



## **FORMULATION AND EVALUATION A NOVEL HERBAL BASED FACE WASH BY USING HYDNORAAFRICANA (SUB FAMILY-HYDNORACEAE) FRUIT EXTRACT**

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**Abstract-** There are many herbal based face wash invented. But in this research Hydnora Africana 2gm used for the external use for the treatment of Acne. In this time Hydnora Africana fruit extract used for the purpose of skin treatment such as Acne. Actually for this research I got the two street dogs which has acne but in their skin properly shaved but too much acne available. The acne occurred in two street dogs in hairless areas. Before I did this research of Hydnora Africana root extracts and after research I known that it is used as anti-diarrhoeal agent and antimicrobial with anti-fungal. But in this invention I performed the research for watching that this face wash is effective for the treatment of acne or not.

**Introduction-** In every year many face wash invented for the treatment of acne. The face wash first invented in 1990. Before I invented about Hydnora Africana root extract that it is

anti-diarrhoeal and antimicrobial with anti-fungal also. But in this present study for the preparation of facewash. In this facewashresearch I got chin acne affected 2street dogs by lab. Acne occurs in dog on the bottom of skin around the mouth, lower lips and chin sometimes in the hairless areas. As Hydnora Africana's fruit also effective that's fruit extract also use.

### **Materials and Ingredients-**

AS by the lab Hydnora Africana will be collected with fruits. Leaf extract will be used but now fruit extract also left that's fruit extracts also use. Actually the Hydnora Africana collected from South Africa after it collected from Malbazar by lab. First the dried fruit extract 100gm will be collected. After 2gm of Hydnora Africana will be ready for the preparation.

The other ingredients are-

61.495ml of liquid Castile soap

61.495ml of chamomile tea

42.26ml of Honey

2gm of Hydnora Africana fruit extract

0.75ml of sweet almond oil

4drops of rose oil(essential oil) but it is optional

### **PROCEDURE-**

-Pour some liquid of liquid Castile soap into clean container. First we need a 61.495ml of liquid Castile soap. But we must make sure that is unscented and uncoloured because our skin will be irritate by scents.

-After for the face wash preparation chamomile tea also added. Actually according my knowledge I know that chamomile tea has anti-inflammatory properties and can help to reduce the redness of skin. So, I took 61.495ml but before added it to the container let the tea cool.

-After I considered for adding some honey in my face wash preparation. For this time I want to be more moisturizing cleanser so, I use 42.26ml of Honey. But this time I make sure that it is must translucent sort and runny.

-After this time i mixed with 2gm hydнора africana fruit extract with I must needed 0.75ml of sweet almond oil but this time I collected it very hardly after i mixed it.

-This time I considered for adding essential oil as example of rose oil of 4drops because it but it is optional

-After I closed the container tightly and shake it for few minutes when everything is combined.

-After the face wash will be prepared.

-But I prepared it 2times 1<sup>st</sup> all ingredients with rose oil and without rose oil for the testing of the herbal based face wash.

As for identify I gave name to the formulations

1<sup>st</sup> formulation name- Laxtanukanhai(with rose oil)

2<sup>nd</sup> formulation name-Rajkissurjchandbika(without rose oil)

**Solubility Test-** as adding solute for solubility analysis in small incremental amount to fixed the volume of solvents such as ethanol, acetone and chloroform. After undissolved particles will be examined.

**PH Value-** As the rules PH value should between 5-6.9. In this invention I took 1gm of this facewashafter with distilled water 100ml this 1gm will be dissolved properly after placed for 2hour. After then dip the glass electrode into an herbal facewash. The PH value without rose oil showed 6.3 and with rose oil showed 6.5

**Invitro Release-**The herbal formulation Rajkissurjchandbika is released for 19days when it will be analyzed and other Laxtanukanhai is released for 18days when it will be analyzed.

**ADR-** This formulations when applied on the street dogs for many days, we founded it showed no skin irritation and founds to be effective.

## Result and Discussion-

Actually in this research I used chamomile tea which is used for the treatment of redness in skin after I used honey which also moisturizing our skin. Then about *Hydnora Africana* that we know about this plant this is very effective and it is used for the treatment of acne. It is antimicrobial, antifungal and anti-diarrhoeal. The main point is that it is non-toxic and harmless. So, in future I think many Pharmaceutical company research about *Hydnora Africana*. As for identify I gave name to the formulations

1<sup>st</sup> formulation name- Rajkissurjchandbika (with rose oil)

2<sup>nd</sup> formulation name- Laxtanukanhai (without rose oil)

This process made me very easy for this research.

## References-

1. Role of *Hydnora africana* (Sub. Family-Hydnoraceae) root extract for antidiarrhoeal activity

<https://www.thepharmajournal.com/archives/?year=2023&vol=12&issue=1&ArticleId=18038>

2. Relative antimicrobial activities of ethanolic extracts of roots of *Hydnora africana* (Sub. Family-Hydnoraceae)

<https://www.thepharmajournal.com/archives/?year=2023&vol=12&issue=2&ArticleId=18678>

3. TWENTY EIGHT DAYS ORAL ADMINISTRATION ASSESSMENT OF *HYDNORA AFRICANA* THUNB. AQUEOUS ROOT EXTRACT ON KEY METABOLIC MARKERS OF WISTAR RATS

<https://ijpsr.com/bft-article/twenty-eight-days-oral-administration-assessment-of-hydnora-africana-thunb-aqueous-root-extract-on-key-metabolic-markers-of-wistar-rats/#:~:text=africana%20is%20non%2Dtoxic%20at,within%20the%20period%20of%20exposure.>

4. FORMULATION AND EVALUATION OF MULTI HERBAL FACE WASH GEL

International Journal of Biology, Pharmacy and Allied Sciences - 2020

5. On the Female Flower and Fruit of *Rafflesia Arnoldi* and on *Hydnora Africana*

The Miscellaneous Botanical Works of Robert Brown - 2015

6. Review on Nano based herbal face wash powder

International Journal of Green and Herbal Chemistry - 2020

7. Pollination Biology of *Hydnora africana* Thunb. (Hydnoraceae) in Namibia: Brood-Site Mimicry with Insect Imprisonment, Bolin et al. - International Journal of Plant Sciences – 2009.

8. Taxonomy and Natural History of *Hydnora* (Hydnoraceae) Musselman & Visser - Aliso – 1989.

9. Formulation and comparative evaluation of poly herbal anti-acne face wash gels Rasheed et al. - Pharmaceutical Biology - 2011

10. Preparation a Novel Poly Herbal Antibacterial Formulation, Characterization and Evaluation of Mouth Wash Protecting and Tackling Oral Cavity against Oral Pathogens - & - International Journal For Multidisciplinary Research - 2022

11. Parasitic plants pummel pavement—*Hydnora abyssinica* (Hydnoraceae) Maass & Musselman - Economic Botany - 2001

12. A Research Article on Formulation and Evaluation of Antiacne Herbal Face Wash

Rutuja V. Dalavi et al. - International Journal of Advanced Research in Science, Communication and Technology - 2022

13. FORMULATION FACE WASH AGENT USING Aloe vera GEL AS NATURAL SURFACTANT Mughni - 2019

14. Formulation and Analysis of Herbal Face Wash Using *Luffa Cylindrica* Seeds Oil Extract As A Soap Base Vandkar et al. - American Journal of PharmTech Research - 2018

15. Formulation and Standardization of Anti-acne Herbal Foaming Face Wash using Curcuma longa along with Aloe vera, Rosa centifolia, and Citrus sinensis Lal et al. - Drug Delivery Letters - 2021
16. Formulation and Evaluation of Gel Based Herbal Hand Wash Using Extracts of Argemone Mexicana Bagade et al. - International Journal of Pharmaceutical Sciences and Medicine - 2021
17. A taxonomic revision of the genus *Hydnora* (Hydnoraceae) Hatt et al. - 2022
18. A New Species of *Hydnora* (Hydnoraceae) from Southern Africa Bolin et al. - Systematic Botany - 2011
19. Formulation and Evaluation of Herbal Hand wash Gel from Hyptissuaveolens Flowering-tops Chindarkar - American Journal of PharmTech Research - 2020
20. FORMULATION AND EVALUATION OF ANTI-ACNE FACE WASH GEL, Jadhav - World Journal of Pharmacy and Pharmaceutical Sciences - 2017
21. FORMULATION AND EVALUATION OF NATURAL HERBAL FACE PACK, S.K. - World Journal of Pharmaceutical Research - 2017
22. Host-specific germination of the root holoparasite *Hydnora triceps* (Hydnoraceae), Bolin et al. - Botany - 2009
23. Formulation and Evaluation of Herbal Face Pack, - & - - International Journal For Multidisciplinary Research - 2022
24. Formulation & Evaluation of Curcuminoid Based Herbal Face Cream Alakh N et al. - Indo Global Journal of Pharmaceutical Sciences - 2011
25. Formulation and Evaluation of Anti-microbial Herbal Hand Wash Gel Containing Aqueous Extract of Sapindus mukorossi, Singh et al. - 2022
26. Floral thermogenesis of three species of *Hydnora* (Hydnoraceae) in Africa, Seymour et al. - Annals of Botany - 2009

27. Formulation and evaluation of herbal face pack, Kumar & Komal - Asian Journal of Pharmaceutical Research - 2021
28. Novel Formulation and Evaluation of Poly Herbal Mosquito Repellent, Gupta et al. - 2022
29. Decreasing Severity of Acne Vulgaris After the Use of a Combination of Anti-Acne Cream Case Medical Research - 2019
30. PREPARATION AND EVALUATION OF HERBAL ANTI -ACNE FACE PACK, Priya - World Journal of Pharmaceutical Research - 2017
31. Derm Research Unsettles Ped's Treatment of Acne, WACHTER - Skin & Allergy News - 2012
32. Characterization of a new acne vulgaris treatment device combining light and thermal treatment methods, Joo et al. - Skin Research and Technology - 2011
33. Skin Acceptance and Efficacy Assessment of a Topical Product in Acne Treatment When Compared to a Placebo. Case Medical Research - 2020
34. Herbal Formulation for the Treatment of Acne Vulgaris, Advances in Bioengineering and Biomedical Science Research - 2019
35. Formulation and Standardization of Polyherbal Face Wash Gel for Acne Management Gautam & Upadhyay - Research Journal of Pharmacy and Technology - 2022
36. Respective Treatment Modalities with the Use of Combined Ingredients to Address Acne Prone Skin, Judey - Journal of Dermatology Research and Therapy - 2021
37. Dermaroller: simple and effective acne scar treatment, Patil & Patil - International Journal of Research in Dermatology - 2016
38. FORMULATION AND EVALUATION OF TOPICAL HERBAL GEL FOR TREATMENT OF ACNE, K R, et al. - Journal of Biomedical and Pharmaceutical Research - 2019

### 39.FORMULATION AND EVALUATION OF NANO PARTICULATE DRUG DELIVERY SYSTEM FOR AN EFFECTIVE TREATMENT OF ACNE

International Journal of Pharmacy Research & Technology - 2019

### 40.Investigation of genotoxicity caused by oral isotretinoin use in acne treatment

Eker et al. - Annals of Medical Research - 2019

### 41,Novel Drug Delivery Systems of Herbal Constituents Used in Acne

Baghel et al. - Asian Journal of Research in Pharmaceutical Science - 2017

### 42.Value of high-frequency ultrasound in the treatment of moderate and severe acne vulgaris

Luo et al. - Skin Research and Technology - 2022

### 43.Subject Reported Outcomes With Use of Trifarotene 50 µg/g Cream in the Treatment of Moderate Facial and Truncal Acne Vulgaris

Case Medical Research - 2019

### 44.Formulation and Antimicrobial Evaluation of A Novel Anti-Acne Herbal Hydrogel

Lekshmy M et al. - International Journal of Ayurveda and Pharma Research - 2022

### 45.Coping with mild inflammatory catamenial acne. A clinical and bioinstrumental split-face assessment

Petit et al. - Skin Research and Technology - 2004

### 46.Quality of life of adolescents with facial acne vulgaris before and after treatment in Ibadan, Nigeria

Anaba&Adebola - International Journal of Research in Dermatology - 2019

### 47.Formulation of Herbal Gel of Antirrhinum majus Extract and Evaluation of its Anti-Propionibacterium acne Effects

Jahanian-Najafabadi et al. - Advanced Biomedical Research - 2018



48.Reduction of bacterial skin flora during oral treatment of severe acne with 13-Cis retinoic acid

Weissmann et al. - Archives of Dermatological Research - 1981

49.Combination Treatment of Skin Needling, Platelet-Rich Plasma and Glycolic Acid 70% Chemical Peeling for Atrophic Acne Scars in Fitzpatrick's Skin Type IVVI

SHW & Murlistyarini - Journal of Clinical & Experimental Dermatology Research - 2016

50.Trends and Opinion of Isotretinoin Use for Acne Treatment by Dermatologists in Western Area of Saudi Arabia: A Cross- Sectional Survey

Kokandi & - International Archives of BioMedical and Clinical Research - 2017

51.Microneedling combined with botulinum toxin-A versus microneedling combined with platelet-rich plasma in treatment of atrophic acne scars: a comparative split face study

Albalat et al. - Archives of Dermatological Research - 2022

52.Colloidal carriers of isotretinoin for topical acne treatment: skin uptake, ATR-FTIR and in vitro cytotoxicity studies

Gürbüz et al. - Archives of Dermatological Research - 2015

53.Confocal Microscopy Images to Monitor Skin Needling in the Treatment of Acne Scars

Fabbrocini et al. - Journal of Clinical & Experimental Dermatology Research - 2015

54.Methylferulate from methanol extract of Indonesian sausage fruit (*Kigelia africana*)

Ilmiawati et al. - THE 8TH INTERNATIONAL CONFERENCE OF THE INDONESIAN CHEMICAL SOCIETY (ICICS) 2019 - 2020

55.Transparent Soap from Virgin Coconut Oil with Addition of Papaya Fruit Flesh Extract

Marpaung et al. - JURNAL AGROINDUSTRI HALAL - 2019

56.STUDY OF THE POSSIBILITY OF USING FERN EXTRACT AS A PRESERVATIVE OF APPLE JUICE

Nasarova et al. - Fruit growing and viticulture of South Russia - 2022

57. Chemical composition, antioxidant and antibacterial activities of essential oil and methanol extract of *Artemisia vulgaris* and *Gaultheria fragrantissima* collected from Nepal

Pandey et al. - Asian Pacific Journal of Tropical Medicine - 2017

58. Antioxidant activity and total phenolic and flavonoid content of the extract and chemical composition of the essential oil of *Eremostachys laciniata* collected from Zagros

Bajalan et al. - Asian Pacific Journal of Tropical Biomedicine - 2017

59. Effects of dietary levels of essential oil ( *EO* ) extract from bitter lemon ( *Citrus limon* ) fruit peels on growth, biochemical, haemato-immunological parameters and disease resistance in Juvenile *Labeo rohita* fingerlings challenged with *Aeromonas hydrophila*

Ngugi et al. - Aquaculture Research - 2016

60. FORMULASI DAN EVALUASI STABILITAS SEDIAAN LIP BALM EKSTRAK KULIT BUAH NAGA MERAH (*Hylocereus polyrhizus*) DENGAN PENAMBAHAN MINYAK ZAITUN SEBAGAI EMOLIEN SERTA PENENTUAN NILAI SPF (Sun Protection Factor)

Abdul Wahid Suleman et al. - Medical Sains :Jurnal Ilmiah Kefarmasian – 2022.

61. *Hydnora africana* Thunb

<https://pza.sanbi.org/hydnora-africana#:~:text=The%20fruit%20is%20extremely%20astringent,face%20wash%20also%20treat%20acne.>