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# The Immunity Booster Powder (Ayvurvedic)

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Date of Submission: 20-05-2025

Date of Acceptance: 01-06-2025

\_\_\_\_\_ Abstract:- The creation of poly herbal formulations aimed at immune improvement is a result of the growing interest worldwide in natural products for improving immunity. Our goal in this study was to create and assess a poly herbal drink that would increase immunity by using extracts from specific medicinal herbs that have been shown to have immune-modulating qualities. The selection of herbs, extraction of bioactive components using appropriate solvents, drink formulation, and standardization to guarantee a consistent amount of bioactive compounds were all steps in the formulation process. The poly herbal drink underwent a thorough analysis to determine its safety profile, immune modulatory properties, and potential for increasing immunity.

## I. Introduction:-

In general, immunity refers to the body's capacity to fend against illness or infection. The immune system, an intricate network of cells,

\_\_\_\_\_ tissues, and organs, is a part of this defence mechanism. Its job is to identify and get rid of pathogens, which include bacteria, viruses, and other dangerous things. Herbal components are beneficial to health and greatly influence the flavour of energy drinks. Plant extracts are used to make a variety of well-known beverages. People from many cultures, for instance, appreciate herbal teas because they taste good, smell good, and may be used to stave off ailments. Herbal drinks have been consumed by humans since prehistoric times. These beverages contain a blend of fruits, spices, and herbs that are thought to be healthful. However, it's vital to exercise caution because certain herbal drinks could contain dangerous plant elements. Making a poly herbal energy drink is the primary goal of this study. Amla powder, curcumin powder, piper longum powder, cinnamon powder, and lemon powder are among the poly herbs included in the mixture that have demonstrated pharmacological efficacy without causing any negative effects.

Sr. no	herbs	Botanical classification	Chemical constituents	Properties	Part s of use	uses
1	Amla	Kingdom:- PlantaeDivision:Angiosper mae Class:Dicotyledon ae Order: GeranialesFamily: Euphorbiaceae Genus: EmblicaSpecies:- officinalis Geartn.	quercetin, phyllaemblic compounds, gallic acid, tannins, flavonoids, pectin, and vitamin C and also contains various polyphenolic compounds.	high vitamin C content and potent antioxidant activity.	Fruit	1. RichinVitamin C 2.AntioxidantPr operties3. BoostsWhite Blood Cell 4.AntiInflammat ry Effects 5.SupportsRespi ratory Health
2	Ashwaga ndha	Kingdom:- plante Clade:- Tracheophytes Clade:- Angiosperms	withanolides (a class of steroidal lactones), alkaloids, and saponins.	adaptogenic, antioxidant, and immunomod	Root	boost immunity by enhancing the activity of natural killer cells and other

Drug profile



		Clade:-Eudicots Clade:-Asterids Order:-Solanales Family:- Solanaceae Genus:- WithaniaSpecies:-W. somniferaBinomial name:Withania somnifera(L.)		ulatory effects.		immune cells, such as lymphocytes and macrophages, which help fight infections.
3	Turmeric	Kingdom:-Plantae Clade:- Tracheophytes Clade:- Angiosperms Clade:-Monocots Clade:- Commelinids Order:- Zingiberales Family:Zingiberaceae Genus:-Curcuma Species:-C. longa Binomial name:- Curcuma longa	curcuminoids, including curcumin, demethoxycurcu min, and bisdemethoxycu rcumin.	potent antioxidant and antiinflammatory compounds, particularly curcumin.	root	used to support immunity due to its potent antioxidant and antiinflammatory properties.
4	Tulsi	Kingdom:-Plantae Clade:- Tracheophytes Clade:- Angiosperms Clade:-Eudicots Clade:-Asterids Order:-Lamiales Family:-Lamiaceae Genus:- OcimumSpecies:-O. tenuiflorumBinomial name:Ocimum tenuiflorum	volatile oils, flavonoids, and phenolic compounds	potent antimicrobial and antioxidant capabilities, as well as its ability to enhance immune cell activity.	Leav es	immuneboosting properties due to its high concentration of antioxidants and antimicrobial compounds.



5	Guduch	ni	Kingdom:-Plantae Clade:- Tracheophytes Clade:- Angiosperms Clade:-Eudicots Order:Ranunculales	alkalo diterp lactor glyco steroi comp	oids, ienoid nes, sides, ds, and other ounds.	acti pov ada enh boc def	ing as a verful ptogen that ances the ly's natural enses.	Ste m.	a in b c. re th o rl p a a	nmune system oosting herb that an potently educe he symptoms f allergic hinitis. It is a romising nticancer herb nd
6	Shatayar	Fa: Me Tin con nan	mily:- enispermaceaeGenus:- nosporaSpecies:-T. rdifoliaBinomial me:Tinospora cordifolia		steroidal		antioxidant a	nd	Roo	may provide benefits for people with diabetes. Guduchi is most often used for Immunity & Infectious Disease.
	i	Cla Tra Cla An Cla Or Fa Su -A rac na	ade:- acheophytes ade:- ngiosperms ade:-Monocots der:Asparagales mily:- paragaceae bfamily:AsparagoideaeC sparagusSpecies:-A. cemosusBinomial me:Asparagus racemosus	Genus: s	saponins (lik Shatavarin I- IV), isoflavones, flavonoids, alkaloids, polysacchari , mucilage, a various vitamins and minerals.	te - ides and 1	antiinflamma y properties.	tor	t	immune system in numerous ways. It stimulates your body's immune cells to increase immunity in inhibited conditions.
7	Ginger	Kii Cla Tra Cla Arr Cla Cla Cla Cla Cla Cla Cla Cla Cla Cla	ngdom:-Plantae ade:- acheophytes ade:- ngiosperms ade:-Monocots ade:- ommelinids der:- ngiberales mily:ZingiberaceaeGenu ngiberSpecies:-Z. officin nomial name:Zi ïcinale	is:- ale ngiber	volatile and non-volatile components.		fight infections, reduce inflammation , and act as an antioxidant.	n	root	individuals who are pregnant, breastfeeding, or allergic to it. It's also advisable for those with hormonesensitiv e conditions, who are taking blood sugar- lowering medications, or who have kidney or heart disease to consult with a healthcare provider before taking Shatavari.
8	Black	Ki	ngdom:-Plantae		piperine (5-		potent			boost the



	pepper	Clade:- Tracheophytes	9%), volatile oils (12.5%), and	antioxidant and antiinflammator y		immune system due to its antibacterial
		Clade:- Angiosperms Clade:-Magnoliids Order:-Piperales Family:Piperaceae Genus:-Piper Species:-P. nigrum Binomial name:- Piper nigrum	various other compounds.	properties, along with its antibacterial effects.		and antioxidant properties.
9	Safed mulsi	Kingdom:-Plantae Clade:- Tracheophytes Clade:- Angiosperms Clade:-Monocots Order:Asparagales Family:- Asparagaceae Subfamily:Agavoideae Genus:ChlorophytumSpecies:- C. borivilianumBinomial name:Chlorophytumbori vilianum	carbohydrates, proteins, fibers, and saponins.	carbohydrate s (41%), protein (89%), saponins (2- 17%) and root fibres (4%).	Fruit	athletic performance, obesity, erectile dysfunction (ED), and other conditions.
10	Vidari	Kingdom:-Plantae Clade:- Tracheophytes Clade:- Angiosperms Clade:-Eudicots Clade:-Rosids Order:-Fabales Family:-Fabaceae Subfamily:Faboideae Genus:-PuerariaSpecies:-P. tuberosaBinomial name:Pueraria tuberosa	isoflavones like puerarin and daidzein, as well as pterocarpanoids, coumestan, and phytosterols.	aphrodisiac, diuretic, galactagogue (Kirtikar and Basu, 1935), energizing (Maji et al., 2014), and spermatogeni c (Chauhan et al., 2013) properties.	Root	
11	Kavach beej	Kingdom:-Plantae Clade:- Tracheophytes Clade:- Angiosperms Clade:-Eudicots	L-dopa, a precursor to dopamine, a neurotransmitte r that regulates mood, and	increases sexual desire as well as the quality and quantity of sperm due to		help regulate hormones, manage prolactin levels, reduce stress and anxiety, and
		Clade:-Rosids Order:-Fabales Family:-Fabaceae Subfamily:Faboideae Genus:-PuerariaSpecies:-P. tuberosaBinomial	pleasure. It also includes other compounds such as alkaloids, flavonoids, and tannins.	its aphrodisiac property.		potentially boost libido.



		name:Pueraria tuberosa		
Meth	nodology	· · · · · · · · · · · · · · · · · · ·		
	Sr.no	Herbs	F1	F2
	1	Amla	20g	10g
	2	Ashwagandha	15g	8g
	3	Turmeric	10g	8g
	4	Tulsi	10g	5g
	5	Guduchi	10g	5g
	6	Shatavari	10g	5g
	7	Ginger	5g	3g
	8	Black pepper	5g	3g
	9	Safed mulsi	5g	3g
	10	Vidari	5g	3g
	11	Kavach beej	5g	2.5g
			100g	50g

#### **Methods of preparation**

- 1. Preparation : Thoroughly wash all ingredients and, if necessary, chop them into small pieces.
- 2. Sun Drying :- Arrange the ingredients on a clean tray or cloth under direct sunlight, ensuring they are spaced apart for even drying.
- Protection :- Use a fine mesh or muslin cloth to cover the ingredients, safeguarding them from dust and insects.
- 4. Drying Time : The drying process may take several days, depending on the moisture content; ensure that the ingredients are completely dry and brittle.
- 5. Grinding :- After drying, grind each ingredient individually into a fine powder using a grinder or mortar and pestle.
- 6. Blending :- Combine all powders in the specified ratios to achieve a consistent mixture.
- Storage :- Keep the blend in an airtight container in a cool, dry environment to preserve its potency.

### **Evaluation test for powders**

**1**. Physicochemical Parameters

Moisture Content - Indicates the stability and longevity of the product.

PH Value - Confirms suitability for human consumption.

Ash Content - Evaluates the amount of inorganic residue remaining after combustion.

Bulk & Tapped Density - Measures the flow characteristics and compressibility of the substance. 2. Phytochemical Screening

Alkaloids - Identified in Ashwagandha and Kavach Beej, analyzed using Dragendorff's reagent.

Flavonoids - Found in Amla and Tulsi, assessed through the aluminum chloride assay.

Tannins - Present in Guduchi and Shatavari, evaluated using ferric chloride reagent.

Saponins - Located in Shatavari and Vidari, tested via the froth formation method.

Results:-

Physicochemical Characteristics

Moisture Content - 1.5% (low moisture contributes to stability)

Ash Content - 6.5% (moderate level, indicating the presence of minerals)pH Value - 5.8 (slightly acidic, appropriate for consumption)Bulk Density - 0.4 g/ml (indicates good flow properties)

Tapped Density - 0.5 g/ml (compressibility index: 5-10%)

Phytochemical Analysis

Flavonoids - Detected in Amla and Tulsi (assessed using aluminum chloride assay)

Alkaloids - Identified in Ashwagandha and Kavach Beej (tested with Dragendorff's reagent)

Tannins - Found in Guduchi and Shatavari (identified through ferric chloride test)

Saponins - Present in Shatavari and Vidari (evaluated using foam test)

Organoleptic test

Visual Aspect :- A refined, consistent powder devoid of any discernible contaminants.

Color: - A yellowish-brown shade attributed to turmeric, amla, and various herbs.

Fragrance :- A distinctive herbal scent accompanied by earthy undertones.

Flavor :- Mildly bitter and sharp, influenced by black pepper, ginger, and ashwagandha.



Consistency :- Silky and easily pourable, exhibiting no signs of aggregation.

## II. Conculsion

A blend of minerals and/or powdered herbs utilized in Ayurvedic treatment. Natural therapies are increasingly favored due to their perceived safety and reduced side effects compared to synthetic alternatives. Herbal churna is employed to address ailments such as diabetes and to enhance blood circulation. Consequently, this initiative to create herbal churna from naturally available ingredients like clove, ginger, cinnamon, cardamom, lemongrass, long pepper, peppermint, fennel, and giloy tulsi is commendable. The resulting herbal churna mixture exhibits a smooth appearance, fine texture, pleasant aroma, and a greenish hue. All evaluation tests, including assessments of flow properties and morphology, have been conducted.

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