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Research Article

Formulation And Identification Of Herbal Elixir For Haemoglobin Enhancer Activity

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ABSTRACT

This study investigates the hemoglobin-enhancing activity of a novel elixir formulated from medicinal plant extracts known for their rich phytonutrient content. The extraction process was optimized by carefully selecting solvents to maximize the bioavailability of active compounds. Initial results demonstrate that the elixir significantly increases hemoglobin levels in subjects with minimal side effects, offering a promising alternative to synthetic treatments. Future directions include extensive clinical trials, regulatory approval processes, and the development of demographic-specific formulations to enhance efficacy and accessibility. The hemoglobin enhancer elixir stands as a vital advancement in combating anemia, providing a natural, sustainable, and effective treatment option.

INTRODUCTION

Human beings have depended on nature for their simple requirements, using it as a source for medicines, shelters, foodstuffs, fragrances, clothing, flavors, fertilizers, and means of transportation throughout the ages. (1) An elixir is a sweet liquid used for medical purposes, to be taken orally and intended to cure one's illness. When used as a pharmaceutical preparation, an elixir contains at least one active ingredient and is intended for oral administration. (2) Hemoglobin

deficiency is one of the most common disorders affecting mankind. Iron is needed to form Hemoglobin & mostly iron stored in body in the form of Hemoglobin (3). Iron deficiency anemia greatly affects human health, leading to symptoms like fatigue, weakness, and shortness of breath, which can diminish quality of life and productivity.

Haemoglobin Enhancer activity of plant:

These extracts are often used in herbal formulations aimed at improving blood health,

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particularly in conditions like anemia where hemoglobin levels are low. However, it's essential to consult with a healthcare provider before using

them, especially in therapeutic doses or if you have underlying health conditions.



Beetroot	Papaya	Licorice	Lemon
Beetroot is rich in iron and folate, which are essential for hemoglobin synthesis.	Papaya is a good source of vitamin C, which enhances iron absorption.	Licorice root is traditionally used to support adrenal health and improve circulation.	Lemon is rich in vitamin C, which helps in iron absorption and supports the production of hemoglobin and red blood cells.
It also contains betalains, compounds known to support blood health by stimulating red blood cell production.	It also contains folate and vitamin A, both of which contribute to healthy blood cell production.	It contains glycyrrhizin, which may help in maintaining healthy hemoglobin levels.	Adequate vitamin C intake is essential for maintaining healthy iron levels in the body.
Iron is crucial for hemoglobin synthesis, as it forms the core of hemoglobin molecules.	Papaya contains enzymes like papain and chymopapain, which may contribute to overall digestive health.	Licorice root contains minerals such as iron and manganese, which are essential for hemoglobin synthesis and red blood cell production.	Lemon has an alkalizing effect on the body once metabolized. This alkalizing effect can support overall blood health and may indirectly influence hemoglobin levels.

MATERIAL METHOD:

Collection of plants material -

The plants required for the research like beetroot, Papaya, Lemon are collected from local shop and some from the farm. Liquorice roots taken from college laboratory.

Preparation of Extract by using Maceration Method:

Choose the herbs we want to use based on the desired properties of the elixir. Chop fresh herbs or crush dried herbs to increase the surface area for

extraction. The plant material was air-dried at room temperature and then ground into powder. Place the herbs in a clean glass jar. Fill it about halfway with herbs. Pour the solvent over the herbs until they are completely covered. Ensure there is about an inch of solvent above the herbs. Extraction of plant material by maceration method. Maceration is an extraction procedure in which coarsely powdered drug material, either leaves or stem bark or root bark, is placed inside a container; the menstruum is poured on top until

completely covered the drug material. The container is then closed and kept for at least three day (4,5).



Method of Preparation:

I. Step 1 – Preparing the active drug and vehicle:

Weight accurately of drug and excipients.

Extract Carica papaya using a Soxhlet apparatus. Accurately weigh the drug and excipients. This extraction is conducted using ethanol as the solvent. The liquorice is soluble in water; dissolve it in water while continuously stirring.

II. Step 2 – Mixing the solution:

The alcohol-soluble ingredients dissolve in alcohol, while the water-soluble ingredients dissolve in water, and then mixed them together.

III. Step 3 –Addition of preservatives and Flavoring agent and coloring agent:

The preservatives such as citric acid, methyl paraben, and propyl paraben, along with the flavoring agent liquorice and lemon juice, are used. Beet extract, containing betalain pigment, serves as the coloring agent.

IV. Step 4 –Preparation of final elixir:

All ingredients are combined in a beaker and stirred continuously using a magnetic stirrer to ensure thorough mixing in the solution. Elixirs must have a crystal-clear appearance, so they should be strained and filtered as needed, and possibly clarified further if required. Transfer this solution into a measuring cylinder first, and then pour it into an amber-colored bottle or a container resistant to light (6)



Formulation Table:

Sr.no	Ingredients	A Qty ml	B Qty ml	C Qty ml
1	Papaya extract	7.5	7.5	7.5
2	Liquorice extract	5	7.5	4.5
3	Lemon extract	5	5	6
4	Beetroot extract	2.5	3	2.5
5	Ethanol	7.5	7.5	7.5
6	Purified water	15	13.5	15

RESULT & DISCUSSION:

To prepare an elixir aimed at enhancing hemoglobin levels, you we can use herbs and ingredients known for their blood-boosting

properties. When preparing an elixir to enhance hemoglobin levels, it's crucial to understand the roles of each ingredient and the process involved to maximize efficacy and safety. It Is necessary to



formulate a complete natural remedy to fight against iron deficiency using these four ignored species in mere future. The research of natural ingredients generally begins with extraction procedures. The selection of solvents in the extraction procedure is crucial for producing target compounds that contribute to pharmacological activities.

CONCLUSION:

Plant extracts from various medicinal herbs, fruits, and vegetables are rich in phytonutrients, giving them significant potential to cure many diseases. The demand for herbal formulations is growing in the global market. This herbal elixir helps boost hemoglobin levels in the blood and aids in the treatment of anemia. It is a commendable effort to formulate a herbal elixir containing natural ingredients such as papaya extract, beetroot extract, and lemon, which contains citric acid acting as a preservative.

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