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Formulationand Evaluation of Herbal Effervescent Granules for Digestive Stimulant Activity

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ABSTRACT: This research was to formulated and evaluate effervescent granules of Trachyspermumammi seed extract that would mask the peppery taste of herbal drugs and increase the dissolution,responsible for hasteing the onset the action. Citric acid,Tartic acid, Sodium bicarbonate and other formulation ingredients were used to formulate effervescent granules using the wet granulation method. Trachyspermumammi seed extract was prepared in four different formulation(F1-F4) and evaluation test for flow properties,pH and effervescence time were carried out. The outcomes demonstrated the formulated granules have good flow properties. The effervescent time for all four formulas is under three times.According to the observation,formulation F4 was found be optimized because it has best drug release (97.98 %) and effervescent time of about 96 sec.

Keywords: effervescent granules,Trachyspermumammi ,wet granulation ,quicker on action.

I. CHAPTER -1

INTRODUCTION

1.1 Introduction of Granules:

Effervescent granules are the granules dosage form having drug and effervescent base which is composed of sodium bicarbonate,citric acid and tartic acid , when added towater,the acids and the base react to liberate CO2, resulting in effervescence. Effervescent granules fromas the carbonated solution masks the underirable taste of drug. The weekly acidic drugs like ENO when formulated in effervescent granules forms exhibit increased absorption from gastric environment as most of the drug remains in unionized form.

1.2 Introduction of digestivesystem:

The Digestive system consist of a group of organs the break down the food we eat into smaller molecules that can be used by body cells. Two groupos of organ compose the digestive system:

1. Gastrointestinal Tract
2. Accessory digestive system

1.Gastrointestinal Tract:

Is a continuous tube that extends from the mouth to the anus through the thoracic and abdominopelvic cavities. Organs of GI tract include the mouth , most of the pharynx, esophagus,stomach, small intestine, large intestine. The length of GI tract is about 5-7 meters in a living person when muscles along the wall of GI tract organ are in a state of tonus and the loss of muscle tone after death.

3. Accessory digestive system:

Are include the teeth,tongue,salivaryglands,liver,gall bladder and pancrease, Teeth aid in the physical breakdown of food, and the tongue assists in chewing and swallowing. The other accessory digestive organ , however never come into direct contact witn food. They procedure or store secreation that flow into the GI tract through ducts, the secreation aid in the chemical brealdpwn of food.

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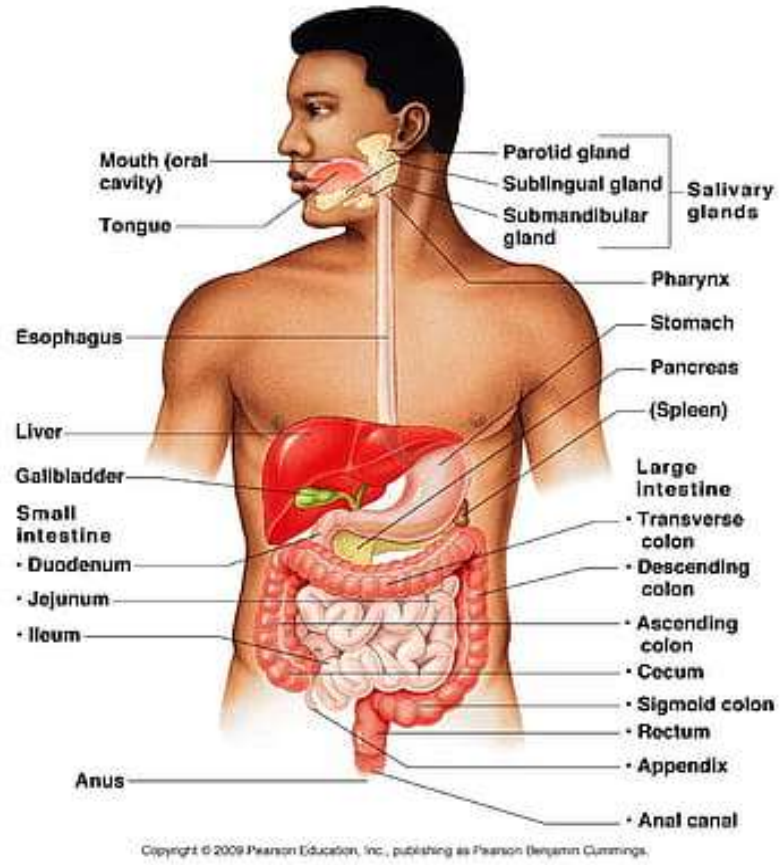

(Figure 1.1 : Digestive system)

II. CHAPTER -2 :INGREDIENTS

2.1 Ingredients used along with its properties:

Sr.No	Mateials	Properties
1	Carom seeds	Improve digestion Antibacterial Antifungal Anti-inflammatory Antioxidants Antihypertensive
2	Citric acid	Release CO2 Flavoring agent Preserving agent
3	Tartic acid	Release CO2 Flavoring agent Used as dusting powder Making silver mirrors
4	Sodium bicarbonate	Non-flammable Relieve heartburn Acid indigestion

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5	Sucrose	Odorless Flavoring agents Preserving agent Bindeing agent
6	Sodium starch glyconate	White to off-powder powder Binding agents Free-flow property
7	Orange oil	Reduce inflammation Reduce blood pressure Low anxiety level Promote weight loss

2.2. Formuation :

Sr.No	Ingredients	Batch 1	Batch 2	Batch 3	Batch 4
1	Carom Extract (gm)	1	1	1	1
2	Citric acid (gm)	2.5	2	2.5	2.5
3	Tarticsacid (gm)	3	2.5	2.5	1
4	Sodium bicarbonate(gm)	5	3	4	3
5	Sucrose (gm)	1	0.5	1	1
6	Sodium starch glyconate (gm)	1	1	1	1
7	Orange oil (ml)	1	1	1	0.5

III. CHAPTER 3: METHOD USED IN FORMUALTION

EXTRACTION METHOD:

❖ Take 50 gm carom seeds was soaked in 200 ml water. Shake well and then left to stand over night. Next day, Obtained extract were filtered over filter paper and filtrate was collected. Then, water remove by a evaporation method. Extract was obtained.

PROCEDURE :

❖ Granules prepared by wet granules method. All formuation ingredients are mixed according aboveformulation table and add binding agents. Wet mass was passed throght sieve no.20 to separate out grains. Then granules spent to dry in hot air ven at 40°C.

IV. CHAPTER -4 : EVALUATION PARAMETERS

1.Organoleptic Property:

State : Solid
Colour: Brown
Odour : Pleasant

2. Angle of repose:

- The angle of repose was calculated with fixed funnel method.
- The mixture was slowly poured down the funnel until the tip of conical pile reached very end.
- The conical piles base radius was calculated used is:

$\tan\square = h/r$

Where ,
$\square$ = Angle of repose
h = Height of pile
r = Radius of pile

3.pH :

- Granules was dissolved in 100 ml of distilled water.
- pH of the solution ismeasured by using pH meter.

4.Effervescence time :

- 100 ml distilled water was taken in beaker, one dose of effervescent granules poured in beaker.
- Effervescent time and production time was recorded.

V. CHAPTER -5 : RESULTS AND DISCUSSION

Sr.No	Parameters	Observation
1	State	Solid
2	Colour	Brown
3	Odour	Pleasant
4	Angle of repose	Good
5	pH	5-6
6	Effervescence time	96 sec

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VI. CHAPTER-6 : CONCLUSION

Trachyspermumammiis having many potent phytoconstituents responsible for carminative property,antispasmodic ,abdominal pain and lack of apetite but due to it is pungent and peppery tasteit is difficult to consume as is also and thus to taste mask and fast effective dosage form,in this study effervescent granules of trachyspermumammihas been prepared and evaluated. For this four different formulation of Trachyspermumammi were formulate using citric caid, tartic acid and sodium bicarbonate. ASnd further various studies like flow properties, effervescent time and pH study it has been found in that F4 formulation found to be best formulation.

CHAPTER -7 : REFERENCES

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