International Journal of Pharmaceutical Research and Applications
Volume 10, Issue 2 Mar – Apr 2025, pp: 531-544 www.ijprajournal.com ISSN: 2456-4494

Review on Sugar Free Herbal Chyawaprash

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Date of Submission: 15-03-2025 Date of Acceptance: 25-03-2025

ABSTRACT:
Chyawanprash is an ayurvedic dietary health supplement used for boosting immunity and help in making a person feel young chyawanprash is one of the anti-ageing supplements, which is purely herbal in nature. It has amla as its main ingredient, which is a powerful antioxidant chyawanprash is formulated by processing around 50 medicinal herbs, minerals sugar, honey, ghee, Indian gooseberry jam, sesame oil, berries and spices. It also helps to slow down the aging process improve memory, good heart rate and improve the health of the digestive, digestive and respiratory system. This abstract presents an overview of sugar-free herbal chyawanprash, a modern adaptation of the classic formulation, designed to provide the same health benefits without the inclusion of sugar.the sugar-free variant employs natural sweeteners such as stevia and monk fruit, which do not spike blood glucosee levels, making it suitable for diabetics and those conscious of their sugar intake.

KEYWORDS: Chyawanprash, Immunity booster, Medicinal Herbs, Herbal medicine. Traditional medicine, Ayurveda, Youthfulness.

I. INTRODUCATION:

One of the most famous ayurvedic health supplement called chyawanprash is made up of a super concentrated blend of nutrient-rich herbs along with various minerals.In ayurveda, chyawanprash is classified under the category of rasayanachyawanprash is also spelled as chyavanaprash, chyavanaprasha, chyavanaprasam, and chyawanaprash.

The name chyawan is the name of an expert, and it also symbolizes descending change prasha means a drug or food that is ready to be consumed.This innovative product addresses the health needs of diabetics, pre-diabetics, and the health-conscious, offering a guilt-free way to enjoy the wellness benefits of chyawanprash.These sweeteners do not raise blood glucose levels, making the product safe for individuals with diabetes and those adhering to low sugar diets.The meticulous selection of herbs ensures that the sugar free variant retains the efficacy and potency of the original formula.

Recently in pandemic COVID-19 Ministry of AYUSH recommends the self-care guidelines for preventive health measures and boosting immunity with special reference to respiratory health in which for immunity promotion they recommended 10gm (1tsf) chyawanprash in the morning.Taking 1-2 tablespoons of chyawanprash along with warm milk prevents cold and improves the immunity of children due to its rich vitamin C content.

This formulation is prepared with reference to the texts.The proprietary chyawanprash is that where modification to an authoritative text-based recipe is allowed as long as all the ingredients are listed in any one of the texts officially enlisted in the drugs and cosmetic act of 1940 and marketed as "a proprietary ayurvedic medicine".Ayurveda has suggestedrejuvenative therapies or the rasayanas forleading a healthy and active life.Modern pharmacology interpretsrasayana as a product having antioxidant, immunomodulatory,antistress and nootropic properties and the one promoting health.Chyawanprakash is chyawanprash based proprietary product.Though chyawanprash is renowned as a time tested immunitybooster, its use in diabetic population is restricted due to its sugarcontents. Chyawanprakash is chyawanprash based product in whichsugar and honey are replaced by sorbitol and sucralose. It is intendedto be used by people with diabetes irrespective of treatment regimen. Sorbitol is a nutritive sweetener providing dietary energyand used in diet foods and cough syrups. Sucralose is no-calorie sweetener, safe for consumption by diabetics as it does not a blood glucose level.

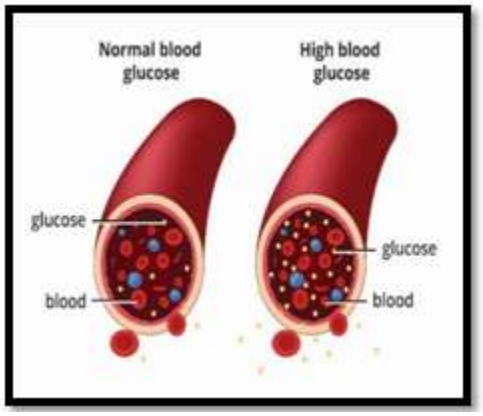
1.1 WHAT IS DIABETIC:

Diabetes is a disease that occurs when your blood glucose, also called blood sugar, is too high. Glucose is your body's main source of energy. Your body can make glucose, but glucose also comes from the food you eat.Which leads over

International Journal of Pharmaceutical Research and Applications
Volume 10, Issue 2 Mar – Apr 2025, pp: 531-544 www.ijprajournal.com ISSN: 2456-4494

time to serious damage to the heart, blood vessels, eyes, kidneys and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin.

In the past 3 decades, the prevalence of type 2 diabetes has risen dramatically in countries of all income levels. Type 1 diabetes, once known as juvenile diabetes or insulin-dependent diabetes, is chronic condition in which the pancreas produces little or no insulin by itselfchronic condition in which the pancreas produces little or no insulin by itself.



1.1 CLASSIFICATION OF DIABETIC :

The first mostly accepted classification of diabetes mellitus was published by WHO in the year 1980 and, it is modified in the year 1985. The most common and important form of Primary or idiopathic diabetes mellitus, which is focus of our discussion. It must be different from secondary diabetes mellitus which includes forms of hyperglycemia associated within dentifiable causes in which destruction of pancreatic islets is induced by inflammatory pancreatic diseases, surgery, tumors, certain drugs, iron overloaded hemochromatosis and certain acquired or genetic endocrinopathies.

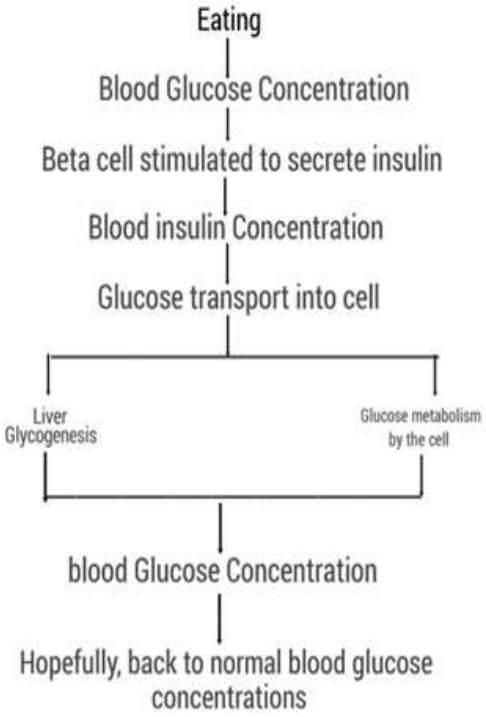


Fig 2 : Glucose metabolism

Fig 3 : Normal response to fasting

The old and new terms of insulin-dependent (IDDM) or non-insulin-dependent (NIDDM) which were proposed by WHO In1980 and 1985 have disappeared and the terms of new classification system identifies four types of diabetes mellitus type1(IDDM), type2(NIDDM),

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other specific types" and gestational diabetes WHO expert committee 1999.

1. Insulin Dependent Diabetes Mellitus (Type1 IDDM) :

This type of diabetes mellitus is also called autoimmune diabetes and previously known as juvenile-onset or ketosis-Prone diabetes. The individual may also seek with other autoimmune disorders such as graves disease, hashimoto's thyroiditis, and addison'sdisease.Type I diabetes mellitus Is also known as insulin- dependent diabetes mellitus (IDDM), This occurs mainly in children and young adults; the onset is usually sudden and can be life threatening.Type 1 is usually characterized by the presence of anti–glutamic acid decarboxylase, islet cell or insulin antibodies which identify the autoimmune processes which leads to beta-cell destruction type 1 diabetes due to the destruction of b-cell which is usually leading to absolute insulin deficiency american diabetes association, 2014.Markers of immune destruction, including islet cell auto-antibodies and auto-antibodies to insulin, and auto antibodies to glutamic acid decarboxylase (GAD) are present in 85-90 % of individuals with type 1 diabetes mellitus when Fasting diabetic hyperglycemia is initially detected

2. Non-Insulin Dependent Diabetes Mellitus (Type2 NIDDM) :

Type 2 diabetes mellitus is also known as adult-onset diabetes the progressive insulin secretary defect on the background of insulin resistance american diabetes association, 2014. People with this type of diabetes frequently are resistant to the action of insulinThe long-term complications in blood vessels, kidneys, eyes and nerves occur in both types and are the major causes of morbidity and death from diabetes Thecauses are multifunctional and predisposing factor includes: obesity, sedentary lifestyle, increasing age affecting middle-aged and older people, genetic factor ross and wilson 2010, such patients are at increased risk of developing macro vascular and micro vascular complications

3. Gestational Diabetes Mellitus :

The glucose intolerance occurring for the first time or diagnosed during pregnancy is referred to as gestational diabetes mellitus (GDM).Women who develop type1 diabetes mellitus during pregnancy and women with undiagnosed asymptomatic type 2 diabetes mellitus that is discovered during pregnancy are classified with Gestational Diabetes Mellitus (GDM).

4. Other Specific Type (Monogenic Types):

The most common form of monogenic types of diabetes is developed with mutations on chromosome 12 in a hepatic transcription factor referred to as hepatocyte nuclear factor (HNF)-1a.They also referred to as genetic defects of beta cells. These forms of diabetes are frequently characterized by onset of hyperglycemia at an early age generally before age of 25 years.

They are also referred to as maturity onset diabetes of the young (MODY) or maturity-onset diabetes in youth or with defects of insulin action persons with diseases of the exocrine pancreas, such as pancreatitis or cystic fibrosis persons with dysfunction associated with other endocrinopathies (e.g. acromegaly); and persons with pancreatic dysfunction caused by drugs, chemicals or infections.

1.2 Some Common Sign and Symptoms:

In diabetes mellitus, cells fails to metabolized glucose in the normal manner, effectively become starved.The long term effect of diabetes mellitus which includes progressive development of the specific complications of retinopathy with potential blindness, nephropathy that may lead to renal failure, and neuropathy with risk of foot ulcer, joint and features of autonomic dysfunctions and sexual dysfunction people with diabetes are at increases risk of diseases.Other various symptoms are observed due to.

1. Gluconeogenesis from amino acids and body protein, causing muscle wasting, tissue breakdown and further increases the blood glucose level.
2. Catabolism of body fat, releasing some of its energy and excess production of ketone bodies.

1.3 Causes of Diabetes Milliteus :

Reduced sensitivity of peripheral tissues to insulin:Reduction in number of insulin receptors, down regulation of insulin receptors. Many hypersensitive and hyperinsulinaemic but normal glycaemic and haveassociated dyslipideaemic, hyperuriaemiac, abdominal obesity.Excess of hyperglycaemia hormone (glucagon) etc. obesity causes relative insulin deficiency the ß cells lag behind. Two theories have demonstrated abnormalities in Nitric oxide metabolism, resulting in altered perineural blood flow and nerve damage .Other rare forms of diabetes mellitus are those due

International Journal of Pharmaceutical Research and Applications
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to specific genetic defects (type 3) like "maturity onset Diabetes of young" (MODY) other endocrine disorders, pancreatectomy and gestational diabetes mellitus (GDM).

1.4 Diagnosis of Diabetes Mellitus :

The diagnosis of diabetes in an asymptomatic subject should neverbe made on the basis of a single abnormal blood glucose value.If a diagnosis of diabetes is made, the clinician must feel confident that the diagnosis is fully established since the consequences for the individual are considerable and lifelong.The diagnosis of diabetes mellitus include, urine sugar, blood sugar, glucose tolerance test, renal threshold of glucose, diminished glucose tolerance, increased glucose tolerance, renal glycosuria, extended glucose tolerance curve, cortisone stressed glucose tolerance test, intravenous glucose tolerance test, oral glucose tolerance test.

1.5 Treatment of Diabetes Mellitus :

1. To restore the disturbed metabolism of the diabetic as nearly to normal as is consistent with comfort and safety.
2. To prevent or delay progression of the short and long term hazards of the disease.
3. To provide the patient with knowledge, motivation and means to undertake this own enlightened care.

Chyawanprash is a potent antioxidant paste, prepared through the synergistic blending of around 50 herbs and spices. Chyawanprash falls, by virtue of its consistency and form of dosage, under the category of Awaleha (electuaries/herbal jams), a group of Ayurvedic formulations. Typically, CP includes four classes of herbal drugs: The Dashmula class (ten roots); the Chaturjata class (four aromatic plants); Ashtavarga (threatened medicinal herbs from the Northwest Himalayas, which are not commercially available in the modern era) ; and a general class (materials not belonging to the former classes). The Chyawanprash formula is described in the ancient Ayurvedic texts, namely, Ashtanga Hridayam, Charaka Samhita, Sangandhara Samhita, which are dedicated to clinical management. The dominant ingredient is Amla, a citrus fruit that is a highly renowned and potent botanical in Ayurveda. The main ingredients of CP, along with their botanical identities, key active biomolecules and specific therapeutic roles

Phytochemical and Quality Specifications of Chyawanprash :

Chyawanprash is a semi-solid sticky paste with a brownish black appearance, chiefly having sweet and spicy odor, with a sweet and astringent feel after taste with aroma of Prakshepadravya (powder of seven herbs. The taste is predominantly governed by the flavors of honey, cow ghee (clarified butter), and Triphala (a mixture of three myrobalans), and the aroma by cow ghee and certain spices viz. sandalwood, cinnamon, and cardamom. Limited studies are available on quality testing of CP. A major part in the composition of CP is Amla, which is rich in vitamin C and polyphenolics, including flavonoids. The phenolic compounds of CP possess antioxidant principles that are said to contribute to the rejuvenating and tonic attributes of CP. A high-performance liquid chromatography (HPLC) analysis has identified several biologically active phenolics in CP, i.e., gallic acid, protocatechuic acid, catechin, caffeic acid, vanillic acid, chlorogenic acid, syringic acid, rutin, ferulic acid, and quercitrin, which may account for its therapeutic activity.

The 'Vitamin C' Controversy :

Amla, having rich vitamin C (445 mg/100 g) contents, constitutes the main ingredient (35%) . Owing to the lack of uniform quality control standards of Ayurvedic drugs, it becomes challenging to ensure the uniformity of their composition and so the efficacy of final products. Although the official quality testing methods for CP do not contain vitamin C content, there are contrasting findings apropos of its presence in CP , possibly due to the application of less sensitive and nonspecific methods of investigation. A study in 1997 found that vitamin C was missing in the tested CP samples, and it might have been destroyed during cooking of the Amla pulp with cow ghee in the pharmaceutical process.

Chyawanprash: A Nutraceutical and Functional Food :

The term 'nutraceutical' was coined in 1989 by Stephen De Felice as "a food or part of a food that provides medical or health benefits, including the prevention and/or treatment of disease." Chyawanprash has been a consistent part of Indian tradition both as a functional food and nutraceutical for the past 5000 years, with constant zeal and vivacity, and has survived owing to its peerless health benefits. Chyawanprash is reported to have rich vitamin, protein, dietary fiber, energy contents, carbohydrate, low fat contents (no-trans and zero percent cholesterol), and appreciable

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levels of major and minor trace elements (mg/100g), such as Fe (21.1), Zn (3.1), Co (3.7), Cu (0.667), Ni (1.4), Pb (2.4), Mn (8.3), vitamin C (0.5), tannic acid (20.2), other vitamins A, E, B1, B2, and carotenoids that act as micronutrients for health-invigorating purposes. It also provides several essential phytoconstituents, namely, flavonoids, alkaloids, saponins, antioxidants, piperine, phenolic compounds, etc. The synergistic antioxidant effects of vitamin C along with vitamin E and carotenoids are well known. The rich nutritive composition and antioxidant biomolecules of CP act both singly as well as synergistically for immuno-modulation, body building, health restoration, and prevention of oxidative damage (a leading cause of several degenerative diseases)

1.2TYPES OF SUGAR FREE CHYAWANPRASH :

1) **Organic India Sugar-Free Herbal Chyawanprash** :
Made from organic herbs and free from synthetic additives. It uses natural sweeteners like stevia or jaggery to keep the formulation free from refinedsugar.

2) **Kapiva Sugar-Free Chyawanprash** :
Made from 40+ herbs and free from added sugars or artificial sweetener. Kapiva uses natural ingredients
for sweetness.

3) **Himalaya Sugar-Free Herbal Chyawanprash** :
This variant of Himalaya's chyawanprash uses herbs like amla, bala, and yashtimadhu with no added sugar, ensuring natural sweetness from its herbal content.

4) **Baidyanath Sugar-Free Herbal Chyawanprash** :
A sugar-free herbal blend of traditional ayurvedic herbs, including amla, ashwagandha, and pippali, providing health benefits without added sugars.

5) **Zandu Suga-Free Herbal Chyawanprash** :
Contains a rich blend of amla, ashwagandha, and other powerful herbs with no added sugar.

6) **Patanjali Sugar-Free Chyawanprash** :
Patanjali's sugar-free version is suitable for diabetics or those on a low-sugar diet. It includes the same ayurvedic herbsand ingredients as their regular.

1.3CLASSIFICATION OF SUGAR FREE CHYAWANPRASH :

1) **Based on Ingredients** :
HerbalSugar-Free Chyawanprash: Primarily made with ayurvedic herbs like amla, ashwagandha, giloy, and other natural ingredients.

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Ex.Organic indiasugar-free herbal chyawanprashjivaayurvedic sugar-free herbal chyawanprash.

Standard Sugar-Free Chyawanprash: Contains a mix of herbs and other additives but without added sugars.
Ex.Dabur chyawanprakash sugar-free, baidyanath sugarfree chyawanprash.

2) **Based on Sweeteners** :
Natural sweetener-Based Chyawanprash_: Uses natural sugar alternatives such as stevia, jaggery, or honey to replace refined sugars.
Ex. Organic indiachyawanprash (with stevia), amrita sugar free chyawanprash with honey or jaggery.

Artificial Sweetener-Based Chyawanprash: Uses artificial sweeteners like sucralose, aspartame, orOthers to keep the product sugar-free.
Ex.DaburChyawanprakash Sugar-Free with sucralose.

3) **Based on Health Focus** :
General Immunity: Formulated for overall immune system support with a balanced blend of herbs.
Ex.Patanjali Sugar-Free Chyawanprash, Zandu Suga-Free Chyawanprash.

For Diabetes: Specially formulated with ingredients that are safe for people with diabetes, often avoiding both natural and artificial sweeteners that might spike blood sugar levels.
Ex. Baidyanath sugar-free chyawanprash diabetic-friendly, Dabur chyawanprah sugar free.

4) **Based on Target Audience** :
For Adults: Some sugar-free Chyawanprash products are designed specifically for adult consumption, focusing on boosting energy, immunity, and strength.
Ex. Dabur chyawanprakash sugar-free targeting middle-aged and elderly adults.

For Childrens: Certain formulations might be created for children, providing a gentler mix of herbs and ingredients to suit younger bodies.
Ex. Brands like Zandu or Himalaya may offer kid-friendly versions, though specific sugar-free options are less common.

5) **Based on Organic Certification** :

Certified Organic Sugar-FreeChyawanprash: Made from organically sourced herbs and ingredients, ensuring no pesticides or chemicals are used in cultivation.
Ex. Organic India Sugar-Free Herbal Chyawanprash.

Non-Organic Sugar-FreeChyawanprash: Contains herbs and ingredients that may not be organically certified but still follow traditional Ayurvedic formulations.
Ex. Dabur ChyawanprakashSugar Free Raidyanath Sugar Free.

1.4 BENEFITS / APPLICATIONS

- Blood Sugar Control**:**

Chyawanprash may be useful in managing type2 diabetes. Chyawanprash contains natural sweetener honey that does not increase blood sugar as rapidly as white sugar.

- Immune System Support **:**

Rich in vitamin C and antioxidants from amla and other herbs, sugar free herbal chyawanprash helps strengthen the immune system, protecting the body against infections and illnesses.

- Enhanced Energy and Vitality **:**

The adaptogenic herbs like ashwagandha in the formulation help improve energy levels, reduce fatigue, and enhance overall vitality, making it ideal for people with demanding lifestyles .

- Improved Digestion :

Chyawanprash has laxative property due to which it promotes digestion, absorption and assimilation. It thus helps in the removal of accumulated waste and prevents indigestion.

- Good for bodybuilding**:**

It increases protein synthesis and helps tone your muscles and promote muscle mass. Chyawanprash also rejuvenates all the tissues in your body and provides overall strength and vigor .

- Chyawanprash Good for Allergies **:**

Although enough scientific evidence is not available, Chyawanprash may be good for managing allergic reactions. This is due to the presence of antioxidants that have anti-allergic property .

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II. PLANTPROFILE

➢ **AMLA** :

- **Synonym:-**Indian gooseberry, amalaka, dhatriphala,anvala,amlang, amlaki, ambala, amalica, aunla,nellikai.
- **Biologicalsource:-**This is consists of dried, as well as fresh fruits pericarp of theplant emblica officinalis gaerthphyllanthusemblica linn.
- **Family:**euphobiaceae.

Fig 5 : Amla

- **Chemical Constituents :**

Type	Chemical Constituents
Hydrolysable Tannins	Emblicanin A and B, Punigluconin, Pedunculagin, Chebulinic acid (Ellagitannin), Chebulagic acid (Benzopyran tannin), Corilagin(Ellagitannin), Geraniin (Dehydroellagitannin), Ellagotannin
Alkaloids	Phyllantine, Phyllembein, Phyllantidine
Phenolic compound	Gallic acid, Methyl gallate, Ellagic acid, Trigallayl glucose
Amino acids	Glutamic acid, Proline, Aspartic acid, Alanine, Cystine, Lysine
Carbohydrates	Pectin
Vitamins	Ascorbic acid
Flavonoids	Quercetin, Kaempferol
Organic acids	Citric acid

Table 1 :Chemical constituent of amla

- **Uses of Amla :**

➢ Reduces amount of free radicals associated with aging.
➢ Improves immunity and protects body against infection.
➢ Treats menstrual cramps and fever.
➢ Flushes out toxin that cause diarrhea and dysentery.
➢ Aids digestion, improves appetite and helps gain weight.
➢ Absorbs calcium and keeps body looking great and healthy.

➢ **ASHWAGANDHA :**

- **Synonyms** :

Indian Ginseng; Withania root, ashwagandha, winter cherry

- **Biological Source** :

Ashwagandha consists of the dried mature roots of WithaniasomniferaDunal

- **Family** :SolanaceaeFig 6 : Ashwagandha

- **Chemical Constituents :**

Steroidal alkaloids.

- Anaferin
- Withanine

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- Tropine
- Anahygrine
- Cuscohygrine
- Choline

Steroidal Lactones:

- Withanolides
- Withaferine
- Withaferin A

Uses of Ashwagandha :

- Sedative and Hypnotic
- Hypotensive, Respiratory stimulantAction along with Bradycardia.
- Immuno-modulatory agent and having anti-stress activity.
- Used in the treatment of Rheumatism, Gout and Skin diseases.
- Widely used as sex-stimulant.
- Strength and vigor promoting drug especially in geriatric case.
- Withaferin, a steroid lactone shows anti-tumour activity.

➢ **STEVIA :**

- **Synonyms :** Meethi patti, sweet leaf, sugar leaf
- **Biological Source :**Stevia is a sweetener and sugar substitute extracted from South American leaveStevia rebaudiana.

- **Family** : Asteraceae

FiFig 8 : stevia

- **Chemical constituents :**
- **Steviol Glycosides:**

- Stevioside.
- Rebaudioside A
- Rebaudioside B, C, D, E, F.
- Dulcoside A

- **Other Chemical Compounds**

- Flavonoids.
- Chlorophyll
- Terpenes
- Xanthophylls.
- Tannins

- **Uses of Stevia :**

- Stevia sweeteners are used as an ingredient in products throughout Asia and South America such as:Ice cream,Desserts,Sauces, Yogurt, Pickled foods, Bread
- Manage blood glucose levels
- Manage high blood pressure
- Help in weight loss journey
- Add sweetness without adding calories

➢ **Sorbitol**

- **Synonyms :**

Glucitol, D-Glucitol ,Hexahydric alcohol, SorbitSorbitose

- **Biological Source :**

Sorbitol is a sugar alcohol commonly found in various fruits and plants. It is produced naturally in some plant leaves, notably in the leaves of theSorbitia genus

Fig 9 : Sorbitol

- **Uses of Sorbitol :**

- Food Industry :
- Sweetener
- Humectant
- Bulking agent
- Pharmaceutical Industry :
- Laxative
- Tablet/Capsule Coating
- ExcipienCosmetic and Personal Care Products:

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2.1 OTHER INGREDIENTS OF CHYAWANPRASH

Plant Name	Common Name	Uses
Adhatodavasica Nees	Adusa, Vasaka	Cardiotonic, expectorant, diuretic, cardiac &respira-tory disorders.
Aegle marmelos Correa	Bilva, Bel	Useful in chronic dysentery, diarrhoea & dyspepsia
Aquilaria agallochaRoxb.	Agar, Agarkashta	Aromatic, neurotrophic, carminative & aphrodisiac
Bambusa arundinacea Willd.	Vanshlochan	Stimulant, astringent and aphrodisiac
Boerhaaviadiffusa Linn.	Punarnawa, Punarnava, Gad-hapuran	Cardiotonic, hematinic, diuretic & helps in anemia
Cinnamomum tamala Nees & Ebrm.	Tamalpatra, Tejpatra, Patra	Helps in general debility, anorexia & indigestion, uterine stimulant.
Cinnamomum zeylanicum Breyn.	Dalchini	Anemia, general debility, abdominal distension & anorexia.
Curcuma zedoariaRosc	Kachur, Sathi kehora	Stimulant, tonic, depurative, vertigo & during preg-nancy.
Cyperus rotundus Linn.	Nagarmotha, Mustak, Motha	Neurotrophic, carminative, helps in constipation, hepatoprotective.
DesmodiumbulbiferaDesv.	Shalparni, Sarivan	General debility, nervine tonic, cardiac, blood & respiratory disorders.
Elettaria cardamomum Maton	Elaichi, Cardamum	General tonic, useful in anorexia and flatulence.
Emblica officinalis Gaertn.	Amalaki, Amla, Awala, Indian Gooseberry	Rejuvenative, neurotrophic, hepatoprotective, antioxdant, cardiotonic, rich source of vitamin
Gmelina arborea Roxb.	Gambhari, Khambhari, Kash-marya	Promotes lactation & helps in indigestion.
Inula racemosa Hook.	Pushkarmool, Pohkarmool	Cardiotonic, carminative, antiseptic, diuretic,dyspepsia, indigestion, chronic cough and general debility.
Leptadenia reticulata Wight &Arn	Jivanti	Cooling, eye tonic, nutrient and aphrodisiac.

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Nelumbiumspeciosum Willd.	Kanwal, Neelkama	Neurotrophic, cardiotonic & helps in general debility.
Oroxylum indicum vent	Arlu, Sona patha, Shyonak	General debility, diarrhoea & dysentery.
Phaseolus trilobus-sensu Ai	Mudgparni, Van-mug, Matak	Aphrodisiac, mild sedating, fatigue, general debility, malnutrition.
Phyllanthus niruri Linn.	Bhumyaamalaki, Bhumiamla,Bhueawala	Appetizer, cholagogue, laxative, hepatoprotective & antiviral.
Piper longum Linn.	Pippali	General debility, dyspepsia, flatulence, respiratory tract infection.
Pistacia integerrima Stewart-ex Brandis	Kakdashingi, Karkatshingi, Shringi	Expectorant, carminative, anorexia, cholagogue, cough & asthma.
Premna integrifolia Linn.	Arni, Agnimantha	Laxative, helps in indigestion & cough.
PtertocarpussantalinusLinn.f	Lal Chandan	Skin, blood & eye disorders, used as disinfectant to mucus membranes of genito-urinary & bronchial tracts.
Sesamum indicum Linn.	Til oil, Sesame oil	Cooking oil, tonic, nutrient, aphrodisiac, diuretic, cures dry cough, asthma, lung diseases, inflamma-tion, ulcers, urinary diseases, migraine & vertigo.
Sida cordifolia Linn	Bala, Bariyara	Cardiotonic, stomachic, aphrodisiac & general tonic. (Contd)
Eugenia caryophyllus Linn.	Lavang, Clove	Antiseptic, aromatic, carminative, stimulant &fla-voring agent.
Honey	Obtained from honey bees	Mild laxative, bactericidal, sedative, antiseptic, useful for cold, cough, fever, sore eyes, throat, tongue, duo-denal ulcers & liver diseases.
TinosporacordifoliaMiers ex Hook f.& Thoms.	Guduchi, Giloy, Amrta	General tonic, immunomodulator, helps in degenerative disorders.
Tribulus terrestris Linn.	Gokhru, Gokshura	Aphrodisiac, diuretic & cardiotonic.
Mesua ferrea Linn	Nagkesar	Nutrient,cardiotonic,brain.tonic

2.2 PREPARATION OF SUGAR FREECHYAWANPRASH :

- Amla Indian Gooseberry- 1 kg
- Herbs Dashmool group, Ashwagandha, Brahmi, Shatavari, etc100-150 gm depending on availability and preference
- Herbal extracts and spices e.gPippali, Nagarmotha, Tejpatta, Cinnamon, Cardamom, etc. 50 gm mSugarsubstitute : Stevia or any natural sweetener as per taste or preference
- Honey - 100 ml (optional)Ghee (Clarified Butter) - 100 gmSesame Oil - 100 ml water as required

➢ **Step For Preparation :**

- Prepare the Amla pulp :Wash and steam the Amla until they are softDe-seed the Amla and grind them to make a fine paste (pulp)
- Prepare the Herbal Decoction : Take the herbs (Dashmool, Ashwagandha, etc.) and boil them in water for 2-3 hours to extract the medicinal

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components.Filter the liquid (decoction) and set aside

- Cook the Amla :In a large thick-bottomed pan, add the Amla pulp and start cooking it on lowHeat . Add the herbal decoction to the pulp and continue stirring the mixture.Let it simmer until the mixture thickens.
- Add the Spices : Add the finely powdered spices like cinnamon, cardamom, cloves, etc., to the Amla mixture. Stir and ensure the spices are well incorporated.
- Sweetening with Stevia or Honey : Once the chyawanprash base has thickened, add Stevia (or your chosen sugar substitute) and mix well. You can also add a small quantity of honey at this stage if you prefer it for taste.
- Incorporating Ghee and Oil :Add ghee and sesame oil to the thickened mixture.Stir thoroughly, ensuring that the ghee and oil are well blended into the chyawanprash.
- Final Cooking : Continue cooking until the chyawanprash reaches a jam-like consistency.Make sure there is no excess moistureleft Storage : Once the mixture cools, transfer it into clean, airtight glass jars. Store in a cool, dry place. Sugar-free chyawanprash can last for several months if stored properly.

III. RATIONAL OF WORK :

Chyawanprash is a popular Ayurvedic product known for its immunomodulatory and antioxidant properties.Traditional Chyawanprash recipes use sugar as a preservative and sweetener, which may not be suitable for consumers with dietary restrictions or preferences.Sugar-free alternatives are in high demand, and a sugar-free Chyawanprash would cater to this growing market.The development of a sugar-free Chyawanprash would require the selection of suitable sugar substitutes, modification of the manufacturing process, and ensuring the product's stability and safety.

- **AIM :**To Study Sugar free herbal chyawanprash

- **OBJECTIVE :**

- **To create a sugar-free version of Chyawanprash:** Develop a recipe that replaces sugar with a suitable alternative while maintaining the original taste, texture, and health benefits.
- **To cater to the growing demand for sugar-free products:** Provide a product that meets the increasing consumer demand for sugar-free alternatives, particularly among health-conscious individuals.
- **To expand the market reach:** Tap into the market of consumers who are restricted from consuming sugar due to health conditions like diabetes or those who follow a low-sugar diet.
- **To maintain the original health benefits**: Ensure that the sugar-free version retains the immunomodulatory and antioxidant properties of traditional Chyawanprash.

IV. LITERATURE REVIEW :-

- **Author**: Dr. S. Kumar, A. Singh, P. Tiwari**Year**: 2019
- **Content :**This study explores the formulation of sugar-free chyawanprash using artificial sweeteners as alternatives to sugar. The research highlights how sugar substitution affects taste, texture, and shelf life. The authors present evidence that sugar-free variants of chyawanprash maintain most of the traditional health benefits while catering to diabetic patients and health-conscious consumers. The paper emphasizes the importance of keepingthe product's antioxidant properties intact despite the absence of sugar.

- **Authors:** N. Sharma, V. Gupta, and K.Mehta**Year :**2021
- **Content :**This study compares the antioxidant capacity of sugar-free chyawanprash with its traditional counterpart. The results showed that both versions have similar antioxidant properties, primarily due to ingredients like amla (Indian gooseberry), ghee, and various herbs. The research supports the notion that sugar-free chyawanprash is as effective as the traditional version in boosting immunity without the added risk of excessive sugar consumption.

- **Authors:**A. Deshmukh, M. Patel, andP. Singh**Year:** 2020
- **Content:**This study investigates the impact of sugar-free chyawanprash on blood glucose levels in diabetic patients. The researchers replaced sugar with stevia and other low-calorie sweeteners in the formulation. The findings indicate that consuming sugar-free chyawanprash does not cause significant spikes in blood sugar levels, making it a safer option for diabetic individuals. Additionally, the product retained its traditional health benefits related to digestion and immunity.

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- **Author :**R. Mishra, S. Raj, and D.Tandon**Year :** 2022
- **Content :**This article focuses on the growing consumer demand for sugar-free products in the health and wellness industry, particularly in Ayurvedic formulations like chyawanprash. The authors conducted a market survey to understand consumer preferences, noting that people are increasingly shifting to sugar-free alternatives due to concerns about diabetes, obesity, and general health. The study emphasizes that sugar-free chyawanprash is becoming popular, especially among the younger, health-conscious demographic**.**
- **Author:**K. Verma, J. Yadav, and P.Joshi**Year :** 2018
- **Content :**This research examines the impact of using different sweeteners (stevia, erythritol, and sucralose) in the preparation of sugar-free chyawanprash. The authors assess the changes in taste, texture, and consumer acceptability. The findings show that stevia was the most preferred sweetener due to its natural origin and minimal aftertaste. The paper also highlights that while taste and texture may slightly differ from the traditional version, the health benefits remain largely unchanged.

V. SUMMARY AND CONCLUSION :

Summary :

Chyawanprash is a traditional Ayurvedic health supplement made from various herbs, spices, and minerals, known for its immunity-boosting properties. It is often consumed in the form of a jam-like paste. Traditionally, chyawanprash contains sugar or honey, which some people may avoid due to health conditions like diabetes or preferences for sugar-free alternatives.Sugar-free chyawanprash is a modern variation catering to these needs, replacing sugar with natural or artificial sweeteners like stevia or sugar alcohols (like sorbitol or xylitol). This makes it suitable for diabetics and those managing their sugar intake.

- Boosts Immunity
- Diabetic-Friendly.
- Improves Digestion
- Rich in Antioxidants.
- Supports Respiratory Health

Conclusion :

Sugar-free chyawanprash offers the same traditional health benefits as regular chyawanprash, particularly in terms of boosting immunity, promoting digestion, and enhancing overall vitality. However, it is especially beneficial for those needing to limit their sugar intake, such as diabetics. It's a healthy option for individuals who are conscious about sugar consumption but still want to maintain a balanced Ayurvedic routine.

VI. FUTURE SCOPE :

❖ Health-Conscious Consumer Base :

✓ Diabetic-Friendly Products : As the prevalence of diabetes continues to rise, sugar-free alternatives for traditional health products are becoming increasingly important. A sugar-free herbal Chyawanprash appeals to diabetic and pre-diabetic consumers who seek natural immunity-boosting supplements without sugar content.

✓ Calorie-Conscious Consumers : Individuals who are calorie-conscious, or following diets for weight management, are likely to prefer sugar-free versions of traditional products like Chyawanprash.

❖ Growing Demand for Herbal Products :

✓ Herbal and Ayurvedic Remedies : There's a growing trend globally towards herbal and ayurvedic products due to their perceived benefits and lack of harmful chemicals. Sugar-free herbal Chyawanprash fits perfectly into this space, appealing to consumers who prefer natural ingredients and traditional remedies.

✓ Immune-Boosting Focus : Post-pandemic, there has been a heightened awareness of immunity-boosting products. Chyawanprash, known for boosting immunity, can see expanded adoption, especially when marketed for diabetics and those avoiding sugar.

❖ Global Market Penetration :

✓ International Expansion : The global wellness industry is seeing a rise in demand for ayurvedic and natural health supplements. Sugar-free herbal Chyawanprash can potentially reach international markets where consumers are seeking alternative immune-supporting supplements and herbal products.

✓ Online Retail Growth :The growth of e-commerce and health-focused platforms presents a significant opportunity for sugar-free herbal Chyawanprash to reach a broader audience, both locally and internationally.

❖ Product Innovation :

✓ Enhanced Formulations : The development of new flavors or enhanced formulations (e.g., with added herbs, vitamins, or minerals) could widen the appeal to different

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Volume 10, Issue 2 Mar – Apr 2025, pp: 531-544 www.ijprajournal.com ISSN: 2456-4494

demographic groups, such as younger consumers or fitness enthusiasts.

- ✓ Combination Products : Innovating products that combine sugar-free Chyawanprash with other health supplements or ingredients could tap into new markets, such as those looking for all-in-one health solutions.
- ❖ Regulatory Support and Certifications :
- ✓ Ayurvedic and Organic Certifications :: The global demand for certified organic, non-GMO, and ayurvedic products continues to grow. Companies that can meet these standards with sugar-free herbal Chyawanprash will likely attract a niche, premium segment of the market.
- ✓ Health Claims and Research : Backing up the product with clinical research that supports health claims (e.g., immunity boosting, antioxidant properties) can increase consumer trust and drive sales.
- ❖ Sustainability and Ethical Sourcing:
- ✓ Sustainable Production : The emphasis on sustainability and ethical sourcing can further enhance the brand value. Using sustainably sourced herbs and eco-friendly packaging will resonate well with environmentally-conscious consumers.
- ✓ Corporate Social Responsibility (CSR) : Focusing on CSR activities like supporting farmers, promoting ayurvedic heritage, or sustainable herb sourcing can create strong brand loyalty.
- ❖ Partnerships and Collaborations :
- ✓ Healthcare Industry Collaborations : Collaboration with healthcare professionals and nutritionists to promote the benefits of sugar-free herbal Chyawanprash could build trust and boost its acceptance in the market.
- ✓ Celebrity Endorsements : Using health-conscious influencers or celebrities for promotions can help in building brand awareness, especially among younger consumers.

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