



AYURVEDIC PRESERVATIVE FOR CONTACT LENS TO PREVENT COUNTER-EFFECTS OF CONTACT LENS' SOLUTION ON EYES

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Article Received on
20 Dec. 2018,

Revised on 11 Jan. 2019,
Accepted on 01 Feb. 2019

DOI: 10.20959/wjpps20192-13170

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INTRODUCTION

A contact lens, or simply contact, is a thin lens placed directly on the surface of the eye. Contact lenses are considered medical devices and can be worn to correct vision, or for cosmetic or therapeutic reasons.^[1] People choose to wear contact lenses for many reasons.^[2] Aesthetics and cosmetics are the main motivating factors for people who want to avoid wearing glasses or to change the appearance of their eyes. Others wear contact lenses for functional or optical reasons. When compared with spectacles, contact lenses typically provide better peripheral vision, and do not collect moisture (from rain, snow, condensation etc.) or perspiration. This can make them preferable for sports and other outdoor activities. Contact lens wearers can also wear sunglasses, goggles, or other eyewear of their choice without having to fit them with prescription lenses or worry about compatibility with glasses.^[3]

NEED FOR STUDY

Contact lens care solutions are complex; they perform a multitude of tasks that ultimately contribute to either success or failure of contact lens wear. A delicate balance exists between disinfection efficacy and the ability to be gentle to the ocular surface. It is incumbent upon the eye care practitioner to understand the magnitude of the factors that can affect this condition, and to modify what we can to enhance the health of the ocular surface and

decrease patient symptoms. Preservatives, although beneficial in providing a sterile option in a multi-dose container for many of our patients, can also have certain unwanted effects on the ocular surface.

AIM

To prepare Ayurvedic Preservative for contact lens.

OBJECTIVE

- a) To prepare Ayurvedic preservative for contact lens.
- b) To perform pharmaceutical analysis of solution on soft contact lens.

MATERIALS AND METHODS

a) **Drugs:** The drugs listed in table no. 1 were used to prepare the solution in mentioned proportion.

Sr. No.	Ayurvedic Name	Latin Name	Proportion
1	Daruharidra	Berberis aristata	1 part
2	Gulab pushpa	Rosa centifolia	1 part
3	Chameli pushpa	Jasminum grandiflorum	1 part
4	Karpoor	cinnamomun camphor	1 part
5	Rasapushpa	Mercuric sulphate	1/12 th part
6	Tankana	Borax powder	1/12 th part

b) **Method of preparation:** Arka-patana method was used to prepare the solution. For that, drugs from 1 to 4 number from table no.1 were soaked in water for overnight. On next day, all the drugs were taken in distillation apparatus. After acquiring Arka, rasapushpa & tankana were added afterwards. Above solution was diluted with 10% distilled water.

c) **Assessment of preservative efficacy of solution:** For assessment of preservative efficacy of solution, 3 sets of contact lens were soaked in solution, for 3 days, in three different temperatures, i.e., 18 C, 31 C & 48 C for cold, normal & hot temperature respectively.

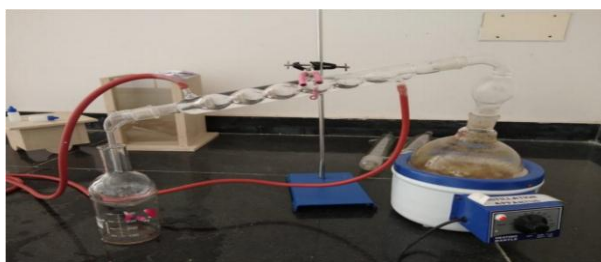


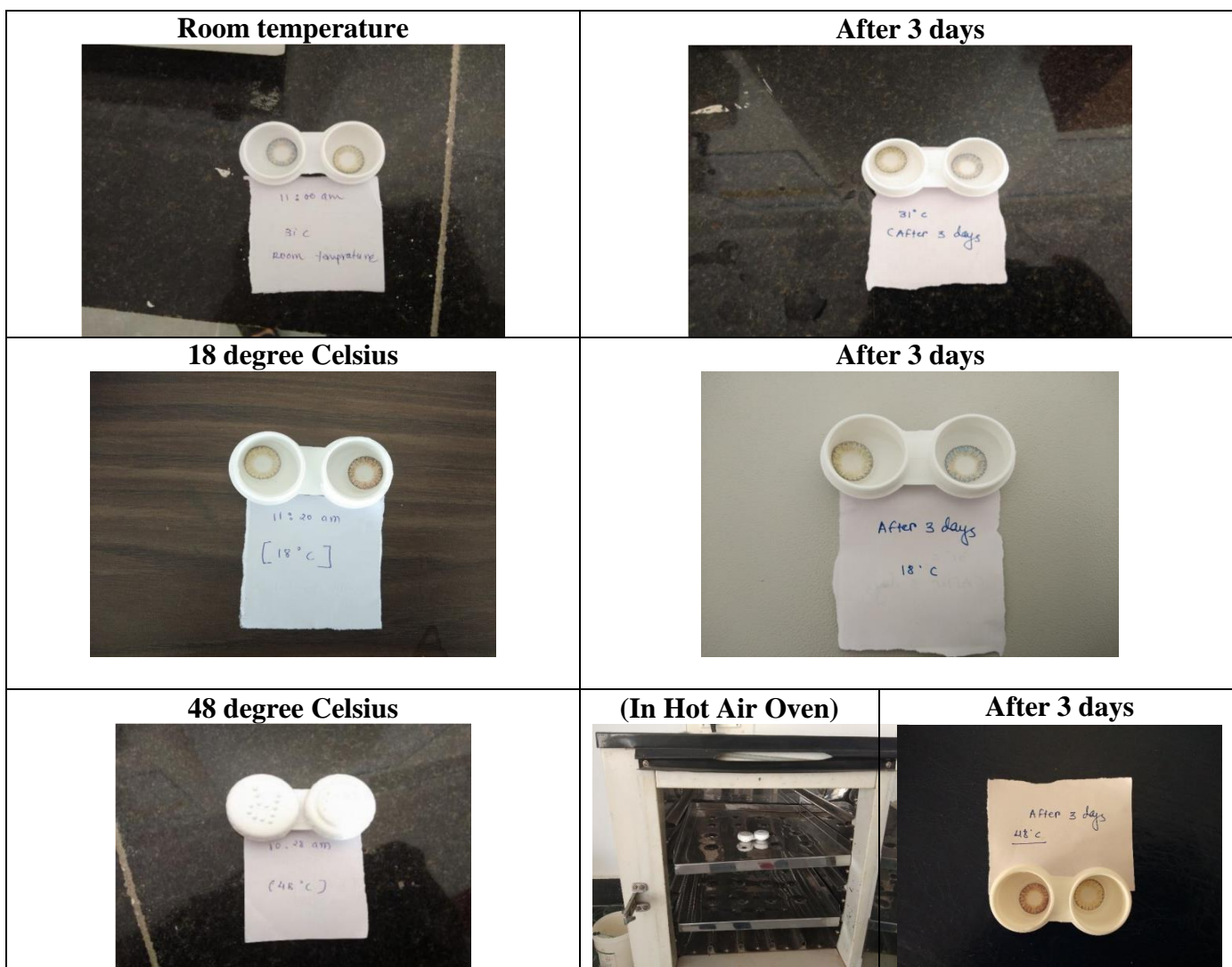
Fig. 1: Distillation of drugs.



Fig. 2: Diamond Drop extractum of berberine with camphor.

OBSERVATION

Criteria	Optical length	Touch	Texture	Colour
18° C	Maintained	Glycerine	Maintained	Non fragmented
31° C	Maintained	Glycerine	Maintained	Non fragmented
48° C	Maintained	Glycerine	Maintained	Non fragmented
Acid Media Test	Shrunken lens with normal preservative within 15 seconds		Optical length & touch maintained up to 30 minutes in Daru-haridradi preservative	



Acid Media Test with Normal Preservative



Acid Media Test with Daru-haridradi solution

CONCLUSION

It can be concluded from above discussion that the solution prepared to preserve contact lens is proved to provide preservative effects on soft contact lens. The drugs used to prepare solution are all *Chaksushya* in property, hence it can be used as an alternative to chemical preservative available in market.

ACKNOWLEDGEMENTS

This work would not have been possible without the guidance and support of Dr. Prassana Mathad, Associate Professor, Parul Institute of Ayurved & Research.

We are thankful to faculties of Dept. of Shalakyta tantra; PIA, Dept of RSBK; PIAR for providing knowledge & guidance on the field.

We are thankful to Dr. B.G. Kulkarni, Principal, PIAR for giving permission to perform research work in PIAR research laboratory.

We are thankful to Dr. Hemant Toshikhane for always motivating research activities and providing learning atmosphere in the university.

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