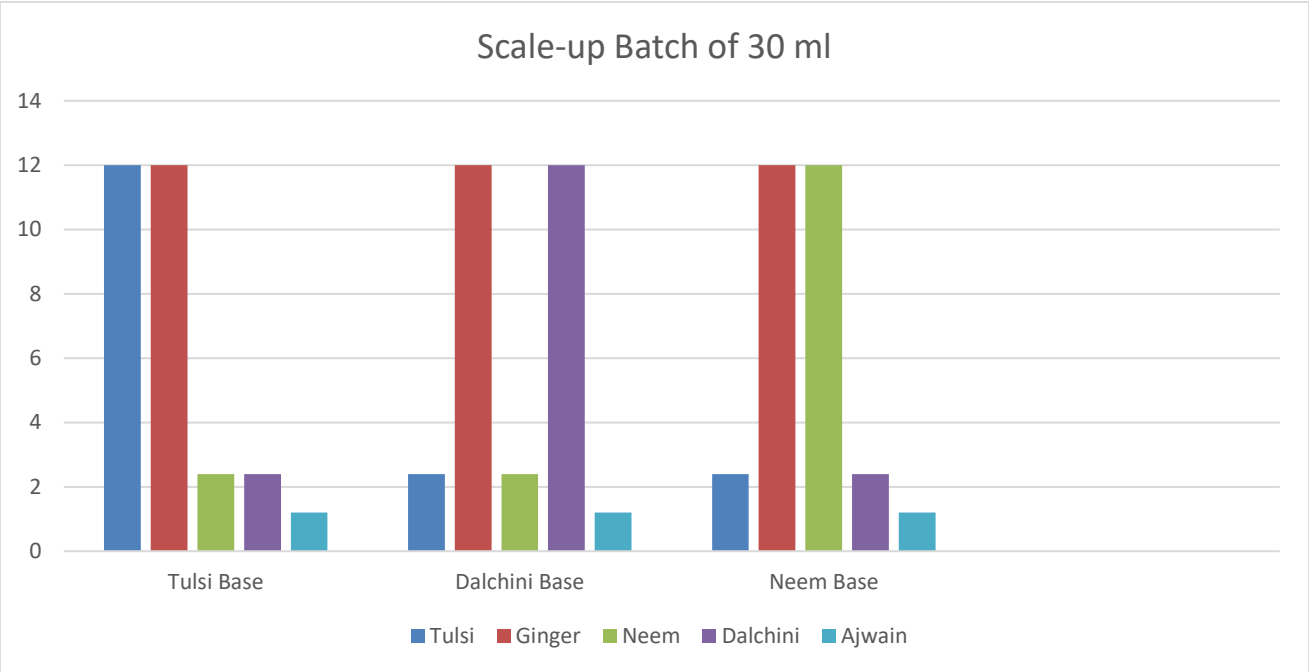
III. Initial Trial of batch size 5 ml

S.No.	Ingredients	Tulsi base	Dalchini base	Neem base
1	*Ocimum sanctum* (Tulsi)	2 ml	0.4 ml	0.4 ml
2	*Zingiber Officinale* (Ginger)	2 ml	2 ml	2 ml
3	*Azadiracta indica* (Neem)	0.4 ml	0.4 ml	2 ml
4	*Cinnamomum Zylanicum* (Dalchini)	0.4 ml	2 ml	0.4 ml
5	*Trychyspermum Ammi* (Ajwain)	0.2 ml	0.2 ml	0.2 ml



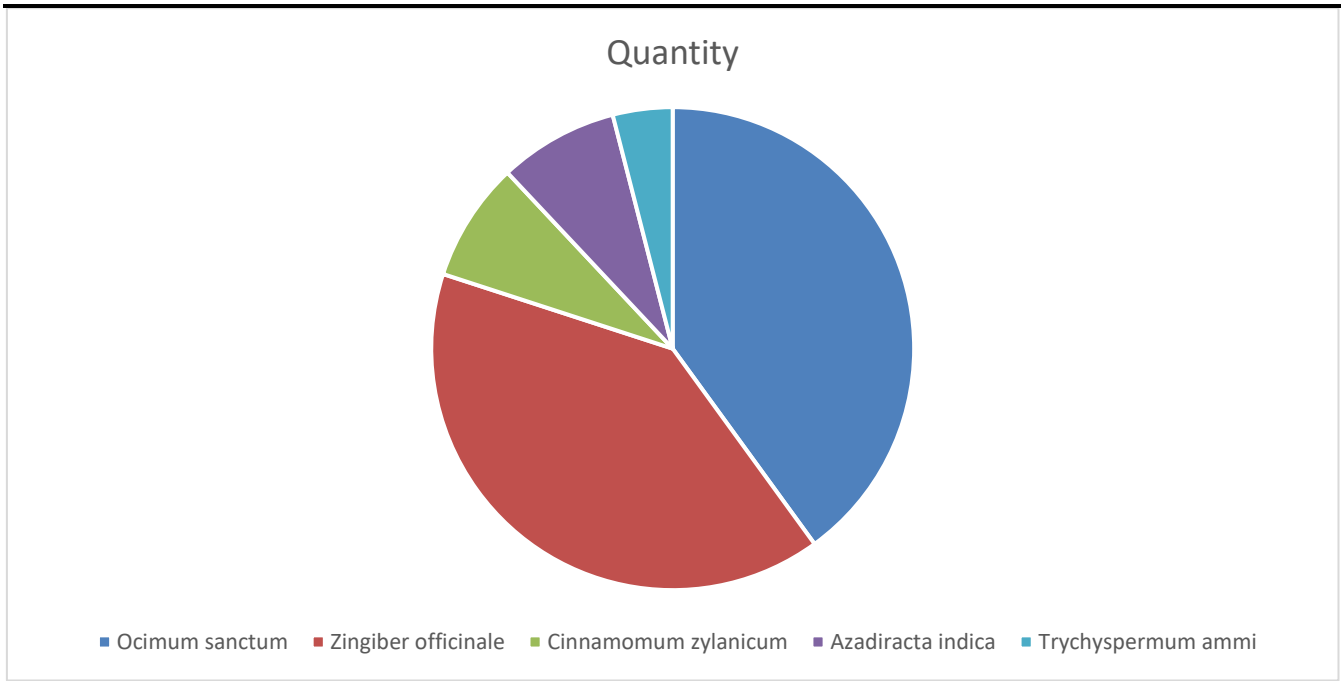
IV. Scale Up batch 30 ml

S.No.	Ingredients	Tulsi base	Dalchini base	Neem base
1	*Ocimum sanctum* (Tulsi)	12 ml	2.4 ml	2.4 ml
2	*Zingiber Officinale* (Ginger)	12 ml	12 ml	12 ml
3	*Azadiracta indica* (Neem)	2.4 ml	2.4 ml	12 ml
4	*Cinnamomum Zylanicum* (Dalchini)	2.4 ml	12 ml	2.4 ml
5	*Trychyspermum Ammi* (Ajwain)	1.2 ml	1.2 ml	1.2 ml



V. Scale up Batch 600 ml (Tulsi Base)

S.No.	Ingredients	Quantity
1	*Ocimum sanctum*	240 ml
2	*Zingiber officinale*	240 ml
3	*Cinamomum zylanicum*	48 ml
4	*Azadiracta indica*	48 ml
5	*Trychspermum ammi*	24 ml



VI. Final Batch

S.No.	Ingredients	Quantity (70ml)
1	*Ocimum sanctum* (Tulsi)	40 %
2	*Zingiber officinale* (Ginger)	40 %
3	*Azadiracta indica* (Neem)	8 %
4	*Cinnamomum zeylanicum* (Dalchini)	8 %
5	*Trychyspermum ammi* (Ajwain)	4 %

VII. Result and Discussion

An Anti-Septic is a substance which inhibits the growth and development of microorganism. Anti-Septic is mainly used to reduce level of microorganism on the skin. Germinal is an anti-septic liquid that is available in market, besides it Savlon, Hixlon etc. are available in market. The Anti-septic which are available in market are not completely natural and show side-effects on long term use. The optimum percentage of various ingredients in the formulation is *Ocimum sanctum* (40%), *Zingiber officinale* (40%), *Azadiracta indica* (8%), *Cinnamomum zeylanicum* (8%) and *Trychyspermum ammi* (4%). The criteria of maximum transparency and negligible precipitation is fulfilled. The Natural antiseptic solution (Germicare) can be used wide range of application and maximum stability life span of four years with same transparency and potential.

VIII. Conclusion

This project is undertaken with the objective of designing such a antiseptic solution which is completely herbal in nature. To increase the spectrum of anti-microbial activity & devoid of the adverse effects encountered with synthetic agents. In this Project the work is started to formulate a unique formulation for multipurpose antiseptic use in conditions like burn, cuts, wounds and skin hygiene. We have used medicinal plants for manufacturing process which gives anti-septic effective with wide antimicrobial spectrum. It is purely natural so it has no side effect and give long protection from microorganism.

IX. Acknowledgment

Authors are thankful to the management of Career Point School of Pharmacy, Career Point University, Kota, Rajasthan for providing necessary facilities.

X. Conflict of Interest

The authors declare that they have no conflict of interest.

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