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Review Article

Fast Dissolving Tablets: A Review

Chaitanya Ingale*, Trusha Shangrapawar, Dr. Ashok Bhosale

PDEA's Shankarrao Ursal College of Pharmaceutical Sciences and Research Centre, Kharadi, Pune- 411014, Maharashtra, India

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ABSTRACT

Fast dissolving tablets emerge as one of the popular and widely accepted dosage forms, especially for pediatric patients because of incomplete development of the muscular and nervous system and a case of geriatric patients suffering from Parkinson's disorder or hand tremors. The convenience of administration and improved patient compliance are important in the design of oral drug delivery system which remains the preferred route of drug delivery inspite of various disadvantages. One such problem can be solved in the novel drug delivery system by formulating "mouth dissolving tablets" (MDTs) which disintegrates or dissolves rapidly without water within few seconds in the mouth due to the action of superdisintegrant or maximizing pore structure in the formulation. Mouth dissolving tablets are advantageous particularly for pediatric, geriatric and mentally ill patients who have difficulty in swallowing conventional tablets and capsules. The review describes the various formulation aspects, superdisintegrants employed and technologies developed for MDTs, along with various excipients, evaluation tests, marketed formulation and drugs used in this research area.

INTRODUCTION

Definition

A fast-dissolving drug delivery system, in most cases, is a tablet that dissolves or disintrigrants in the oral cavity without the need of water or chewing. Most fast-dissolving delivery system films must include substances to mask the taste of the active ingredient. This masked active ingredient is then swallowed by the patient's saliva along with the soluble and insoluble excipients.4-5 These are also called melt-in-mouth tablets, repimelts, porous tablets, oro-dispersible, quick dissolving or rapid disintegrating tablets.

An ideal Properties of FDT[6]

Require no water for oral administration, yet dissolve / disperse/ disintegrate in mouth in a matter of seconds.

Have a pleasing mouth feel.

***Corresponding Author:** Chaitanya Ingale
Address: *PDEA's Shankarrao Ursal College of Pharmaceutical Sciences and Research Centre, Kharadi, Pune- 411014, Maharashtra, India.*
Email ✉: chaitanyaingale670@gmail.com

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Have an acceptable taste masking property. Be harder and less friable Tablet is disintegrated rapidly along with quick dissolution and absorption in the oral cavity. Rapid drug therapy intervention is possible. FDT provides easy portability and accurate dosing manufacturing, good physical and chemical stability as an ideal alternative for pediatric and geriatric patients. Bioavailability of drugs is enhanced due to absorption from mouth, pharynx, and esophagus.

Limitations of FDTS [10, 11]

• The mechanical strength of tablets is one of the main drawbacks of FDTs.
• FDT are very porous and soft molded metrics or compressed in a tablet with low compression, which makes tablet friable and brittle which difficult to handle.
• Bad tastes drugs are difficult to formulate as FDT; special precaution should have to be taken before formulate such kind of drug.
• Several FDT are hygroscopic cannot maintain physical integrity under normal condition from humidity which requires a specialized package.
• Dryness of the mouth due to decreased saliva production may not be good candidates for these tablet formulations.
• Rate of absorption from the saliva solution and overall bioavailability.
•Drug and dosage form stability.

Excipients used for the preparation of FDT

FDT contain one superdisintegrant, a diluent, a lubricant. Contain optionally a swelling agent, a permeabilizing agent, sweeteners and flavouring agents.

Super disintegrants [12-14]

As day's passes, demand for the faster disintegrating formulation is increased. For, that pharmacist needs to formulate disintegrants i.e. Super disintegrants which are effective at less concentration and have greater disintegrating efficiency. The superdisintegrant must quickly wick saliva into that tablet to generate the hydrostatic pressure and volume expansion necessary to provide rapid disintegration in the mouth.

Examples

- Croscarmellose Sodium
- Crospovidone
- Cross-linked alginic acid
- Gellan gum
- Sodium starch glycolate
- Soy polysaccharide meant for diabetics.
- Xanthan gum

Bulking materials [16, 17]

Bulking materials are very important in the development of fast dissolving tablets. They contribute the functions of a diluent, filler and cost reducer. Bulking agents improve the texture of the tablets that consequently enhances the disintegration in the mouth, besides adding volume and reducing the concentration of the active in the formulation. The bulking agents for this formulation should be sugar-based such as mannitol, polydextrose, lactose derivatives such as directly compressible lactose (DCL) and starch hydrolysate for higher aqueous solubility and good sensory perception. Mannitol especially has high aqueous solubility and good sensory perception, as it provides a cooling effect due to its negative heat of solution. Bulking agents are added in the range of 10% to about 90% by weight of the final composition. Sugar based excipients are two types they classify on the basis of moulding and dissolution rate:

Type 1 saccharides: (lactose and mannitol) which exhibit low moldability but high dissolution rate.

Type 2 saccharides: (maltose and maltitol) which exhibit high moldability but low dissolution rate

Emulsifying agents [5, 17]

When creating fast-dissolving tablets, emulsifying agents are particularly important since they facilitate rapid medication release and disintegration without requiring chewing, swallowing, or water consumption. Emulsifying chemicals also improve bioavailability and stabilise immiscible mixes. Lecithin, sucrose esters, propylene glycol esters, alkyl sulphates, and other emulsifying agents are used in formulations of fast-dissolving tablets. These can range from 0.05% to around 15% of the final formulation's weight.

Lubricants [5, 15]

These excipients can help make the tablets more appealing once they dissolve in the mouth, but they are not necessary. Lubricants facilitate the passage of drugs from the mouth to the stomach and lessen grittiness.

Flavours (taste masking agents) and sweeteners [5, 17]

For the formulation, flavours and taste masking agents are helpful since they increase the goods' palatability and patient satisfaction. By adding these components, the bitterness and unfavourable flavours of some active substances are lessened. Fast-dissolving tablets' organoleptic properties can be improved by adding both natural and artificial tastes. In addition to non-nutritive sweeteners like aspartame, sodium saccharin, sugar alcohols, and sucralose, a variety of sweeteners are available, such as sugar, dextrose, and fructose. The addition of sweeteners gives the mixture body and a pleasing flavour.

Mechanism of action of superdisintegrants

- Capillary action/Water wicking
- Swelling
- Heat of wetting
- Disintegration particle/particle repulsive forces
- Release of gases
- Enzymatic action

Capillary action

According to this method, the tablet's particles are mostly surface wetted in the specified aqueous medium. Water then seeps into the tablet's centre, weakening the inter-particle link and facilitating tablet breakage. As a result, it is called capillary action or wicking because the moisture gradually increases within the tablet, ultimately leading to tablet fracture. In this case, the tablet's porosity is crucial since it is a basic necessity for rapid and simple wetting and water absorption. The rate of wetting increases and the disintegration time decreases with increasing material porosity.

Swelling

Superdisintegrants which act by this mechanism work on the fundamental of “swell” and “burst” When the Superdisintegrant comes in contact with the water/saliva, the aqueous phase extras more adhesive force upon the superdisintegrant as compared to other excipients and drug resulting in swelling and trust or breaking apart of the tablet.

Heat of wetting

Because disintegrants have exothermic properties, they become wet and cause localised stress from capillary air expansion, which aids in the tablet's disintegration. However, it only covers a small number of disintegrates and is unable to explain how the majority of contemporary disintegrating agents work.

Disintegration particle/particle repulsive forces

A theory of particle repulsion has been put out by Guyot-Hermann. According to this view, the swelling caused by "non-swellable" tablets dissolves. Water is necessary for the mechanism of disintegration, which is the electric repulsive interactions between particles. Researchers discovered that wicking takes precedence over repulsion.

Release of gases

When bicarbonate and carbonate come into touch with citric or tartaric acid, carbon dioxide is released within the tablets. The tablet is under strain from the tablet disintegrants. Very quickly dissolving or fast disintegrating pills are made with the effervescent combination. Either the effervescent blend is introduced right before compression, or it can be added to two different formulation fractions.

By enzymatic reaction

The body's natural enzymes function as disintegrants. Enzymes aid in disintegration by destroying the binder's binding properties. Actually, the tablet bursts owing to swelling, pressure applied radially or externally, or the rapid absorption of water, which results in a massive increase in the amount of granules to aid in disintegration.

Techniques for preparing fast dissolving tablets

There are numerous methods for creating fast-dissolving tablets. The six main methods that are frequently employed in the production of these tablets have been covered here. [18, 19]

- Freeze drying/lyophilisation
- Tablet moulding
- Spray drying
- Direct Compression
- Sublimation
- Mass Extrusion

Freeze-drying or lyophillisation

The process of removing water from a frozen product is called lyophilization. This method produces a porous, amorphous structure that dissolves quickly. This article [16] describes a typical process used in the production of FDT utilising this technique. The freeze-drying method has shown increased bioavailability and better absorption. The lyophillization technique's main drawbacks are its high cost and duration, its fragility, which renders traditional packaging inappropriate for these items, and its poor stability under stressful circumstances [17, 18].

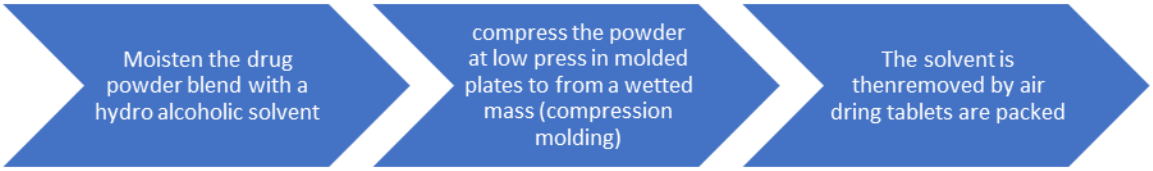
Steps by step procedure of lyophillisation of FDT

The freeze-drying technique has demonstrated improved absorption and increase in bioavailability. The major disadvantages of lyophillisation technique are that it is expensive and time-consuming; fragility makes conventional packaging unsuitable for these products and poor stability under stressed conditions [17, 18

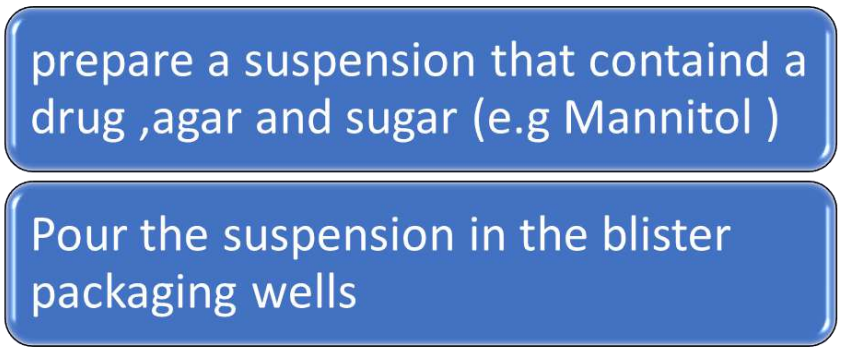
Tablet molding

There are two sorts of moulding processes: solvent method and heat method. FDT produced using the solvent process has a porous structure that speeds up dissolution and is less compact than compacted tablets. One major concern is the mechanical strength of moulded tablets. It is necessary to include binding agents, which increase the tablets' mechanical strength [23]. This method has an additional issue with taste masking. To create the masked drug particles, a molten mixture of hydrogenated polyethylene glycol, cottonseed oil, lecithin, and sodium carbonate—an active ingredient—is spray-congealed into a lactose-based tablet triturate form. In contrast to the lyophillization approach, the industrial maker can easily scale up the production of tablets using the moulding technique.

Solvent method



Heat method

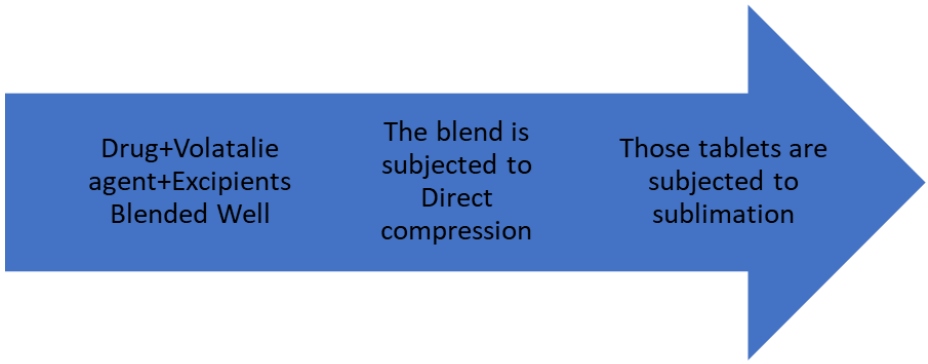


Spray drying

This method uses superdisintegrants such croscarmellose, sodium starch glycolate, or crospovidone, mannitol as a bulking agent, and gelatin as a matrix and supporting agent. In an aqueous media, tablets made from spray-dried powder that contains bulking agent, super disintegrant, an acidic component (citric acid), and/or an alkaline ingredient (such as sodium bicarbonate) have been shown to dissolve in 20 seconds. When compacted into tablets, this spray-dried powder demonstrated enhanced solubility and rapid disintegration [24].

Sublimation

Sublimation is the process by which volatile elements are incorporated to create a porous combination. Benzoic acid, ammonium bicarbonate, ammonium carbonate, camphor, naphthalene, urea, phthalic anhydride, and urethane are examples of very volatile substances that can be compacted into a tablet along with additional excipients. This volatile element is subsequently eliminated with the aid of the sublimation process, leaving behind a very porous matrix. It has been claimed that tablets made using this method often dissolve in 10–20 seconds. As pore-forming agents, solvents such as cyclohexane and benzene can be employed [25].



Direct compression

The simplest and most economical method of producing tablets is direct compression. This method can now be used to prepare Fast Dissolving Tablets due to the availability of better excipients, such as sugar-based excipients and superdisintegrants [26].

Superdisintegrants

For direct compression procedures, superdisintegrants are the key factor influencing the disintegration and eventual breakdown of the fast-dissolving tablets. The disintegration process is accelerated by the addition of additional substances such effervescent agents and water-soluble excipients.

Sugar based excipients

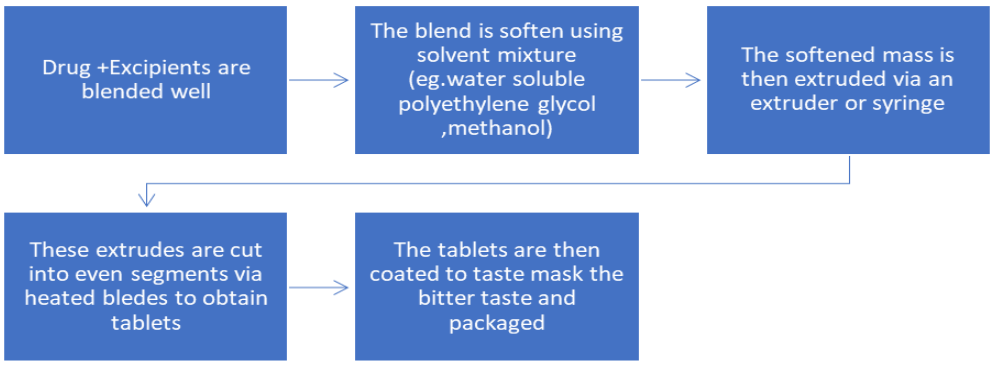
The direct compression technique can also be approached in this way. starch hydrolysate that exhibits excellent sweetness and aqueous solubility, which results in a pleasing mouthfeel and flavour masking ability. Lactilol, dextrose, isomalt, fructose, maltilol, maltose, mannitol, sorbitol, polydextrose, and xylitol are examples of sugar-based excipients, particularly bulking agents. Based on moulding and dissolution rate, Mizumito et al. have divided sugar-based excipients into two categories.

Type 1 saccharides (mannitol and lactose) exhibit low mould-ability but high dissolution rate.

Type 2 saccharides (maltilol and maltose) exhibit high mould-ability and low dissolution rate [27].

Mass-extrusion

This technology uses a solvent mixture of water-soluble methanol and polyethylene glycol to soften the active blend. The softened mass is then expelled through a syringe or extruder to create a cylinder product, which is then broken into even segments using a hot blade to create a tablet. To achieve taste masking, the dried cylinder can be utilised to cover bitter medication granules [28].



Patented technologies for fast dissolving tablets

Numerous pharmaceutical businesses have patented a number of technologies that were developed based on formulation characteristics and various processes. Below is a description of the patented technology: [29]

Zydis technology [30]

Zydis is a novel oral solid dose form that is freeze-dried and dissolves on the tongue in less than five seconds, allowing it to be eaten without water. To create a product that dissolves quickly, the medicine is physically confined in a water-soluble matrix and then freeze-dried. Water-soluble saccharides and polymer make up the matrix, which allows for quick disintegration and enough physical strength to resist handling. In order to create porous units for quick disintegration, water is used throughout the process.

Limitations

•The amount of drug added should generally be less than 400 mg for insoluble drugs and less that 60 mg for soluble drugs.

• The particle size of the insoluble drugs should not be less than 50µm and not more than 200 µm to prevent sedimentation during processing.

Advantages

• Buccal pharyngeal and gastric regions are all areas of absorption from this formulation. Pre-gastric absorption avoids first-pass metabolism and can be an advantage in drugs that undergo a great deal of hepatic metabolism.

• Patients who have difficulty swallowing oral medication due to dysphagia, stroke or medical conditions such as gastroesophageal reflux disease, multiple sclerosis or Parkinson's disease.

Disadvantages

• The process of freeze-drying is a relatively expensive manufacturing process.

• The formulation is very lightweight and fragile, and there of re should not be stored in backpacks or the bottom of purses.

• It has poor stability at higher temperatures and humidities.

• A water-insoluble drug can be incorporated only up to 400 mg per tablet or less. On the other hand water, the soluble drug can be incorporated only up to 60 mg.

Orasolv technology [31, 32]

CIMA Labs has developed Orasolv technology. The active medication in this method is taste-masked. The effervescent disintegrating agent is also present. To reduce oral dissolve time, fast-dissolving tablets are composed using a direct compression process at low compression force. The tablets are made using a tablet machine and traditional blenders. The resulting tablets are friable and soft, and they come in a specially made pick-and-place container.

Advantages [30]

There are two types of taste masking: rapid dissolving and dual. Drug strengths ranging from 1 mg to 750 mg have been treated with this technology. The disintegration time of a tablet can be tailored to be between 10 and 40 seconds, depending on its size.

Disadvantages [30]

Because of the effervescent mechanism, they are moisture-sensitive and need to be properly stored. minimal mechanical strength.

Durasolv technology [33, 31]

CIMA Labs' proprietary technique is called Durasolv. This method creates tablets with a

medication, lubricant, and fillers. Tablets have good stiffness and are made with standard tabletting equipment. These come in blisters or other standard packaging. For applications that call for small quantities of active chemicals, Durasolv is a suitable technology.

Advantages [30]

Dura Solv technology works well with tablets that contain small amounts of active substances (125 mcg to 500 mg) and are compressed to a higher hardness of 15–100 N, which produces an ODT that is more durable. This technology allows for flexible packaging; tablets can be blistered and bottled.

Disadvantages [30]

During compaction, Durasolv's drug powder covering may break, exposing the patient's taste buds to the bitter medications.

Wow tab technology [30-34]

Whoa, Yamanouchi Pharmaceutical Co. has a patent on tab technology. WOW stands for "Waterless." In order to create a robust tablet that melts quickly, a combination of low and high moldability saccharides is utilised. To create tablets with the right amount of hardness, a mix of high and low mould ability is utilised.

Advantages

suitable hardness and rate of dissolving. Amazingly, the tab product can be packaged in blister packs or the traditional bottle.

Disadvantages

No significant change in bioavailability.

Flash dose technology [33, 35, 30]

Fuisz Nurofen has patented flash dose technology, and Biovail Corporation's first commercial product is a novel type of Ibuprofen in the form of melt-in-mouth tablets made with flash dose technology. The self-binding shear form of flash dosage tablets is called floss. Flash heat processing is used to create shear form matrices.

Advantages

large surface area for dissolution.

Disadvantage

The usage of medications that are sensitive to heat, moisture, and humidity may be limited by the high temperature needed to melt the matrix.
• Only 600 mg of the medication can be contained in the dose form.
• The resulting tablets are extremely soft, friable, and moisture-sensitive. As a result, special packing is needed.

Flash tab technology [36, 37]

Using this technology, a tablet with an active component in the form of microcrystals is prepared that dissolves quickly. The flash tab technique is patented by Prographarm Laboratories. The majority of the excipients used in traditional compressed tablets are also used in this product. In this formulation, coated medication particles are combined with a disintegrating agent and a swelling agent to create a tablet that dissolves in the mouth in less than a minute.

Oraquick technology [30-38]

For this technology, K. V. S. Pharmaceuticals holds a patent. It makes use of taste masking microsphere technology, also known as micro mask, which offers a better mouthfeel than taste masking substitutes, considerable mechanical strength, and rapid product breakdown. The flavour masking procedure doesn't use any form of solvents. As a result, excellent and quick efficient output results.

Advantages

Faster and efficient production, appropriate for heat-sensitive drugs.

Dispersible tablet technology [31] Patents for dispersible dihydro ergotoxine and cimetidine tablets were granted by Lek in Yugoslavia. The pills were said to dissolve in less than a minute when they came into touch with room temperature water. When dihydroergotoxine is in its free basic form, it dissolves poorly in water. Dihydro ergotoxine methane sulphonate dissolved more readily in dispersible tablets that included 0.8–10%, ideally 4% by weight, of organic acids. A disintegrating agent is one of the key excipients in the cimetidine formulation. It gives the pills speedy swelling and/or good wetting ability, which speeds up their disintegration. Alginic acid, cross-linked sodium carboxymethylcellulose, microcrystalline cellulose, cyclodextrin polymers, and starch or modified starches are among the disintegrating agents. When two or more disintegrating agents were combined, the result was better disintegration results.

Advatab technology [39]

Advatab differs from other FDT technologies in that it can be used in conjunction with complementary particle technologies from Eurand, such as its DiffucapsR controlled release technology and its industry-leading MicrocapsR taste-masking technology.
Advatab tablets dissolve in the mouth in less than 30 seconds, making it easy to administer medications orally without the need for water. These pills are particularly well-suited for people who have trouble swallowing tablets and capsules.

Nanocrystal technology [31, 39, 30]

The properties of the finished product and compound activity can be enhanced using nanocrystal technology. The surface area increases as particle size decreases, increasing the rate of disintegration. With nanocrystal technology, this can be done effectively and predictably. The medicinal material is ground using a patented wet milling technology to create nanocrystal particles, which are tiny particles of the drug substance, usually less than 1000 nanometres (nm) in diameter.

Nanocrystal fast dissolving technology provides for

• The pharmacokinetic advantages of oral nanoparticles (less than 2 microns) in the form of a tablet matrix that dissolves quickly.
• Product distinctiveness through the use of both patent-protected and proprietary technology components.
• Economical production methods that make use of traditional, expandable unit operations.

Pharma but technology [31, 39]

SPI Pharma is the patent holder of the Pharmaburst technology. A dry mixture containing a medication, flavours, and lubricant is used to create the tablet, which is then compressed into tablets that dissolve in 30 to 40 seconds. Tablets produced using this process are strong enough to be packaged in bottles and blister packs.

Frosta technology (Akina) [31, 39, 40] Akina is the patent holder of this technology. Frosta technology creates robust tablets with high porosity by forming plastic granules and compressing them under low pressure. A binder is used to granulate the porous plastic material after it has been mixed with a water penetration enhancer.

Evaluation of blend

The prepared blend was evaluated by following tests.

The angle of repose.
Bulk density.
Tapped density.

Carr's index.
Hauser's ratio.

Angle of repose

The angle of repose is determined using the funnel method. A funnel was used to collect the precisely weighed mixture. The funnel's height was changed such that the tip of the funnel contacts the top of the mix pile. The mixture of drug excipients (as solid dispersion) was permitted to freely pass through the funnel and land on the top. The powder cone's diameter was measured. The following formula was used to get the angle of repose:

$\tan \theta = h/r$

where h and r are the powder cone's height and radius, respectively.

Bulk density

Bulk density was determined by pouring a weighed quantity of blend into a graduated cylinder and measuring the volume and weight.

BD =Weight of the powder/Volume of the packing.

Tapped density

A graduated cylinder with a known mass of the drug-excipient combination was placed to ascertain it. At intervals of two seconds, the cylinder was permitted to drop from a height of 10 cm onto a hard surface under its own weight. The tapping was kept up until there was no more audible variation.

TBD =Weight of the powder/volume of the tapped packing.

Compressibility index

Carr's compressibility index was used to calculate the blends' compressibility index.

Evaluation of fast dissolving tablets

Weight variation

To guarantee consistency in the weight of the tablets in every batch, the weight variation test is conducted. The first step is to weigh all 20 pills in each formulation and compute the average. To compute the weight variance, the individual weight of each tablet is also calculated. The formula provides weight variation.

% Weight variation= Individual weight-Average weight/Average weight ×100

Hardness

A Monsanto tablet hardness tester was used to measure the force needed to shatter a tablet in a diametric compression. Hardness is also known as the tablet's crushing strength (fc). It is expressed by in kg/cm2.

Friability (F)

The Roche friabilator was used to determine the tablet's friability. The weight loss of the tablet in the container as a result of the small particles being removed from its surface is known as friability. To determine the tablet's resistance to abrasion during handling, packing, and transportation, a friability test is conducted. Each batch of 20 tablets should be weighed before being placed in a Roche friabilator that rotates for four minutes at 25 rpm. After dusting every tablet, reweigh. The formula provides the friability (F).

F=W(initial)-W(final)/W(final)

Wetting time

The internal structure of the tablets and the hydrophilicity of the excipient are intimately linked to wetting time. The following formula, put forth by Washburn E. W. (1921), states that the hydrophilicity of the powders affects the water

penetration rate into the powder bed, which is proportional to the pore radius.

$dl/dt = r\Upsilon\cos\theta/(4\eta l)$

In this case, l stands for penetration length, r for capillary radius, ¡ for surface tension, h for liquid viscosity, t for duration, and q for contact angle. It is clear that when compression force or porosity increases, pore size decreases and wetting time increases. Wetting time and disintegration have a linear connection. Therefore, wetness is a crucial phase in the disintegration process. A double-folded piece of tissue paper was put into a 6.5 cm-diameter Petri dish with 6 millilitres of water. After placing the tablet on the paper, the amount of time it took for it to completely wet was measured in seconds. The technique was significantly altered by keeping the water at 37 °C +/- 0.5 °C. Wetting time is the amount of time it takes for a pill to dissolve on the tongue while being held still.

In vitro drug release

The USP 2 Paddle device was utilised, and the paddle was allowed to rotate at 50 rpm. Phosphate buffer (PH 6.8) (900 ml) was employed as a dissolving medium, and the release of the medication in vitro was calculated by estimating the dissolution profile.

Mechanical Strength

Tablets should be strong enough to endure the mechanical shocks of handling during production, packing, and delivery. When assessing a tablet's mechanical strength, two crucial factors are its friability and crushing strength.

Crushing strength

A key factor in the formulation of mouth dissolve tablets, crushing strength is simply defined as the force necessary to shatter a tablet by compression in the radial direction. Excessive crushing strength drastically shortens the disintegration period. Pfizer hardness testers were used in this investigation to determine the tablet's crushing strength. Three observations on average are given.

Friability testing

The best indicator of possible behaviour during handling and packaging might not be the crushing test. Perhaps a more important characteristic is the resistance to surface abrasion. Each batch's friability was measured using a "Electro lab-friabilator." After rotating ten preweighed tablets for four minutes at 25 rpm, the tablets were reweighed, and the weight reduction percentage was determined.

Rapidly disintegrating property

To evaluate a tablet for their rapid disintegration properties, following tests were carried out.

Modified disintegration test

There are a number of restrictions to using an accurate disintegration test protocol for dosage forms, and they are insufficient to determine extremely short disintegration times. Since fast dissolving tablets must dissolve without water, the disintegration duration must be adjusted. The test should also replicate the disintegration of saliva. Ten millilitres of water were added to a Petri dish with a diameter of 10 cm in order to measure this parameter. After carefully placing the tablet in the middle of the Petri dish, the amount of time needed for it to totally break up into tiny pieces was recorded.

Disintegration in oral cavity

Six healthy volunteers who received tablets from the ideal formulation were asked how long it took for the tablets to completely dissolve in their mouths. A piece of tissue paper that had been folded twice was put in a small Petri dish with six millilitres of water to measure the water absorption

ratio. After placing the tablet on the paper, the amount of time needed for it to completely wet was recorded. Next, the moist tablet was weighed. The following formula was used to calculate the water absorption ratio, represented by R:

R= 10(wa/wb)

Where wb= weight of tablet before water absorption and

wa =weight of the tablet after water absorption

CONCLUSION

Drugs (such as neuroleptics, analgesics, cardiovascular medications, antihistamines, and pharmaceuticals for erectile dysfunction) might be considered a candidate for this dose structure, and the development of a quick-dissolving pill offers a good potential for a queue expansion in the commercial centre. Another reason for the rise of inaccessible quick-dissolving products is pharmaceutical marketing.

Marketed products of fast dissolving tablets

The commercialized products of FDT which are available in the market are given in table

Fast dissolving tablets products available in Indian market [2-8]

Brand (Trade) name	Active drug	Manufacturer/Company
Acepod-O	Cefpodoxime	ABL Lifecare, India
Acufix DT-TAB	Cefixime	Macleods, India
Alepam	Amoxycillin trihydrate and Potassium clavulanate	Scoshia Remedy, India
Bigcef DT-TAB	Cefuroxime	Bestochem, India
Clonazepam ODT	Clonazepam	Par Pharmaceutical
Dompan	Pantoprazole and Domperidone	Medley pharmaceuticals, India
Mosid-MT	Mosapride citrate	Torrent Pharmaceuticals, Ahmedabad, India
Minoclav DT-TAB	Amoxycillintrihydrate and Potassium clavulanate	Minova life Sciences, India
Nulev	Hyoscyamine sulfate	Schwarz Pharma, India
Nimulid MDT	Nimesulide	Panacea Biotech, New delhi, India
Numoxylin CV DT	Amoxycillintrihydrate and Potassium clavulanate	Gepach international, India
ZyrofMeltab	Rofecoxib	Zydus, Cadila, India
Romilast	Montelukast	Ranbaxy Labs Ltd., New Delhi, India
Torrox MT	Rofecoxib	Torrent Pharmaceuticals, Ahmedabad, India
OlanexInstab	Olanzapine	Ranbaxy Labs Ltd., New Delhi, India
Kemstro	Baclofen	Schwarz Pharma, India
Romilast	Montelukast	Ranbaxy Lab. Ltd. Delhi, India
Rofaday MT	Rofecoxib	Lupin,, India
Valus	Valdecoxib	Glenmark, India

AUTHORS CONTRIBUTIONS

All the author have contributed equally

CONFLICT OF INTERESTS

Declared none.

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