

## Formulation and Evaluation of Polyherbal Energy Drink

Ms. Chetana D. Patil<sup>1</sup>, Ms. Mayuri B. Bhandare<sup>2</sup>, Ms. Smita P. Bedis<sup>3</sup>

<sup>1</sup>Principal, Jaywant Institute of Pharmacy Wathar, Karad, Maharashtra, India

<sup>2</sup>Department of Chemistry GIPER, Limb, Satara, Maharashtra, India

<sup>3</sup>Assistant Professor, Department of Pharmaceutical Chemistry Dnyanvilas  
College of Pharmacy, Dudulgaon, PCMC, Pune, Maharashtra, India

### ABSTRACT

Ayurvedic formulations are mainly administered by oral route, and most of the orally administered. Ayurvedic formulations belong to liquid form of drug. Polyherbal energy drink was prepared by using some traditional herbs having proved nutritional potential. The ingredients were selected as Amla, Liquorice, Ashwagandha, Tulsi, and Mentha. The prepared polyherbal energy drink was evaluated immediately after preparation. The analysis of prepared drink found to contain optimum level of pH. The developed herbal energy drink provides good taste combined with potential health benefits. The prepared drink is potentially capable to replace the synthetic drinks available in the market.

**KEYWORDS:** Polyherbal Energy Drink, Evaluation

**How to cite this paper:** Ms. Chetana D. Patil | Ms. Mayuri B. Bhandare | Ms. Smita P. Bedis "Formulation and Evaluation of Polyherbal Energy Drink" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-4, June 2022, pp.719-722,  
www.ijtsrd.com/papers/ijtsrd50085.pdf



URL:

Copyright © 2022 by author(s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



### INTRODUCTION

India has used the herbal drugs long safe and continuous uses in alternative .Medicines well as over the counter self-medications by Ayurveda doctors. Its definition was “any substance that may be considered food or part of food and provides medical or health benefits, including the prevention and treatment of disease. The consumption of energy drinks has increased vigorously among the youth generation, even after knowing the fact that the energy drinks have adverse effects. The energy drinks available in the market contains varying amount of caffeine but it has its own side effects. The preparation contains poly herbs such as Amla, Liquorice, Ashwagandha, Tulsi, and Mentha leaves have proved pharmacological activity with no side effects. Mentha belongs to the herb of the family Labiateae family. The beneficial effects of Mentha in treatment of many gastro-intestinal disorders. Moreover, the antimicrobial, anti-inflammatory and anti-tumor properties of Mentha. Tulsi the “queen of herbs” has been renowned for its therapeutic potentials for anti-

asthmatic drugs. It has also been relieved to retain good anti-stressed and analgesics activity. Liquorice also known as sweet wood, the dried rhizomes and roots of the plant used as carminative expectorant and cough Remedies. Liquorice supplements can give the adrenal gland relief. Liquorice is recommended to treat respiratory problems. Amla is undoubtedly a powerhouse of nutrients. The essential minerals and Vitamins that it contains are essential not only for our body’s health, but also for preventing some of the common diseases. Amla is an excellent source of vitamin C; hence it helps boost your immunity, metabolism and prevents viral and bacterial infections, including cold and cough. According to Ayurveda, Amla balances all the processes in the body and brings equilibrium all three doshas- vata, kapha, and pitta. Ashwagandha strengthens the immune system. It also possess anti-oxidant property. It helps to treat terminal illnesses like cancer, Alzheimer’s and Parkinson’s disease. It also helps to maintain cholesterol levels and remedy for chest

pains. This herbal formulation was prepared by using different herbs which has shown pharmacological activity with no side effects. A mixture of herbal drugs has been used in the current research for the development of potent energy drink. The polyherbal energy drink is the best choice for the replacement of soft energy drinks usage and tackles the adverse effects.



Figure No: - 3 -Ashwagandha



Figure No:-1- Liquorice Figure No:-2- Amla



Figure No:- 4-Tulsi Figure No:-5 -Mentha

## MATERIALS AND METHODS

Amla, Liquorice, Ashwagandha, Tulsi, Mentha, Honey were purchased from local market.

### Method of preparation of energy drink

#### Formula:

Sr. no	Ingredients	Qty. given	Qty. taken	Uses
1	Amla	27.8 gm	13.9 gm	Immunity booster
2	Liquorice	27.8 gm	13.9 gm	Carminative expectorant
3	Ashwagandha	27.8 gm	13.9 gm	Anti-oxidant
4	Tulsi	9.6 gm	4.8 gm	Antibacterial, stomachic
5	Mentha	7 gm	3.5 gm	Flavoring agent
6	Honey	Quantity sufficient	Quantity sufficient	Sweetening agent
7	Methyl paraben	0.8 gm	0.4gm	Preservative
8	Distilled water	800 ml	400 ml	Vehicle

Table no.1:-Ingredients with their prescribed quantity in the formulation of Energy Drink.

### PROCEDURE: -

All the ingredients were weighed accurately and then mixed with 400ml of water, the mixture was boiled until total volume becomes one fourth of initial volume. Then the decoction was cooled and filtered. After cooling addition of sufficient amount of honey is mixed with drink and then required quantity of methyl paraben was added as preservative to the mixture. Prepared drink was filled into tight container. The final herbal drink was then subjected for evaluation.

### Evaluation of Polyherbal Energy Drink:

#### ➤ Physical appearance

The polyherbal energy drink was examined for physical appearance in terms of colour, Odour.

#### ➤ Test for carbohydrates

1-2 drops of dilute iodine + 1-2 ml of sample which shows red or brown colour.

➤ **Test for alkaloids**

Dragondroff’s test : 2-3 ml sample +few drops of Dragondroff’s reagent solution turns into orange brown ppt.

➤ **Test for flavonoides**

Small amount of sample mixed with lead acetate solution which shows yellow ppt.

➤ **Test for tannins and phenolic compounds**

Small amount of sample + acetic acid which gives red colour.

➤ **Test for proteins**

2-3 ml of sample + 2 ml of biuret reagent then mix vigorously solution shows purple colour.

➤ **Test for fats :**

Take small amount of sample on piece of filter paper, dry the paper in sunlight, observe the paper, oily patch on the paper indicates that presence of fat.

➤ **Determination of pH**

The pH of energy drink was checked by using a calibrated digital pH meter at constant temperature and the pH was noted.

**RESULT AND DISCUSSION:**



**Figure No: - 6-Polyherbal Energy Drink**

Sr. no	Parameter	Observation
1	Colour	Reddish brown
2	Odour	Pleasant
3	Taste	Sweet
4	pH	4.35

**Table no.2: -Evaluation Table of Polyherbal Energy Drink**



**Figure No: - 6- Phytochemical parameter**

Sr. no	Phytochemicals	Observations
1	Carbohydrates	Present
2	Alkaloids	Present
3	Flavonoids	Present
4	Proteins	Absent
5	Tannins and phenolic compounds	Present
6	Fats	Absent

**Table no.3: -- Phytochemical parameter of Polyherbal Energy Drink**

**DISCUSSION:**

The prepared polyherbal energy drink was evaluated immediately after preparation and all the parameters are tested. The final polyherbal energy drink found to have a pH 4.35. The observed parameters like color, odour, and taste have been tested. In order to evaluate the suitability of the formulation for nutritional purpose physicochemical and phytochemical parameters were carried out. Preliminary phytochemical analysis of polyherbal energy drink showed the presence of alkaloids, carbohydrates, tannins, flavonoids, and phenolics. Phenolics and flavonoids are wide class of chemical compounds found in plants. They report quality and nutritional value and plays a vital role in human fitness. Crude tannin is the compounds present in the plants. Tannins are the polyphenols that are responsible for the astringent flavor of food and shows anti-carcinogenic.

**CONCLUSION:**

The prepared formulation beneficial for the all the persons. The formulation is prepared from the natural herbs so the chances of side effects are lower than the soft drinks. This herbal energy drink is natural option to the synthetic drinks along with the several health benefits. This is good supplement for freshly recover from the illness and gives the freshness to the person. All the herbs used in this preparation are easily available during any season and are not costly thus the product is economically feasible.

**REFERENCES:**

[1] GavaliVikas B, Bhalsing Mahesh, DalviNilam B, TarkasbandYogita S. Development and evaluation of polyherbalpowder formulation as energy booster; journal of pharmacognosyandphytochemistry 2018.

[2] MunishGarg, Vinni Ahuja, Development and evaluation of a Nutraceutical herbal summer drink; international journal of pharmacological and pharmaceutical sciences vol 9, no 7 2015.

[3] Swain Pramod Kumar, NayakDurgaPrasan, Design, Development and evaluation of a

- Polyherbalsyrup from the some herbs used as energy booster; International journal of Ayurvedic medicine, 2013, 4(4) 374-378.
- [4] Abhinav Pandey, Rishabh Dixit, Alok Prakash and V. Devi Rajeshwari, school of bioscience and Technology , VIT university, vellore, Tamil Nadu, India, Development of an herbal energy drink using medicinal plant extracts and further statistically analyzing the sensory properties by analyzing of variance.(ANOVA). IJPSR(2014), vol 5 Issue 2.
- [5] Yunusa, I. and Ahmad I. M. energy drinks : consumption and health benefits. Bayero journal of pure and applied sciences,4(2):186-191.
- [6] Michal J. Gonzalez, Jorge R. Miranda-Massari, Jose Rodriguez Gomez, Carlos M. Ricart, Dharma Rodriguez-Pagan. Energy drinks and health: A brief review of their effects and Consequences.
- [7] Natalie Ohanessian , developing a green tea based natural energy drink. 2011.
- [8] N. Dev, A. K. Das , M. A. Hossain, and S. M. M. Rahman, Chemical composition of different
- [9] Extracts of Ocimumbasilium leaves, journal of scientific research 3(1), 197-206, 2011. RaneRajshree, GangolliDivya, PatilSushma, and IngavaleKanchan, Amla, Ashwagandha and Shatavari formulations as herbal medicines and nutraceuticals. research journal of pharmaceutical sciences vol. 1(3), 10-15. November 2012.
- [10] Poonam Mishra and CharuLataMahanta, Extraction, identification and anti-oxidant properties of bioactive component of amlapomace powder. international journal of food and nutritional science vol.5, no.3, july 2016.
- [11] M. A. Heckman, K. Sherry, And E. Gonzalez de Mejja. Energy drinks: An assessment of their market size, consumer demographics, ingredient profile, functionality and regulations in the united states.
- [12] Nauman Aziz, Malik Hassan Mehmood and Anwarul Hassan Gilani, Studies on two polyherbval formulations for comparison of their anti-dyslipidemic, anti-hypertensive and endothelial modulating activities. Complementary and alternative medicines 2013.
- [13] Khatwani P. K. ,Gurale V.V, Kulkarni S. R. Evaluation of polyherbaloral formulation for anti-diabetic activity. International journal of pharmacology.6(4),2015. 184-190.
- [14] LCDR Lucas A. Johnson, MC USN; LCDR David Foster, MC USN; LCDR Jackie C. McDowell, MC USN, Energy drinks: review of performance benefits, health concerns and use by military personnel.
- [15] NameerNassirFaris, Energy drinks: Factors that influence college students consumption 2014.