



A Review on Tooth Paste Tablet

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ABSTRACT:

Nowadays we have all become very aware of toothpaste and its usage. Currently in the market medicated and herbal toothpaste are available. It's a huge competition for better results from toothpaste for the prevention of tooth problems. This review article aims to explore dental problems with sparing on a modified tablet dosage form i.e. toothpaste tablet which will be helpful to reduce plastic waste, will be eco-friendly, cost-effective, and improve dental health.

INTRODUCTION:

A toothpaste tablet having a tablet binder in an amount sufficient to form a tablet, a surfactant in amount sufficient to reduce surface tension and increase the rate of dissolution of the tablet in contact with saliva, a cranberry extract in an amount sufficient to reduce micro-adhesion of bacteria, an abrasive in an amount sufficient to mechanically remove debris from a tooth surface and debride plaque, and an artificial sweetener in an amount sufficient to adjust the flavor of the tablet when chewed by a user.

REQUIREMENTS:

CHEMICALS	APPARATUS
1. Calcium carbonate	1. Mortar and pestle
2. Sodium lauryl sulphate	2. Sieves
3. Glycerine	3. Single punch machine
4. Gum tragacanth	4. Electronic balance
5. Saccharin	5. Spatula
6. Starch	
7. Lactose	

FORMULATION:

SR NO.	INGREDIENTS	QUALITY GIVEN	QUALITY (2 TABLET)	ROLE OF INGREDIENTS
1	Calcium Carbonate	56 gm	5.6 gm	Abrasives
2	Sodium Lauryl Sulphate	1gm	0.1 gm	Detergent
3	Glycerin	22gm	2.2 gm	Humectant
4	Gum tragacanth	1.5 gm	0.15 gm	Thickening agent
5	Purified water	19.4 gm	1.94 gm	Vehicle
6	saccharine	0.1 gm	0.01 gm	sweetner
7	starch	22 gm	2.2gm	Disintegrating agent
8	Lactose	75 gm	7.5 gm	Bulking agent
9	Menthol	q.s	q.s	Flavor
10	Sodium benzoate	q.s	q.s	Preservative
11	Starch paste	q.s	q.sa	binder

Factor = Required quality /Quantity given

Factor = 2/20=0.1

PROCEDURE:

1. Weigh all the powdered ingredient.
 2. Separately pass all ingredient sieves no .10
 3. Triturate all powdered ingredients into mortar for size reduction and uniform mixing.
 4. Then add starch paste in above blend and mix well to produce coherent mass.
 5. Pass coherent mass through sieves no .10 and dry and granules at 60 degree C for 1 Hour.
 6. Then place butter paper at bottom and arrange sieves no. 22 and 44 by ascending order.
 7. Then pass the dried granules through sieves no. 22 below which sieves no .44 is kept
 8. The granules retained on sieves on .44 are the desired granules and powder which pass through sieves no. 44 are fines retained on butter paper.
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METHODS:

Tablet are prepared by three methods

1. **Wet granulation method.**
 2. **Dry granulation method.**
 3. **Direct compression method.**
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WHILE MANUFACTURING OF TABLET VARIOUS DEFECTS ARISE SUCH AS: -

1. Binding
 2. Sticking
 3. Capping and lamination
 4. Chipping and cracking
 5. Mottling
 6. Weight variation
 7. Hardness variation
 8. Double impression
 9. Tablet expansion
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EVALUATION OF TOOTH PASTE TABLETS:

1. Size & Shape:
2. Unique identification marking
3. Organoleptic properties:
4. Hardness and Friability
5. Weight Variation test (U.S.P.)
6. Content Uniformity Test
7. Disintegration Test (U.S.P.)
8. Disintegration time
9. Dissolution Test (U.S.P.)

OBSERVATION AND EVALUATION TABLE: -

Name of Preparation	Test	Specification	Observation
Granules ready for powder compression of toothpaste tablet	Discription	White granules powder	Confirmed
	odour	odourless	Confirmed
	Nature of granules	Free flowing granules	Confirmed

LABELLING OF FORMULATION:

TOOTH PASTE TABLET		
Each tablet contains		
1	Calcium carbonate	5.6 gm
2	Sodium lauryl sulphate	0.1gm
3	Glycerin	2.2gm
4	Gum tragacanth	0.15gm
5	Purified water	1.95gm
6	Saccharine	0.01gm
7	Starch	2.2gm
8	Lactose	7.5gm
9	Menthol	q.s
10	Sodium benzoate	q.s
11	Starch paste	q.s
Category: Abbrasive		
Dose -1 to 2 tablet as required		
Storage: stored in well closed container in a cool place		
Ideal college of pharmacy, posheri, wada.		

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CONCLUSION:

It is concluded that the developed toothpaste tablets may be a better alternative to the conventional uses of the toothpaste tubetables are simple and convenient to use. They provide an accurately measured dosage of the active ingredient in a convenient portable package and can be designed to protect unstable medications or disguise unpalatable ingredients. Easy to use in traveling. It does not require water, it can be taken at any time and place because they're waterless, toothpaste tablets don't require chemical preservatives, and the tablets come in fluoride and fluoride-free versions. Reduce product loss, to develop an overall general awareness for the entire consumers regarding useless waste. The future of the earth is in our hands, and by reducing, reusing, and recycling, we can ensure that the environment will be sustained for many years to come.

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