A Review on Sublingual Tablets

Prathusha P and Praneeth Kamarapu
1Browns College of Pharmacy, Khammam, Telangana, India
2Department of Pharmaceutical Sciences, The University of Greenwich, London, UK

Abstract

Drug delivery through the oral mucous film is considered to be a promising contrasting option to the oral course.

Sublingual course is a quick onset of activity and preferred patient consistency over orally ingested tablets. Sublingual (contracted SL), from the Latin for “under the tongue”, alludes to the pharmacological course of organization by which drugs diffuse into the blood through tissues under the tongue. Sublingual course is a valuable when fast onset of activity is wanted with preferable patient consistency over orally ingested tablets. Regarding penetrability, the sublingual al range of the oral pit (i.e. the floor of the mouth) is more porous than the buccal (cheek) range, which thusly is more penetrable than the palatal (top of the mouth) territory.

Factors affecting the sublingual absorption

1. Lipid solubility of drug
2. Saliva pH and pKa
3. Oral epithelium thickness
4. Partition coefficient

Methods of Preparation

Following methods can be used to prepare sublingual tablets
1. Direct compression Method
2. Compression molding
3. Freeze-drying

Direct compression method

This is a commonly used method for preparation of sublingual dosage forms and it is a simple and most economical method. Direct compression Method is best suitable for heat labile drugs. In this method we are using direct compressible and soluble ingredients, lubricant and a superfusdisintegrant (for example Crospovidone, Micro crystalline cellulose etc.), dry binder, sweeteners and flavors [22-24].

Compression molding

Tablets produced by this method will disintegrate and dissolved rapidly (within 4 to 11 sec). Disadvantage of this method is tablets having poor mechanical strength, to overcome this problem binders are added to formulation blend.

Freeze-drying

This is costly and consumes more time compared to direct
compression; this method produces tablets of poor mechanical strength. Tablets produced by this method will have high porosity and dissolve instantly. This method is suitable for heat sensitive drugs.

### Evaluation Tests

#### Hardness test

The hardness of the tablets was determined by using Hardness testers like Electro lab hardness tester, Monsanto hardness tester. The tablets should be resistance to breakage under storage conditions.

#### In-vitro dispersion time

This test can be done by taking 50 ml of Phosphate buffer pH 6.8, three tablets were tested from each batch and note the dispersion time.

#### Wetting time

Place the tablet at the center of absorbent paper fitted into a petridish. After the paper was completely wetted with refined water, overabundance water was totally depleted out of the dish. The time required for the water to diffuse from the wetted retentive paper all through the entire tablet was then recorded utilizing a stopwatch.

#### Friability

Roche friabilator can be utilized to decide the friability. Check the weight of tablets and place them in friabilator, The tablets were pivoted in the friabilator for no less than 4 minutes. At the end of test tablets were cleaned and reweighed, the misfortune in the heaviness of tablet is the measure of friability.

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\text{% Friability} = \frac{\text{Loss in weight}}{\text{Initial weight}} \times 100
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#### In-vitro disintegration test

This test can be performed by using USP disintegration apparatus, distilled water was used as medium.

The time required to obtain complete disintegration of all tablets was noted.

#### In-vitro dissolution test

This test can be performed by using USP dissolution test apparatus type II, 500 ml of distilled water was taken as a dissolution medium, samples were collected at predetermined time intervals and analyze the collected samples using HPLC.

### Conclusion

Sublingual medication conveyance has been utilized for definition of numerous medications with perspective purpose of fast medication discharge and speedy onset of activity. Sublingual items were produced to defeat the trouble in gulping ordinary tablet, among pediatric, geriatric furthermore, psychiatric patients with dysphagia. Compared to defeat the trouble in gulping ordinary tablet, among pediatric, discharge and speedy onset of activity. Sublingual items were produced of numerous medications with perspective purpose of fast medication discharge and speedy onset of activity. Sublingual items were produced of numerous medications with perspective purpose of fast medication discharge and speedy onset of activity.

### References


