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Research Article

**FORMULATION AND EVALUATION OF HERBAL WEIGHT  
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**1. Abstract:**

*Obesity is a multifaceted condition characterized by an excessive accumulation of body fat. This condition heightens the risk of various diseases and health issues, including heart disease, diabetes, and hypertension. A diagnosis of obesity is made when an individual's BMI is 30 kg/m<sup>2</sup> or higher. Nowadays, traditional herbal medicines are increasingly being used to treat numerous ailments, as they tend to have fewer side effects compared to allopathic drugs. The prepared formulation was assessed for both pre-compression and post-compression parameters. The results indicated that the formulation exhibited acceptable values for both sets of parameters, falling within the specified limits. The significant rise in obesity rates in recent years has posed a major public health challenge in many countries worldwide. As a result, there is growing interest in using natural, herbal products to help treat obesity because they are considered to have safer effects.*

**Keywords :** Obesity, Health, Disease, Compression, Formulation, Natural.

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## 2. INTRODUCTION:

Many herbs can enhance metabolism and aid in weight reduction. They have a thermogenic effect that boosts metabolism, and some herbs help you feel fuller for longer, leading to reduced calorie intake. To maximize weight loss and minimize side effects, these herbal formulations must be used properly, similar to any prescription or herbal remedy. Effective weight management is achievable when these herbs are combined with a proper diet and exercise regimen.

In recent years, obesity has become a significant health issue, affecting people of all ages, genders, races, and ethnicities, with its prevalence increasing rapidly. Pharmacological treatments for obesity are often expensive and come with adverse side effects. In contrast, natural remedies used in traditional Indian medicine have shown success in clinical practice and may serve as potential targets for developing safer, more affordable anti-obesity medications. Numerous bioactive components found in Indian medicinal plants used for obesity treatment have undergone extensive chemical and pharmacological analysis. The data on 30 commonly used medicinal plants in traditional Indian medicine were evaluated, considering pharmacological test results, biological origins, and active anti-obesity principles. It is crucial to raise awareness about the use of herbal remedies for treating and preventing obesity and to disseminate the supporting evidence.

Several herbs can enhance metabolism and support weight loss. They have a thermogenic effect that boosts metabolic rates, while other herbs can help you feel fuller for longer, reducing calorie intake. For optimal weight reduction and minimal side effects, these herbal formulations must be used correctly, similar to any prescription or herbal remedy. Effective weight loss can be achieved when weight management herbs are combined with a proper diet and exercise routine.

## 3. Problems:

Obesity has become a serious health issue in recent years, affecting individuals of all ages, genders, races, and ethnicities, with its prevalence increasing rapidly. Pharmacological treatments for obesity are often expensive and come with adverse side effects. In contrast, natural remedies used in traditional Indian medicine have been successfully applied in clinical practice and could be valuable targets for future, more affordable, and less harmful anti-obesity medications. Numerous bioactive components in Indian medicinal plants used to treat obesity have undergone extensive chemical and pharmacological analysis. Data on 30

commonly used medicinal plants were evaluated, considering their biological origins, anti-obesity active principles, and pharmacological test results. While treatment approaches for overweight and obese individuals have evolved, most therapies remain pharmacological or biological. It is crucial to raise awareness about the use of herbal remedies for preventing and treating obesity, along with the supporting evidence. Obesity is a chronic metabolic disorder resulting from increased energy intake and decreased physical activity. It is characterized by the excessive accumulation of fat in the body, surpassing normal levels, and is a significant global health issue. Obesity significantly raises the risk of various diseases, including cardiovascular disease, diabetes mellitus, cancer, high blood pressure, and dyslipidemia. In India, Anti-Obesity Day is observed on November 26<sup>th</sup> each year. A person is considered obese if their body weight exceeds the normal range by more than 20%. A BMI between 25 and 29.9 indicates overweight status, while a BMI of 30 or higher categorizes an individual as obese. BMI is calculated by dividing a person's weight in kilograms by their height in meters squared ( $\text{kg}/\text{m}^2$ ).

The formulated herbal tablet for treating obesity contained a combination of *Garcinia cambogia* and *Commiphora mukul* (Guggul). *Garcinia cambogia* is primarily used as an anti-obesity agent and is commonly available in capsule form; thus, a tablet form was developed. Herbal drugs are increasingly used today due to their fewer side effects compared to synthetic drugs.

Oral drug administration is the most popular and successful method for conventional drug delivery. It offers convenience, ease of administration, flexibility in dosage form design, ease of production, and low cost. Tablets are solid preparations, each containing a single dose of one or more active substances, typically made by compressing uniform volumes of particles. They are intended for oral administration and are usually produced using methods such as wet granulation, double compaction, or direct compression. These tablets are designed for rapid disintegration and drug release, especially for drugs targeting local effects in the gastrointestinal tract.

Herbal plants have been utilized in pharmaceuticals for managing various human diseases. The fruit of *Garcinia cambogia*, known for its sour taste, is commonly used in food preparation and cooking. The fruit extract contains hydroxycitric acid, the main active constituent that influences weight loss by reducing food intake and suppressing appetite.

Traditionally, *Garcinia cambogia* has also been used for its astringent, constipating, cardio-tonic, antifungal, antidiabetic, antineoplastic, and lipid-lowering effects.

*Commiphora mukul* contains compounds such as Z and E guggulsterones, and guggulsterols I, II, III, IV, and V, along with guggul lipid. The oleoresin part of guggul is primarily utilized for its hypolipidemic properties. Traditionally, guggul has been used for its anti-inflammatory, antispasmodic, carminative, hypoglycemic, antiseptic, astringent, and anthelmintic effects.

Obesity is caused by a variety of factors, including sedentary lifestyles, increased caloric intake, genetic predisposition, and other physiological factors. The easy availability of fatty foods, sugary drinks, and snacks significantly contributes to obesity. A lack of physical activity further exacerbates the condition. Genetics play a crucial role, with children of obese parents being more likely to become obese themselves. The genetic influence on obesity development is estimated to be between 40-70%. Women are more prone to obesity than men, and certain ethnic groups, such as African Americans and Mexican-Americans, have higher obesity rates. Additionally, individuals of lower socioeconomic status are at greater risk of developing obesity, regardless of race.

Exercise is the only treatment that addresses all forms of overweight and obesity. However, not all patients are physically capable of engaging in regular physical activity, and any weight loss achieved through exercise alone is often slow and difficult to maintain. Consequently, many individuals who are overweight or obese may need to consider weight-loss medications, surgery, or other treatment options.

#### 4. Ingredients :

1. *Garcinia cambogia* (Kokam)
2. *Commiphora Wightii* (Guggul)
3. *Trigonella foenum – graecum* (Fenugreek)
4. *Zingiber Officinale Roscoe* (Sonth)

#### 4.1. *Garcinia cambogia* :

*Garcinia* supplements are often used to support weight loss in both men and women. The compounds within *Garcinia* tablets work together and may assist in combating free radicals and aiding the body's detoxification processes. Additionally, they might enhance immunity. Regular intake of *Garcinia* supplements can help improve energy levels, activity, and alertness, and may also contribute to maintaining healthy cholesterol levels.

*Garcinia cambogia*, which contains the active ingredient hydroxycitric acid (HCA), is commonly used for weight loss due to its appetite-suppressing effects, increased fat oxidation, and regulation of lipid biosynthesis. Numerous studies on both animals and humans suggest *G. Cambogia* may help reduce body weight and fat. However, some randomized placebo-controlled trials in humans have shown either no significant weight loss or only a marginal reduction over short-term periods, typically not extending beyond 12 weeks. Besides weight loss, experimental studies have noted several other benefits of *Garcinia*, such as anti-inflammatory, antiulcerogenic, antioxidant, hepatoprotective, cytotoxic, and erythropoietic effects. Research on animals has not indicated mortality or significant toxicity, and recommended human doses generally show no side effects. Nonetheless, *G. Cambogia* should not be used alongside other medications to avoid potential interactions. Many dietary supplements containing *G. Cambogia* or HCA are available on the market, though there have been concerns about toxicity, often linked to products with multiple ingredients. Adverse effects may also result from individual reactions or interactions with other concurrently used drugs.

**Mechanism of action:** *Garcinia cambogia* is thought to aid weight loss through multiple mechanisms, primarily targeting the liver and brain. In animal studies, hydroxycitric acid (HCA) has been shown to inhibit adenosine triphosphate citrate lyase, an enzyme that converts citrate to acetyl coenzyme A (acetyl-CoA) and oxaloacetate in the liver's citric acid cycle. This inhibition reduces the production of acetyl-CoA, a key component in fatty acid synthesis and lipogenesis, potentially decreasing fat production and food intake, thus promoting weight loss in humans. Additionally, acetyl-CoA is a precursor to malonyl-CoA, which inhibits carnitine palmitoyltransferase I (CPT 1), an enzyme crucial for lipid oxidation. Reduced malonyl-CoA production lessens CPT 1 inhibition, thereby enhancing lipid oxidation, which may lead to increased fat loss, especially with aerobic exercise. An in vitro study on rats demonstrated that HCA decreased serotonin reuptake in brain tissue by 20%, compared to a 30% decrease with fluoxetine and clomipramine, suggesting that higher serotonin availability may help suppress appetite.

**Chemical Constituents:** *Garcinia cambogia* contains several compounds, including fukugetin, garcinol, guttiferone K, oxy-guttiferone K, arginine, glutamine, hydroxycitric acid, malic acid, citric acid, gallic acid, and procyanidins.



Fig 1 – *Garcinia Cambogia*

Scientific Name: *Garcinia cambogia*

Common Name: Kokam, Malabar tamarind

Benefits:

1. *Garcinia cambogia* is used for weight loss and reduced cravings for unhealthy foods.
2. Improved bowel movements.
3. Stabilized sugar levels.

#### 4.2 *Commiphora Mukul* ( *Guggul* ) :

*Commiphora mukul*, commonly known as *guggul*, is a plant of significant therapeutic value, belonging to the *Burseraceae* family. This family includes many medicinal plants, and *C. Mukul* stands out due to its wide range of applications. The main medicinal component of *guggul* is its gum resin, which has been utilized in traditional medicine for centuries. In *Ayurveda*, *guggul* is recognized for its effectiveness in treating numerous ailments.

*Guggul* exhibits various pharmacological activities, including hypolipidemic, anti-obesity, anti-inflammatory, antioxidant, antiatherosclerotic, antiarthritic, cardioprotective, antidiabetic, cytotoxic, hepatoprotective, thyroid stimulatory, antimicrobial, neuroprotective, antiacne, antipsoriatic, antifertility, antihemorrhoid, and antiurolithic effects. It is also used in traditional, medicinal, and religious contexts. The plant's complex phytochemical profile is rich in bioactive compounds, including *guggulsterones*, terpenoids, steroids, flavonoids, *guggulsterols*, lignans, amino acids, and sugars. Due to its numerous

health benefits, *guggul* is in high demand in the pharmaceutical industry. However, this has led to overexploitation, causing it to become endangered. This article aims to explore the phytochemical composition and various therapeutic uses of *Commiphora mukul*.

**Constituents:** *Guggul* contains a diverse range of phytoconstituents, including volatile oils with terpenoidal compounds such as monoterpenoids, sesquiterpenoids, diterpenoids, and triterpenoids. It also includes steroids, flavonoids, *guggultetrols*, lignans, sugars, and amino acids.

**Mechanism of Action:** Obesity is a widespread issue marked by the accumulation of fat cells, influenced by caloric intake, metabolism, and genetic factors. *Guggul* enhances thyroid function, aids digestion, and speeds up metabolism, helping food move quickly through the gastrointestinal tract. It also inhibits the conversion of undigested carbohydrates into triglycerides and helps lower blood cholesterol by metabolizing existing fatty acids. As a result, *guggul* is recognized as an effective fat-burning agent.

Thyroid health is closely connected to metabolism, which plays a crucial role in an individual's ability to lose weight when combined with a balanced diet and regular exercise. It inhibits the conversion of undigested carbohydrates into fat cells and combats oxidative stress linked to obesity.



fig 2 – *Commiphora Mukul* ( Guggul )

Scientific Name: *Commiphora wightii*

Common Name: Guggul or Indian Myrrh

Benefits: 1. Weight Loss

2. Acne

3. Eczema, Psoriasis, Skin irritation

4. Hyperthyroidism

#### 4.3 *Trigonella foenum - graecum* (Methi):

Fenugreek, a herb frequently used in Indian cuisine, has a long history in alternative medicine. This common spice imparts a sweet and nutty flavor to dishes. A tablespoon of fenugreek seeds provides essential nutrients like iron, magnesium, and manganese, which contribute to overall health. Fenugreek supplements might help manage diabetes and other metabolic conditions. Research indicates that taking 50 mg of fenugreek powder with meals can reduce bad cholesterol, improve insulin function, and lower blood sugar levels. Additionally, the fiber in fenugreek helps control appetite, potentially aiding in weight loss by reducing hunger and food intake. Fenugreek also benefits the body by reducing systemic inflammation, thereby enhancing the conversion of food into energy. The fiber in fenugreek helps control appetite, which can lead to reduced food intake and potential weight loss. Additionally, fenugreek can reduce systemic inflammation, thereby improving the body's ability to convert food into energy.

**Mechanism of Action:** Obesity, characterized by abnormal growth of adipose tissue, is a significant risk factor for morbidity and mortality. Some studies indicate that fenugreek seed extract supplementation can reduce body and adipose tissue weight. This effect may be due to fenugreek's ability to expel carbohydrates from the body before they enter the bloodstream, promoting weight loss. Additionally, fenugreek seeds are rich in soluble fiber, which forms a gelatinous structure that can slow digestion and absorption of food in the intestine, creating a sense of fullness and suppressing appetite. As a result, fenugreek can positively affect blood lipids and sugar levels, exhibit antioxidant properties that protect organs, inhibit disease entry into the body, and reduce body fat, making it effective against obesity.

Fenugreek is abundant in soluble fiber, which aids in weight loss by expanding in the digestive tract and creating a feeling of fullness, thus helping to control appetite. This thermogenic herb also enhances exercise and weight loss efforts by boosting short-term energy levels and potentially regulating carbohydrate metabolism. Additionally, it can lower blood sugar levels after meals.

Fenugreek seeds may aid in weight loss due to their high fiber content, ability to break down fats, and positive effects on blood sugar regulation.



Fig 3 – *Trigonella foenum - graecum* (Methi)

Scientific Name : *Trigonella foenum - graecum*

Common Name: Fenugreek (Methi)

Benefits:

1. Aids in Weight loss
2. Improve Metabolism
3. Regulates Blood Sugar
4. Improve Gut health
5. Helps in Detoxification

#### 4.4 *Zingiber Officinale* Roscoe:

Ginger, known for its crisp and pleasantly spicy flavor, offers numerous health benefits, including its potential to support healthy weight management, particularly in terms of losing weight and reducing belly fat. According to Ayurvedic tradition, consuming ginger root can aid in maintaining a healthy weight.

Ginger, a plant native to Southeast Asia, has been utilized in Traditional Chinese Medicine for centuries. Its primary active compound, gingerol, is responsible for many of its therapeutic effects. Ginger is known for its strong anti-inflammatory properties and its ability to reduce oxidative stress. It can significantly lower body weight and waist-to-hip ratio, as well as reduce insulin and BMI levels. Research indicates that ginger not only decreases systemic inflammation but also enhances metabolism.

Ginger, whether taken as a supplement or used in food and drinks, may help protect against obesity and chronic diseases. Studies have established that ginger and its primary compounds have beneficial effects on obesity, diabetes, cardiovascular diseases, and related

conditions. Ginger aids in fat burning, carbohydrate digestion, and insulin secretion. Additionally, it has been shown to inhibit oxidative stress, reduce inflammation, and lower cholesterol and blood pressure. It may also help reduce atherosclerosis, the buildup of harmful fats in the arteries.

**Mechanism of Action:** Ginger contains compounds known as gingerols and shogaols, which activate various biological processes in the body. Research suggests that obesity can lead to oxidative stress and inflammation, primarily due to free radical damage. Ginger's antioxidant properties help manage these free radicals, while its anti-inflammatory effects reduce inflammation. Although these benefits do not directly cause weight loss, they can help prevent cardiovascular damage and other complications associated with being overweight as you work toward a healthier weight.

Ginger addresses the primary causes of belly fat accumulation, including overeating, hormonal fluctuations, and low energy levels that discourage exercise. Ginger promotes a feeling of fullness, making ginger consumption or drinking ginger water effective in reducing the tendency to overeat. It acts as a natural appetite suppressant, facilitating weight loss. Moreover, ginger is low in calories and versatile, suitable for fresh use in cooking or brewing in tea. Hormonal shifts and chronic stress can elevate cortisol levels in the blood, disrupting immune function and metabolism.



Fig 4 – *Zingiber Officinale Roscoe (Sonth)*

Scientific Name – *Zingiber Officinale Roscoe*

Common Name – Ginger ( Sonth )

Family – Zingiberaceae

Benefits –

1. Weight Loss
2. Treat Morning Sickness
3. Osteoarthritis
4. Lower Blood Sugar
5. Reduce Menstrual Pain

#### 5. Formula(F1)

Sr. No.	Ingredients	Quantity
1	Garcinia Cambogia	500mg
2	Commiphora Mukul	50mg
3	Fenugreek Powder	50mg
4	Ginger Powder	50mg
5	Microcrystalline Cellulose	85mg
6	HPMC	30mg
7	Magnesium Stearate	10mg
8	Starch	20mg
9	Areosil	5mg

## 6. General Procedure For Compressed Tablet:

Hydroxy Propyl Methyl Cellulose paste was prepared by adding a required quantity of HPMC powder to the water under use of mechanical stirrer it gives paste consistency. This Mixture was then used as binder solution in the preparation of granules. Weighed accurately Quantities of Garcinia Cambogia, Microcrystalline cellulose, and starch are properly mixed Together and added slowly HPMC slurry and then added guggul extract powder, Fenugreek Powder, Ginger powder are mix Together. Formulated the granules are passed in sieve no. 18 and dried at 50°C in hot air oven For 30 min. The dried granular mass was passed through a sieve no. 12 to obtain uniform sized Granules. The different batches of the granules were then mixed with calculated equal Quantities of magnesium stearate and aerosil and then were compressed into tablets Compression machine double rotary.

## 7. Evaluation Parameter:

### 7.1 Pre-compression parameters:

**7.1.1 Angle of repose:** The angle of repose of powder was determined by funnel method. The powder was Passed through a funnel fixed to a burette stand at a height of 2.5 cm. A graph paper was Placed below the funnel on the table. The height and radius of the pile was measured. Angle Of repose of the powder was calculated using the formula:

$$\text{Angle of repose } (\theta) = \tan^{-1} H / r$$

Where,

H = Height of the pile

R = Radius of the pile

**7.1.2 Bulk density:** It is the ratio of total mass of powder and the bulk volume of powder. It was measured By pouring the weighed powder into a measuring cylinder and initial weight was noted. From This the bulk density was calculated according to the formula mentioned below.

$$\text{Bulk density (Db)} = \text{Mass (M)} / \text{Bulk volume (Vb)}$$

Where,

M is the mass of powder,

Vb is the bulk volume of the powder

**7.1.3 Tapped density:** It is the ratio of total mass of the powder to the tapped volume of the powder. Volume Was measured by tapping the powder for 100 times and the tapped volume was noted. It is Expressed in gm/ml and is given by

$$\text{Tapped density (Dt)} = \text{Mass (M)} / \text{Tapped volume (Vt)}$$

Where,

M is the mass of powder

Vt is the tapped volume of the powder.

**7.1.4 Compressibility index:** It is based on the apparent bulk density and the tapped density, the percentage Compressibility index of the bulkdrug was calculated by the following formula.

$$\% \text{ compressibility index} = \frac{\text{Tapped density} - \text{Bulk density}}{\text{Tapped density}} \times 100$$

**7.1.5 Hausner's ratio:** The ratio of tapped density and bulk density is called as hausner's ratio. It is an Indirect index of ease of powder flow. It was calculated by the following formula.

$$\text{Hausner ratio} = \text{Tapped density (Dt)} / \text{Bulk density (Db)}$$

### 7.2 post-compression:

**7.2.1 Weight variation:** Weighed 20 tablet individually and then calculate the average weight. Then Percentage deviation was also calculated by using average weight and individual weight. It Was calculated by the following formula:

$$\% \text{ deviation} = \frac{\text{Average weight} - \text{Individual weight}}{\text{Average weight}}$$

**7.2.2 Dimensions:** Thickness and diameter of the tablet was measured by using Digital Verniercaliper. 3 tablets Of the formulation were picked randomly and measured individually.

**7.2.3 Friability:** The friability is measure of tablet toughness. Roche Fraibilator was used to measure the Friability of tablet. 10 tablets were weighed accurately and placed in the friabilator chamber That revolves 25 rpm for 4 min falling the tablets through a distance 6 inch with each rotation. After 4 min 100 rotations was completed then tablets were reweighed. The

$$\text{Friability (\%)} = \frac{\text{Initial Weight (W1)} - \text{Final Weight (W2)}}{\text{Initial Weight (W1)}} \times 100$$

calculated % friabilator by using formula:



**7.2.4 Hardness:** The force of required to tablet crush in compression test. The method used for tablet Hardness testing if the tablet placed between two jaws and crushed the tablet. The hardness of Tablet measured by using Pfizer tester. The unit of hardness is kg/cm<sup>2</sup>.

**7.2.5 Disintegration Time:** Disintegration time is the time taken by a to break down a tablet into small particles or Granules is called as disintegration. The

disintegration test is carried out in an apparatus Containing basket rack assembly with six glass tubes of 7.75 cm length and 2.15mm in Diameter the bottom of which consists of 10 mesh sieve. The basket is raised and lowered 28-32 times per minute in the medium of 900 ml which is maintained at 37° C. Six tablets were Placed in each of the tubes and the time required for complete passage of tablet fragments Through the sieve (# 10) was considered as the disintegration time of the tablet.

## 8. RESULT:

### 8.1 Organoleptic Properties:

Sr. No.	Active Pharmaceutical Ingredients	Test	Observation	Result
1.	GarciniaCambogia	Colour	Light yellowish brown	Complies
		Odour	Charcteristics	Complies
		Taste	Sour taste	Complies
2.	Commiphora Mukul	Colour	White to off white powder	Complies
		Odour	Characteristics	Complies
		Taste	Acrid taste	Complies
3.	Fenugreek	Colour	yellowish	Complies
		Odour	Characteristics	Complies
		Taste	Sweet, Nutty Flavor	Complies
4.	Sonth	Colour	Whitish	Complies
		Odour	aroma	Complies
		Taste	Pungent	Complies

### 8.2 Moisture content determination:-

Sr. No.	Active Pharmaceutical Ingredients	Standard LOD	Observed LOD
1.	GarciniaCambogia	5.0%	3.9%
2.	Commiphora Mukul	5.0%	3.8%
3.	Fenugreek	5.0%	3.5%
4.	Sonth	5.0%	3.6%

**Results of Loss on Drying (LOD)****8.3 Physicochemical Characterization: - Pre and Post compression parameter:**

Formula	Angle of repose (°)	Bulk density gm/ ml	Tapped density gm/ml	Compressibility index %	Hausner's Ratio
F1	24.66±0.099	0.479±0.112	0.557±0.108	14.24±0.034	1.16
Formula	Avg. Weight (mg)	Thickness (mm)	Hardness kg/cm	Friability %	Disintegration Time (min.)
F1	802.4±0.12	6.23±0.03	3.6±0.03	0.19	15 min

**Pre and post Compression parameter of optimized formula F1****8.4 Results of stability studies**

Physical and chemical parameters Anti-obesity herbal tablet (F1) after 1month

Parameter	Initial month	After 1 month
Description	Off white or creamish colour	No change
Avg. weight (mg)	802.2 mg	801.1 mg
Hardness kg/cm <sup>2</sup>	3.5 kg/cm <sup>2</sup>	3.5 kg/cm <sup>2</sup>
Thickness (mm)	6.23 mm	6.23 mm
Friability (%)	0.19 %	0.18 %
Disintegration Time(min)	15 min.	15 min.

**9. DISCUSSION:**

In the pre-compression stage, the blend was analyzed for parameters such as angle of repose, bulk density, tapped density, compressibility index, and Hausner's ratio, all of which were found to be within acceptable limits. Following this, further studies were conducted.

For the post-compression parameters of the tablets:

- The total weight of each formulation varied, but the weight variation was within the acceptable limit of ±5%.
- Friability was less than 5%, which is satisfactory, ranging from 0.19% to 0.32%.
- Tablet thickness was consistent across all formulations, ranging from 6.23mm to 6.35mm.
- Tablet hardness was good, ranging from 3.6 to 5.3 kg/cm<sup>2</sup>.
- The disintegration time for the prepared tablets was within 15 minutes.

In the present study, the combination of C. Mukul and G. Cambogia was found to be the most effective compared to other combinations. These results suggest that the combination tablet of C. Mukul and G. Cambogia may help reduce weight gain induced by a

high-fat diet, likely due to decreased appetite in the combined group.

**10. CONCLUSION:**

Garcinia cambogia, Commiphora mukul, Fenugreek Powder and Sonth Powder are combined to create a drug used for treating obesity. This combination tablet, formulated with different excipients, had a total weight of 800 mg. The identification tests for the pure extracts included description, solubility, and pH. Before being compressed into tablets, the powder and blends were evaluated for bulk density, tapped density, compressibility index, and Hausner's ratio. The results of this study indicate that the tablet containing G. Cambogia, C. Mukul, Fenugreek Powder and Sonth Powder had a positive effect on body weight, reducing weight gain. These findings suggest that G. Cambogia and C. Mukul may serve as effective antihyperlipidemic agents, offering both preventive and curative benefits against hyperlipidemia. However, further research is needed to understand the precise mechanisms of action.

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