IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A REVIEW ON TABLET AND ITS TYPES

Kolekar Saurabh Hanuman *[1], Ms. S. A Ghadage [1], Santosh Jain[1].

[1] Aditya Institute of Pharmaceutical Nalwandi Road, Beed - 431 122.

Abstract: Medicines are not only a science; it is also an art. It does not consist of compounding pills and plasters; it deals with the very processes of life, which must be understood before they may be guided. Pharmaceutical oral solid dosage forms have been used widely for decades mainly due to their convenience of administration and their suitability for delivery for delivery of drugs for systemic effects. The tablets can be made directly from powders or from granules pellets, or from film-coated multiple units. Tablets are now the most popular dosage form, accounting for some 70% of all ethical pharmaceutical preparations produced. Tablets may be defined as solid pharmaceutical dosage forms containing drug substances with or without suitable diluents and prepared by either compression or moulding methods. Hence, tablets can be broadly classified as compressed tablets and moulded tablets. Compressed tablets can be further classified as directly compressible tablets, chewable tablets and tablet triturates etc.

Keywords: Binders, Coated Tablets, Compression, Granulation, Ingredients Etc.

INTRODUCTION

Solid medicaments may be administeredorally as powders, pills, cachets, capsules or tablets. These dosage forms contain a quantity of drug which is given as a single Unit and they are known collectively as solid unit dosage forms, even in the case ofSustained action preparations which, technically, contain the equivalent of several Normal doses of drug .The stringent formulation requirements ofmodern Medicaments, the many advantages of tablet and capsule medication, coupled With expanding health services and the commitment need for large- scale Economic manufacture, have led to a steady decline in the prescribing of powders And pills .Tablets and capsules, on the other hand, currently account for well over Two third of the total number

and cost of medicines produced all over the world. Tablets are solid dosage form which is theconventional as well as have many advantages over other dosage forms. Tablets are the most popular dosage form; about 70% of the total medicines are dispensed in the form of tablet. Tabletshad different shapes, sizes, as well as weight depending on medicinal substancesand the intended mode of administration.In this paper the some advantages as well as some disadvantages of tablets, the basic ingredients that are commonly found in tablets, methods of tablet preparation and the various types of the tablets are briefly reviewed.

Definition

According to the Indian Pharmacopoeia Pharmaceutical tablets are solid, flat or biconvex dishes, unit dosage form, prepared by compressing a drugs or a mixture of drugs, with or without diluents. Tablet is defined as a compressed soliddosage form containing medicaments with or without excipients. They vary in shape and differ greatly in size and weight, depending on amount of medicinal substances and the intended mode of administration [1, 2].

Properties [5]

1) Should be elegant product having its own identity while being free of defects such as chips, cracks, discoloration and contamination.
2) Should have strength to withstand the rigors of shocks encountered in its production, packaging, shipping and dispensing.
3) Should have the physical stability to maintain its physical attributes over time.
4) Must be able to release themedicament agent(s) in the body in a predictable and reproducible manner.
5) Must have a suitable chemical stability over time so as not to allow alteration of the medicinal agent(s).

Advantages [1, 2, 5, 6]

1) Tablets are unit dosage form and offer the greatest capabilities of all oral dosage form for the greatest doseprecision and the least content variability.
2) They are easiest and cheapest to package and strip.
3) Low in cost.
4) Lighter and compact.
5) Having greatest chemical andmicrobial stability over all oral dosage forms.
6) Suitable for large scale production.
7) Easy to swallow with least tendencyfor hang-up.
8) Objectionable odour and bitter tastecan be masked by coating technique.
9) Sustained release product is possibleby enteric coating.
10) Easy to handling.

Disadvantages [1, 2, 5, 6]

1) Difficult to swallow in case of childrenand unconscious patients.

2) Some drugs resist compression into dense compacts, owing to amorphous nature, low density character.

3) Drugs with poor wetting, slow dissolution properties, optimumabsorption high in GIT may be difficult to formulate or manufacture asa tablet that will still provide adequate or full drug bioavailability.

4) Bitter testing drugs, drugs with an objectionable odor or drugs that are sensitive to oxygen may require encapsulation or coating. In such cases,capsule may offer the best and lowest cost.

5) Irritant effects on the GI mucosa by some solids (e.g., aspirin).

11) Possibility of bioavailability problems resulting from slow disintegration and dissolution.

INGREDIENTS

In addition to active ingredients, tablet contains a number of inert materials known asadditives or excipients. Different excipients are:

S.no.	Ingredients	Examples
1.	Diluents	Calcium Phosphate; Carboxymethylcellulose Calcium; Cellulose; Dextrin; Lactose; Microcrystalline Cellulose; PR gelatinizedStarch; Sorbitol; Starch
2.	Binders	Acacia; Alginic Acid; Carboxymethylcellulose; Cellulose; Dextrin; Gelatin; Liquid Glucose; Magnesium Aluminum Silicate; Maltodextrin; Methylcellulose; Povidone; Sodium Alginate; Starch; Zein.
3.	Lubricants	Calcium Stearate; Glyceryl Palmitostearate; Magnesium Oxide; Poloxamer; Polyvinyl Alcohol; Sodium Benzoate; Sodium Lauryl Sulfate; Sodium Stearyl Sulfate; Stearic Acid; Talc; Zinc Stearate
4.	Glidants	Magnesium Trisilicate; Cellulose; Starch; Talc; Tribasic Calcium Phosphate

1) **Diluents**: Diluents are fillers used to make required bulk of the tablet when the drug dosage itself is inadequate to produce the bulk. Also used to improvecohesion, to permit use of direct compression.

2) **Binders**: to form cohesive compactsfor directly compressed tablet.

3) **Lubricants**: Lubricants are intended toprevent adhesion of the tablet materialsto the surface of dies and punches, reduce inter particle friction and may improve the rate of flow of the tablet granulation.

4) **Glidants**: Glidants are intended topromote flow of granules or powdermaterial by reducing the friction between the particles.

5) **Anti–adherents:** Anti-adherents areadded to the tablet formulations to prevent the material from sticking to the walls of the tablet press.

6) **Disintegrates**: Added to a tablet formulation to facilitate its breaking or disintegration when it contact in water in the GIT.

7) **Coloring Agents**: The use of colors and dyes in a tablet has three purposes:

(A) Masking of off color drugs (B) Product Identification (C) Productionof more elegant product.

8) **Flavoring Agents**: Flavoring oils are needed for chewable tablets. The oil is generally added in a dry form such as spray-dried beadlets.

Absorbents: The inclusion ofabsorbents in a tablet formulation isnecessary if the product contains a substance with a high affinity to water. Hygroscopic materials, if present,render the blend wet and difficult to handle during manufacture.

PREPARATION

Tablets are prepared by three methods

1) Wet granulation method
2) Dry granulation method
3) Direct compression

Wet Granulation Method - It is the most common and widely used method. This method involves various steps like weighing of ingredients,mixing, granulation, and screening of damp pass, drying, lubrication and compression of tablets. The main active ingredient, diluent, disintegrant are blended together, and then it is allowed to pass through the sieve(sifting). Solutions of the binding agentare added to the initial mixture with stirring. The amount of binding agent added should be sufficient, in order to avoid over wetting of the tablet [46- 60]. If the powder is not wetted properly, the granules will be too soft and can be broken down during lubrication, which is difficult during compression of tablet. Tray drying is most common method of drying the tablet granules, Tray drying was themost widely used method of drying tablet granulations in the past, which might be replaced by fluid –bed dryers as a novel approach. After drying the granules, they are allowed to pass through the screen; usually 60-100 mesh nylon cloth is used. After drygranulation, lubricant is added as fine powder, which is required for proper filling of the die cavity (Figure 1).

Dry Granulation Method: This method is used for tablet preparation,in case tablet ingredients are highly sensitive to moisture, or unable to withstand elevated temperatures during drying, slugging may be used to form the granules. Dry granulation or doublecompression, usually eliminatesvarious steps, which involves slugging of the powder mass.The active ingredient, diluent and lubricant are blended together, to form the slug. Thus, the compressed slug is passedthrough the mesh or through the mill, and the remaining lubricant is added to the granulation, blended properly and compressed to form the tablets (Figure 1).

9) **Direct Compression:** Directcompression involves directcompressing the powdered materialinto tablets. Direct compression isadopted, if drug constitutes major portion of tablet [86-90] total weight (Figure 1). Tablets containing 25% or less of drug substances can beformulated, with a suitable diluentwhich acts as a carrier or vehicle for the drug. Tablets prepared by abovemethod are subjected to compression machine which may be single station or multiple stations [1, 4].

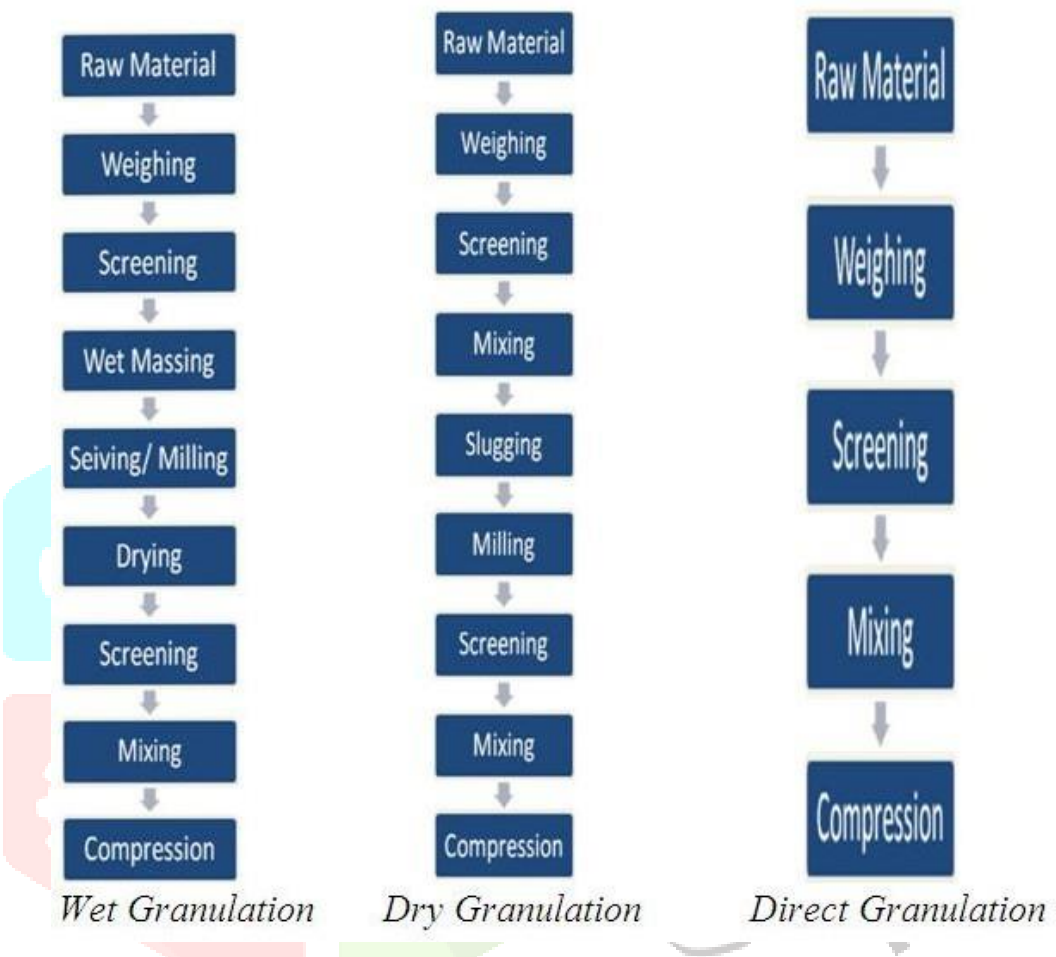

Fig. 1. Processing Steps in Wet Granulation, Dry Granulation and Direct Granulation.

TYPES

Oral Tablets for Ingestion

1) Standard Compressed Tablets

2) Multiple Compressed Tablets

- Compression Coated Tablets – a) sugarcoated, b) film coated tablets, c) gelatin coated tablets, d) enteric coatedtablets

Layered tabletInlay tablet

3) Targeted Tablets – a) Floating Tablet,

b) Colon Targeting Tablet

4) Chewable tablets

5) Dispersible tablets

Tablets used in the Oral Cavity

1) Lozenges and troches
2) Sublingual tables
3) Buccal tablet
4) Dental cones
5) Mouth dissolved / rapidly dissolvingtablets

Tablets Administered by other Routes

1. Vaginal tablet
2. Rectal tablet
3. Implants

Tablets used to prepare Solution

1) Effervescent tablets
2) Molded tablets

Hypodermic tablet Dispensing /soluble tablet

3) Tablet Triturate.

Structure Wise

1) Divisible Tablets
2) Aperture Tablet
3) Concave Convex Tablets
4) Core Tablet

Action Wise

1) Modified Release Tablet

ORAL TABLET FOR INGESTION

Over 90% of tablets manufactured are ingested orally. These are designed to swallow intact, with exception of chewable tablets.

1) **Standard Compressed Tablets:**These are standard uncoated tablets made by compression using wet granulation, direct compression or double compression. It provides rapid disintegration and drug release. They are mostly intended to exert local action in GIT. It typically includes water insoluble drugs such as antacid and adsorbents. In addition to medicinal agents compressed tables usually contains a number of pharmaceutical adjuvants such asdiluents, binders, disintegrants, *etc*.

2) **Multiple Compressed Tablets:** Multiple compressed tablets areprepared by more than onecompression cycle. This process is bestsuited when separation of active ingredient is needed for stability purposes, or if the mixing process is inadequate to guarantee uniform distribution of two or more active ingredients. There are three categories under this class: Compression coated tablets, Layered tablets and Inlay tablets.[7]

i) **Compression Coated tablets:** This tablet readily lends itself into a repeat action. Outer layer provides the initial dose while the inner core releases the drug later on. Hence, it is useful for releases of two active pharmaceutical ingredients (APIs), one immediate release formulation which is entrapped in coat and the other sustained release formulation entrapped in the core. It is also possible to provide loading dose and maintenance dose for one drug using this concept. Colton 232, Stock
538 and Manesty Drycota 900 are equipment's utilized for preparing compression coated tablets [7].

3) **Sugar Coated Tablets:** The sugar coat protect the enclosed drug from the environment and provide a barrier to Objectionable taste or odour. It also produces an elegant, glossy appearance. The patient acceptability also increases due to the sweet taste of tablet. Widelyutilized in preparing multivitamin andmultivitamin mineral combination.

a) Film Coated Tablets: It is the type of coated tablets in which drug is not requiredto coating. In case to provide more strength to the tablet, film coating is used as alternative to sugar coating. The polymers such as HPC (Hydroxypropyl cellulose), HPMC (Hydroxypropylmethylcellulose), and Ethyl cellulose are used for this technique. It is also a fast process thanthe sugar coating technique. It has the advantages over sugar coating in that it is more durable, less bulky and less time consuming to apply, but it is less attractiveand elegant in physical appearance thansugar coating. The coating is designed to rupture and expose the core tablet at the desire location in the gastrointestinal tract.

b) Gelatin Coated Tablets: The innovatorproduct, the gel cap is a capsule–shaped compressed tablet that allows the coated product to be about one–third smaller than a capsule filled with an equivalent amount of powder. The gelatin coating facilitiesswallowing, and gelatin–coated tablets are more tamper evident than unsealed capsule.

c) Enteric Coated Tablets: The enteric coated tablets are coated with the material resistant to acidic medium (stomach environment) and hence are not able torelease drug in stomach. Whereas, it easilyreleases drug in intestine (alkaline) media. Hence, drugs have to pass through stomach and the time of release of drug is delayed and hence called delayed actiontablet [8].

4) **Layered Tablets:** Layered tablets are composed of two or three layers of granulation compressed together. They have the appearance of a sandwich because the edges of each layer are exposed. When two or more active pharmaceutical ingredients are needed to be administered simultaneously and they are incompatible, the best option for the formulation pharmacist would be to formulate multilayered tablet. A single tablet composed of two or more layers and usually each layer is of different color to produce a distinctive looking tablet Equipment-Versa press [7].

i **Inlay Tablets:** A variation of the compression coated tablet is the inlay, dot, or bull's-eye tablet. Instead of the core tablet being completely surrounded by the coating, its top surface is completely exposed. This form can be useful in sustained release preparations to reduce the size and weight of the tablet. Two drugs are incorporated in tablet, one in core and one in coat. Release of both drugs starts immediately but coating is responsible for slow release and core isresponsible for immediate release of incorporated drugs. Inlay tablet are prepared with the Stokes, Colton, orKilian machines. No alterations inequipment are needed only the feed frame and hopper, which normally provide the top coating, are not installed [7].

5) **Targeted Tablets**: Under this category there are two types of tablets.

Floating tablets: These are designedto prolong the residence time of thedosage form within the GI tract. This not only prolongs GI residence timebut also does so in an area of the GI tract that would maximize drug reaching its absorption site in solution and hence, ready for absorption. These are low density tablets. It can expand in gastric environment. Floating in diarrhoea to keep the drug in floating condition in stomach to get a relativelybetter response. Controlled delivery of drugs. It minimizes the mucosal irritation by releasing drug slowly. Used in treatment of gastrointestinal disorders such as gastro esophageal reflux. Ease of administration andbetter patient compliance [9].

a. **Colon Targeting Tablets:** It providesa desired drug concentration in the body by delivering a therapeutic amount of drug to a target site i.e. colon. It is suitable and required for thedrugs having instability, low solubility,and short half-life, a large volume of distribution, poor absorption, lowspecificity, and therapeutic index. The pH in this region (colon) varies from 6.4-7 and presence of microbial flora plays an important role in drug release.Various mechanisms adopted for drug release in this area are: Coating with pH sensitive polymer *e.g.*, Eudragit S100 and L100; Biodegradable polymer which are sensitive to colonic bacteria; Bio- adhesive polymer *e.g.*,poly carbophils. Redox sensitive polymers. It provides delivery of drugsaccurately into the lower GI tract (by avoiding the drug release in upper GIT), which occurs primarily in the large intestine (*i.e.* colon) [10].

5) **Chewable Tablets:** Chewable tablets which are required to be broken and chewed in between the teeth before ingestion. These tablets are given tothe children who have difficulty in swallowing and to the adults who dislike swallowing. These tablets areintended to disintegrate smoothly in mouth at a moderate rate either with or without actual chewing. Chewable tablet are often employed when the active ingredient is intended to act in a localized manner rather than systemically the composition ofchewable tablet consists of gum core, which may or may not be coated. The core is composed of an insoluble gum base like fillers, waxes, antioxidants,sweeteners, flavoring agents. Thepercentage of gum base varies from 30-60%. Mannitol is widely used as anexcipient in chewable tablet for its non-hygroscopic nature for moisture sensitive drugs [11, 12]

5) Dispersible Tablets: Dispersible tabletsas defined in European Pharmacopoeia are uncoated or film coated tablets intended to be dispersed in water before administrationgiving a homogeneous dispersion. Typically a dispersible tablet is dispersedin about 5 to 15 ml of water (*e.g.* in atablespoonful or a glass of water) and the resulting dispersion is administered to the patient. Dispersible tablets are required to disintegrate within 3 min in water at 15 to
25. Also the dispersion produced from a dispersible tablet should pass through a sieve screen with a nominal mesh aperture of 710 µm [13].

B) TABLETS USED IN ORAL CAVITY

ii **Lozenges and Torches:** Lozenges are flavored medicated dosage forms intended to be sucked and held in mouth or pharynx. Two lozenge forms include hard (or boiled) candy lozenges and compressed tablet lozenges (TROUCHES). Lozenges may be used for; Local medications in the mouth or throat, Systemic drug uptake. Soft variety of lozenge, calleda pastille, consists of medicament in a gelatin or glycero- gelatin or in a base of acacia, sucrose and water. No disintegrant is included in compressed lozenges composition. Other additives (binder and filler) must have pleasant taste or feeling during dissolution.Common binder used in compressedlozenges is gelatin; common fillers are (Sorbitol, mannitol and glucose) [1].

iii **Sublingual Tablets:** They are to beplaced under the tongue and produce immediate systemic effect by enabling the drug absorbed directly through mucosal lining of the mouth beneath the tongue. The tablets are usually small and flat, compressed lightly to keep them soft. The tablet must dissolve quickly allowing the drugs to be absorbed quickly It is designed to dissolve in small quantity of saliva. Sublingual, meaning literally 'under the tongue' refers to a method of administering substances via the mouthin such a way that the substances are rapidly absorbed via the blood vessels under the tongue rather than via thedigestive tract [16].

iv **Buccal Tablets:** These drugs are intended to be dissolved in buccal pouch. Tablets are designed not to disintegrate. It is placed near the opening of parotid duct to provide the medium to dissolve the tablet. Buccal tablets are most often used whenreplacement hormonal therapy is thegoal. Long–Acting Buccal Tablets include use of viscous natural or synthetic gums or mixtures of gumscan be compressed to form a hydrated surface layer from which the medicament slowly diffuses and isavailable for absorption through buccal mucosa. Mucoadhesive polymers like PANA and carbopol 934 are used [1, 2].

v **Dental Cones:** These tables aredesigned to be loosely packed in the empty socket remaining following a tooth extraction. Main purpose behind the use of this tablet is either to preventmultiplication of bacteria in the socket by employing a slow releasing antibacterial compound or to reduce bleeding by an astringent or coagulant containing tablet. It's formulated to dissolve or erode slowly in presence of a small volume of serum or fluid over 20-40 minutes period. Usually used vehicles are sodium chloride, sodium bicarbonate or amino acid. [1,2]

1) **Mouth Dissolved or RapidDissolving Tablets:** Mouth dissolving tablets can define as "A solid dosage form containing medicinal substances, which disintegrates rapidly, usuallywithin a matter of seconds, when placed under the tongue. MouthDissolving Tablet has a pleasing mouthfeel, and it not required water toswallow. MDT easily dissolved ordisintegrates in saliva within a few seconds (15 s to 3 min). .Some MDT tablets are designed to dissolve in saliva remarkably fast, within a few seconds, and are called true fast- dissolving tablets. Others contain agents to enhance the rate of tablet disintegration in the oral cavity and aremore appropriately termed as fast- disintegrating tablets, as they may take about one minute to disintegrate completely. Having good hardness,dose uniformity, easy administration and serves as the first choice of dosage form for pediatrics, geriatrics and travelling patients [14].

C) Tablets Administered by Other Routes

1) **Vaginal Tablets:** Designed for vaginal administration in treatment of local vaginalinfections, for systemic absorption and absorption into vaginal tissue can be inserted with aid of an applicator. In the treatment of localized vaginal infectionssuch as, *Candida albicans, yeast* and*Haemophilus vaginalis*. These are uncoated bullet shape or ovoid tablets. Designed to under go slow dissolution and drug release in vaginal cavity. Pleased in an upper region of vaginal tract by plastic tube inserter. It may contain antibacterial, antiseptic, or astringents [1, 2].

2) **Rectal tables:** It is old and acceptable means of treatment. The volume andnature of rectal fluid, its buffer capacity, pH and surface tension play a large part in this but are subject to wide variation, even within single subject, resulting invariability of absorption by this route. Rectal tables not required refrigeration. Better product stability even at roomtemperature.

3) **Implants:** These tablets are implanted in the body cavities for a prolonged effect from several days to months up to year. These tablets are small in size and cylinderlike in shape. They are designed forsubcutaneous implantation by surgical procedure where they are slowly absorbed over a period of month or a year. Special injector with a hollow needle and plungeris used to administer the rod shaped tablet. For other shapes surgery is used. They are sterile formulations without excipients.Mainly these tablets are prepared to deliver growth hormones to foodproducing animals. Ear is preferred site foradministration of drug [1,8].

D) TABLETS USED TO PREAPER SOLUTION

1) **Effervescent Tablets:** Effervescenttablets are designed to break in contact with liquid such as water or juice, often causing the tablet to dissolve into a solution the benefit of effervescent tablets is that they dissolve completely and evenlymeaning that localized concentrations ofthe ingredients cannot occur.

This means not only a better taste but also less chance of irritation and a more efficient means of ingesting the ingredients. Effervescence consists of a soluble organic acid and an alkali metal carbonate salt, one of which is often the API. Carbon dioxide is formed if this mixture comes into contact with water. They have good stomach and intestinal tolerance [15].

2) Molded Tablets

a. ***Hypodermic Tablets:*** These are one type of sterile preparations. In these, tablets are dissolved in the WFI or sterile water to inject before the actual injection in the hypodermic cavity. They are intended to be added in WFI of sterile water to form a clear solution which is to be injected parentally. Theyare widely used by rural physician due to its portability. It can be used for medicaments whose stability in water is very poor. Their use in this manner should be discouraged, since the resulting solutions are not sterile [1,8].

b. ***Dispensing or Soluble Tablets:*** They are to be added to water or other solvents to make a solution containinga fixed concentration of API. Should contain no insoluble materials(including Glidants, binders etc.), sincethey will be made into clear solution.A material incorporated in dispensing tablets includes mild silver proteinate, bichloride of mercury and quaternary ammonium compounds. These tablets are highly toxic if taken orally by mistake. These tablets provide a convenient quantity of potent drug [1].

3) **Tablet Triturate:** Tablet triturates are small, usually cylindrical, Molded or compressed tablets. The drugs employedin such products were usually quite potent and were mixed with lactose and possiblya bonder, such as powder acacia. Tablet triturates are usually soft and friable. Manyof the drugs employed in these tables were highly potent and drug migration could occur as the alcohol evaporated. Only aminimal pressure is applied during theirmanufacturing, since they must be readily and completely soluble in water [1].

Structure Wise

1) ***Divisible Tablet:*** It is sometimes necessary to administer one-half or one-fourth of a tablet and under such circumstances tablets are generally scored once in the middle or twice withlines perpendicular to one another. V- shaped double layer tablets with scoring in the center have been designed.

2) ***Aperture Tablets:*** Designed with a view to achieve constancy in the surface area during disintegration & dissolution.

3) ***Concave-convex Tablets:*** These tablets have been designed with a viewto keep surface area of the structurerelatively constant during the dissolution process. Area is lost on the convex surfaces and gained at the

concavities.

4) ***Core Tablets:*** These tablets have a central core over which another layer of material is compressed and are generally made by two successivecompressions. Separate incompatible ingredients.

ACTION WISE

1) **Modified Release Tablet**: Release the medicament slowly for long time duration after administration of a single tablet. Used to target the site specific releases. Comparison of blood concentration vs. time any adjuvant that can alter water uptake rate, swelling, and gelling characteristics can alter the release rate of API. The drug release can be modified by providing suitable micro environment pH in the tablet .Inclusion of alkaline polymers results in desirable drug release of acidic drugs.

CONCLUSION

As a solid dosage form, tablets are popularamong patients and practitioners alike as they provide a means of self- administration. The formulation of a tablet contains, in addition to the API, various substances to assure proper delivery of the API to the patient. With advancement in technology and increase in awareness towards modification in standard tablet to achieve better acceptability as well as bioavailability, newer and more efficient tablet dosage forms are being developed. The main reasons behind formulation of different types of tablets are to create adelivery system that is relatively simpleand inexpensive to manufacture. Provide the dosage form that is convenient from patient's perspective and utilize an approach that is unlikely to add complexity during regulatory approval process. To understand each dosage form, tablets here are classified by their route of administration and by the type of drug delivery system they represent within that route.

REFERENCES

1) Leon Lachman, Herbert A. Lieberman,Joseph L. Kanig: The theory andPractice of Industrial Pharmacy, Varghese publication house, 3rdedition, 1990, 293-373.

2) Herbert A. Liberman, Martin M. Rieger and Gilbert S. Banker, pharmaceutical dosage forms: Tablets; volume-I.

3) Al-Achi A (2019) Tablets: A Brief Overview. Journal of Pharm Practice and Pharmaceutical Science. 2019(1):49-52.

4) Nagashree K. Solid dosage forms:Tablets. Research and Reviews:Journal of Pharmaceutical Analysis. 2015.

5) Kaur Harbir. International Research Journal of Pharmacy. 2012, 3 (7).

6) G. Hymavathi, J. Adilakshmi, K. Dwarathi, M. Kavya, G. Pravallika. Review Article on In process Problemsand Evaluation Tests of Tablet Manufacturing. International Journalof Research in Pharmaceutical and Nano Sciences. 2012, 3(7).

7) D. M. Jariwala, H. P. Patel, C. T. Desai, S. A. Shah and D. R. Shah. A Review on Multiple Compressed Tablets. Journal of pharmaceutical sciences and boiscientific research. 2016, 6(3). 371-379.

8) Purushottam R. Patil, Vaibhav D. Bobade, Pankaj L. Sawant and Rajendra P. Marathe. Emerging Trends In Compression Coated Tablet Dosage Forms: A Review. International journalof pharmaceutical sciences and research. 2016, 7(3). 930-938.

9) Bhavjit Kaur, Shivani Sharma, GeetikaSharma, Rupinder Saini, Sukhdev Singh, Meenu Nagpal, Upendra K Jain, Mandeep Sharma. A Review ofFloating Drug Delivery System. Asian journal of biomedical and Pharmaceutical Sciences. 2013. 3(24) , 1-6.

10) Anita , Anil Singh and Ankit Dabral. A Review On Colon Targeted Drug Delivery System. International journal of pharmaceutical sciences and research. 2019; Vol. 10(1): 47-56.

11) Renu, Jyoti Dahiya, Pawan Jalwal, Balvinder Singh. The PharmaInnovation Journal 2015; 4(5): 100-105.

12) Nilesh Lahanu Gawade, Raosaheb Sopanrao Shendge. A Review on Chewable Tablet. Journal of Emerging Technologies and Innovative Research (JETIR). March 2020, Volume 7, Issue3.

13) J. Nandhini, A.N. Rajalakshm. Dispersible Tablets: A review. Journal of Pharmaceutical Advanced Research.2018; 1(3): 148-155.

14) Daljit Masih, Rajesh Gupta. Mouth Dissolving Tablets – A Review. UKJournal of Pharmaceutical and Biosciences Vol. 1(1), 18-24, 2013.

15) Leman Birdane, Niyazi Alt›ntoprak, Nuray Bayar Muluk, Desiderio Passali, Andrey Lopatin, Luisa Bellussi, RankoMladina, Ruby Pawankar, Cemal Cingi. Effervescent tablets: a safe and practical delivery system for drug administration. ENT Updates2016;6(1):46–50.

16) Ruchita Jaiswani, Ashutosh Prakash,Dinesh K Mishra, D.K. Jain. Sublingual Tablets: An Overview. Journal of Drug Delivery Research. 2014, 3(4).