INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES
[ISSN: 0975-4725; CODEN(USA): IJPS00]
Journal Homepage: https://www.ijpsjournal.com

Review Article

A Comprehensive Review On: Tablet

Ganesh U. Chavan[1]*, Payal V. Suradkar[2], Trupti D. Hudekar[2]

[1]*Suyash College Of Pharmacy Warud Bk, Maharashtra*
[2]*Laddhad College Of Pharmacy Yelgaon,Buldhana,Maharashtra*

ARTICLE INFO

Published: 15 Oct 2024
Keywords:
Tablet, wet granulation, dry granulation, FDT, fast dissolving, mouth dissolving.
DOI:
10.5281/zenodo.13963865

ABSTRACT

Tablets are the most commonly prescribed dosage form as offer a convenient form of drug administration provides dosage uniformity from tablet to tablet. Medicines are not just a science but an art, involving understanding the processes of life. Pharmaceutical oral solid dosage forms have been widely used for decades due to their convenience and suitability for systemic effects. Tablets, made from powders, granules, pellets, or film-coated units, are the most popular dosage form, accounting for 70% of ethical pharmaceutical preparations. They can be prepared using compression or moulding methods, and can be further classified as compressible tablets, chewable tablets, or tablet triturates. Tablets can be prepared from powders, granules, pellets, or film-coated multiple units.

INTRODUCTION

The oral route is the most preferred method of drug administration due to its ease of administration, patient acceptance, accurate dosing, and cost-effectiveness. Solid medicaments can be administered orally in various forms, including tablets, powders, pills, cachets, capsules, and tablets. Tablets are the most widely used dosage form due to their simplicity, lower production costs, and aesthetic quality. They can be manufactured through dry granulation, wet granulation, or direct compression, with or without excipients, and are designed to produce desired pharmacological responses. The oral route is popular for systemic effects due to its ease of ingestion, pain avoidance, versatility, and patient compliance. Solid oral delivery systems, particularly tablets, are the preferred choice due to their cost-effectiveness and lack of special treatment. The ideal dosage regimen for drug therapy is one that immediately attains the desired therapeutic concentration of the drug in plasma or the site of action and maintains it constant throughout treatment. Oral drug delivery is the most widely used route among nasal, ophthalmic, rectal, and parental routes for systemic drug delivery. It is considered the most natural,

***Corresponding Author:** Ganesh U. Chavan
Address: *Laddhad College Of Pharmacy Yelgaon,Buldhana,Maharashtra*
Email ✉: ganeshchavan1083@gmail.com
Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

uncomplicated, convenient, and safe due to its ease of administration, patient acceptance, and cost-effective manufacturing. Pharmaceutical products designed for oral delivery are mainly immediate release type or conventional drug delivery systems, designed for rapid absorption.

Definition

According to the Indian Pharmacopoeia (IP); Pharmaceutical tablets are solid, flat orbiconvex dishes, unit dosage form, prepared by compressing a drug or a mixture of drugs, with or without diluents. According to the United States of Pharmacopoeia (USP); Tablet is defined as a compressed solid dosage form containing medicaments with or without excipients. According to the Indian Pharmacopoeia Pharmaceutical tablets are solid, flat or biconvex dishes, dosage form, prepared by compressing a drugs or a mixture of drugs, with or without diluents. It is the most popular dosage form and 70% of the total medicines are dispensed in the form of Tablet.

Advantages

1. Ease of accurate dose.
2. They are unit dosage forms and offer the greatest capabilities of all oral dosage forms for the greatest dose precision and the leas tcontent variability.
3. The Tablet in Tablet dosage form gives protection to the hygroscopic or thermo-liable drug.
4. The pharmacokinetic interaction (drug–drug) between concomitantly administered medications can be avoided in Tablet in Tablet dosage by creating the time interval in their release.
5. Greatest chemical and microbial stability over all oral dosage forms.
6. Objection able odour and bitter taste can be masked by coating technique.
7. Release rate of the drug from tablets can be tailored to meet pharmacological requirements.
8. The pharmacokinetic interaction (drug–drug) between concomitantly administered medications can be avoided in Tablet in Tablet dosage by creating the time interval in their release.
9. The Tablet in Tablet dosage form gives protection to the hygroscopic or thermo-liable drug.
10. Easiest and cheapest to package and strip.

Disadvantages

1. Stability problems.
2. Possibility of dose dumping due to food, physiologic or formulation variables or chewing or grinding of oral formulations by the patient thus, increased risk of toxicity
3. Decreased systemic availability in comparison to immediate release conventional dosage forms, which may be due to incomplete release increased first pass metabolism, increased instability, insufficient residence time for complete release, site specific absorption, pH dependent stability etc.
4. Need for additional patient education and counselling
5. More rapid development of tolerance and counselling
6. Increased cost.
7. Retrieval of drug is difficult in case of toxicity, poisoning or hypersensitivity reactions.
8. Irritant effects on the GI mucosa by some solids (e.g., aspirin).

General properties of Tablets:

1. The size and shape should be reasonable for easy administration.
2. There should not be any incompatibility.
3. They should be accurate and uniform in weight.

4. The drug should be uniformly distributed throughout the tablets.
5. They should not break during transportation or crumble in the hand of a patient.
6. They should be chemically and physically stable during storage.

Classification of tablets

1. USE Wise:

A. Oral tablets for ingestion

1. Standard Compressed Tablets
2. Multiple Compressed Tablets

Compression Coated Tablets – a) Sugar coated b) Film coated tablets, c) Gelatin coated tablets, d) Enteric coated tablets, e) Layered tablets

3. Targeted Tablets – a) Floating Tablet, b) Colon Targeting Tablet
4. Chewable tablets
5. Dispersible tablets

B. Tablets used in the oral cavity

1. Lozenges and troches
2. Sublingual tablets
3. Buccal tablet
4. Dental cones
5. Mouth dissolved / rapidly dissolving tablets

C. Tablets administered by other routes

1. Vaginal tablets
2. Rectal tablets
3. Implants

D. Tablets used to prepare solution

1. Effervescent tablets
2. Molded tablets

Hypodermic tablets

Dispensing /soluble tablet

3. Tablet Triturates.

2. Structure wise

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

3. Action wise

1. Modified release tablet

Based on the route of administration or the function, the tablets are classified as follows.

1. Tablets ingested orally.
   a. Compressed tablet
   b. Multiple compressed tablet
      i. Layered tablet
      ii. Compression coated tablet
   c. Repeat action tablet
   d. Delayed Action and Enteric coated tablet
   e. Sugar and chocolate coated tablet
   f. Film coated tablet
   g. Chewable tablet
2. Tablets used in the oral cavity.
   a. Buccal tablet
   b. Sublingual tablet
   c. Troches and Lozenges
   d. Dental cones
3. Tablets administered by other routes.
   a. Implantation tablet
   b. Vaginal tablets
4. Tablets used to prepare solution.

Formulation of tablets

Many excipients for pharmaceutical use are available in several grades. Both classes are often classified by physical and chemical properties. explanation for the grades is to modify the excipient performance characteristics. Excipients are chosen in a tablet formulation to perform variety of functions like for providing essential manufacturing technology functions (binders, glidant, lubricants may be added), for patient acceptance (flavors, colorants may be added), for providing aid in product identification (colorants may be added), for Optimizing or modifying drug release (disintegrant, hydrophilic polymers, wetting agents, biodegradable polymers may be added), for enhancing stability (antioxidant UV absorbers may be added).

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 improve cohesion, to permit use of direct compression.

Table No. 1: Types of diluents.

Sr no	Insoluble tablet diluents	Soluble tablet diluents
1	Starch	Lactose
2	Powdered cellulose	Sucrose
3	Microcrystaalline cellulose	Mannitol
4	Calcium phosphates	Sorbital

Binders:

to form cohesive compacts for directly compressed tablet.

Binders	Concentration	Comments
Acacia mucilage	Upto 20%	Gives very hard granule
Gulcose	Upto 50%	Strong adhesive but hygroscopic
Gelatin	5-20%	Used as warm solution, strong adhesive
Povidone(pvp)	2-10%	Soluble in water Can be used for non aqueous granulation
Starch mucilage	5-10%	Adhesive
Sucrose	Upto 70%	Hygroscopic, tablet hardens on storage
Tragacanth mucilage	Up[to 20%	Gives hard granule

3. Disintegrant

Added to a tablet formulation to facilitate its breaking or disintegration when it contact in water in the GIT.. Different types of disintegrant shown in Table No.2.

Table No. 2: List of disintegrant.

Sr.no.	Disintegrant	Concentration in granules (%w/w)	Special comments
1	Starch USP	5-20	Higher amount is required, poorly Compressible
2	Avicel®(PH 101 & 102)	10-20	Lubricant properties and directly Compressible
3	Solka floc®	5-15	Purified wood cellulose
4	Alginic acid	1-5	Acts by swelling
5	Na alginate	2.5-10	Acts by swelling
6	Explotab®	2-8	Sodium starch glycolate, superdisintegrant

4. Superdisintegrants

All over the world the demand for the faster disintegrating formulation is increased. So, the pharmacist needs to formulate disintegrant i.e Superdisintegrants which are effective at low concentration and have greater efficiency in disintegrating and are more intra-granular efficient. Table No.3 contains different types of super disintegrant.

Table No. 3: List of Super-disintegrants.

Sr. no	Super disintegrants	Example of Super disintegrants	Mechanism of action

1	Crospovidone Crosspovidone M® Kollidon® Polyplasdone	Crosslinked PVP	Swells very little and returns to original size after compression but act by capillary action
2	Sodium starch glycolate Explotab® Primogel®	Crosslinked starch	Swells 7-12 folds in < 30 seconds
3	Alginic acid NF Satialgine®	Crosslinked alginic Acid	Rapid swelling in aqueous medium or wicking action

5. **Anti–adherents**

Anti-adherents are added to the tablet formulations to prevent the material from sticking to the walls of the tablet press. (Different types of antiadherents shown in Table No.4).

Table No. 4: List of Anti-adherents.

Sr.no.	Anti-adherent	Concentration Range (%w/w)	Comments
1	Talc	1-5	Lubricant with excellent antiadherents Properties
2	Corn starch	3-10	Lubricant with excellent antiadherents Properties
3	Colloidal silica	0.1-0.5	It does not give satisfactory results due to the small surface area. Cab-O-Sil® and Syloid®

6. Glidants

Glidants are intended to promote flow of granules or powder material by reducing the friction between the particles.

7. Wetting agents

Tablet formulation uses wetting agents like Sodium Lauryl Sulphate (SLS) to improve disintegration aid in drug dissolution. SLS accelerates dissolution by destroying the path through which drugs must pass, minimizing the path length for the drug to travel. This helps in accelerating drug dissolution through biological membranes. Sodium di-isobutyl is a common wetting agent in tablet formulation.

8. Dissolution retardants

Dissolution retardants are introduced into tablet formulation when the controlled release of is necessarye.g. stearic acid and their esters etc

9. Dissolution enhancers

These are the agents that alter the molecular forces between ingredients to enhance dissolution of a solutein the solvent e.g. fructose, povidone, surfactants etc.

10. Adsorbents

The agents that can retain large quantities of liquids are known as adsorbents. Therefore liquids like Vitamin Ecan be incorporated into tablets by the addition of adsorbents. e.g. Anhydrous calcium phosphate, starch, magnesium carbonate, bentonite, kaolin, magnesium silicate magnesium oxide, and silicon dioxide.

11. Buffers

Buffers are added to maintain a required pH in the formulation. Since a change in pH may cause significant alteration in the stability e.g. Sodium bicarbonate, calcium carbonate, and citrate etc.

12. Antioxidants

Antioxidants are added in a tablet formulation to prevent oxidation. Antioxidants oxidation instead of drugs or block the reaction to oxidation, or act as synergists with other antioxidants. Chelators can act as antioxidants, too. e.g. ascorbic acid and their esters, alpha-tocopherol, ethylene di-amine

tetra-acetic acid, sodium metabisulfite, sodium bisulfite, butylated hydroxy toluene (BHT), butylated hydroxy anisole (BHA), citric acid and tartaric acid.

13. Chelating Agents

Chelating agents tend to form complexes with trace amounts of heavy metal ions inactivate their catalytic activity in drug oxidation e.g. ethylene-di-amine tetra acetic acid and its salts, di hydroxy ethyl glycine, citric acid and tartaric acid.

14. Preservatives

Preservatives may be a part of tablet formulation. It prevents the growth of microorganisms in tablet formulatione.g. parabens like methyl, propyl, benzyl, butyl p-hydroxybenzoate are used as preservatives.

15. Colorants

Colorants are used in tablets to identify similar products within a product line, avoid mix-ups, and enhance brand image. They do not contribute to therapeutic action or drug stability, but they help overcome color change on aging, disguise off-color drugs, and enhance the aesthetic appearance of products, ultimately leading to better patient acceptance.Some commonly used pharmaceutical colorants shown in No.5.

Table No. 5: Some Commonly Used Pharmaceutical Colorants (Synthetic)

Sr. no.	FD & C Colour	Common Name
1	Red 3	Erythrosine
2	Red 40	Allura Red AC
3	Yellow 5	Tartrazine

16. flavors

Flavors are commonly used to improve the taste of chewable and mouth dissolved tablets Flavors may be incorporated as either solids (spray-dried flavors) or oils or aqueous (water-soluble flavors)

17. Sweeteners

Sweeteners are added primarily to chewable tablets. Table No.6 shows different types of pharmaceutical sweeteners).

Table No. 6: Some of the sweeteners used in tablet formulation.

Sr.no	Natural sweeteners	Artificial sweeteners
1	Mannitol	Saccharin
2	Lactose	Cyclamate
3	Sucrose	Aspartame

preparation:

Tablets are prepared by three methods

i. Direct compression
ii. Wet granulation method
iii. Dry granulation method

1. Direct Compression:

Direct compression involves direct compressing the powdered material into tablets. Direct compression is adopted, if drug constitutes major portion of tablet [86-90] total weight (Figure 1). Tablets containing 25% or less of drug substances can be formulated, with a suitable diluent which acts as a carrier or vehicle for the drug. Tablets prepared by above method are subjected to compression machine which may be single station or multiple stations

2. Wet Granulation Method:

The most common method for tablet production involves weighing ingredients, mixing, granulation, screening, drying, lubrication, and compression. The main active ingredient, diluent, and disintegrant are blended, then passed through a sieve. The binding agent is added to the mixture, stirring to avoid over-wetting. Tray drying is the

most common method, but may be replaced by fluid-bed dryers as a novel approach. After drying, the granules pass through a screen, usually 60-100 mesh nylon cloth. Lubricant is added as a fine powder to fill the die cavity. This method ensures proper granulation and prevents over-wetting during lubrication and compression.

3. Dry Granulation Method:

This method is used for tablet preparation, in case tablet ingredients are highly sensitive to moisture, or unable to with stand elevated temperatures during drying, slugging may be used to form the granules. Dry granulation or double compression, usually eliminates various 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 passed through the mesh or through the mill, and the remaining lubricant is added to the granulation, blended properly and compressed to form the tablets

Evaluation of Tablet:

1. General Appearance:

The general appearance of a tablet, its identity and general elegance is essential for consumer acceptance, for control of lot-to-lot uniformity and tablet-to-tablet uniformity. The control of general appearance involves the measurement of size, shape, color, presence or absence of odor, taste etc.

2. Size & Shape:

It can be dimensionally described & controlled. The thickness of a tablet is only variables. Tablet thickness can be measured by micrometer or by other device. Tablet thickness should be controlled within a ± 5% variation of standard value.

3. Unique identification marking:

These marking utilize some form of embossing, engraving or printing. These markings include company name or symbol, product code, product name etc.

4. Organoleptic properties:

Color distribution must be uniform with no mottling. For visual color comparison compare the color of sample against standard color.

5. Hardness and Friability:

Tablet requires a certain amount of strength or hardness and resistance to friability to withstand mechanical shakes of handling in manufacture, packaging and shipping. Hardness generally measures the tablet crushing strength

Fig 1 . Pfizer type hardness tester

Fig. 2. Monsanto hardness tester

6. Friability:

Friability of a tablet can determine in laboratory by Roche friabilator. This consist of a plastic chamber that revolves at 25 rpm, dropping the tablets through a Distance of six inches in the friabilator, which is then operate for 100 revolutions. The tablets are reweighed. Compress tablet that lose less than 0.5 to 1.0 % of the Tablet weigh are consider acceptable.

Fig. 3. Digital Friability Test Apparatus

7. Drug Content and Release:

a. Weight Variation test (U.S.P.):

Take 20 tablet and weighed individually. Calculate average weight and compare the individual tablet weight to the average. The tablet pass the U.S.P. test if no more that 2 tablets are outside the percentage limit and if no tablet differs by more than 2 times the percentage limit.

b. Content Uniformity Test:

Randomly select 30 tablets. 10 of these assayed individually. The Tablet pass the test if 9 of the 10 tablets must contain not less than 85% and not more than 115% of the labeled drug content and the 10th tablet may not contain less than 75% and more than 125% of the labeled content. If these conditions are not met, remaining 20 tablet assayed individually and none may fall outside of the 85 to 115% range.

c. Disintegration Test (U.S.P.):

The U.S.P. device to test disintegration uses 6 glass tubes that are 3" long; open at the top and 10 mesh screen at the bottom end. To test for disintegration time, one tablet is placed in each tube and the basket rack is positioned in a 1-L beaker of water, simulated gastric fluid or simulated intestinal fluid at 37 ± 2 0 C such that the tablet remain 2.5 cm below the surface of liquid on their upward movement and not closer than 2.5 cm from the bottom of the beaker in their downward movement. Move the basket containing the tablets up and down through a distance of 5-6 cm at a frequency of 28 to 32 cycles per minute. Floating of the tablets can be prevented by placing perforated plastic discs on each tablet. According to the test the tablet must disintegrate and all particles must pass through the 10 mesh screen in the time specified. If any residue remains, it must have a soft mass. Disintegration time: Uncoated tablet: 5-30 minutes Coated tablet: 1-2 hours

Fig. 4. Disintegration test apparatus

3.Dissolution Test (U.S.P.):

Two set of apparatus:

Apparatus-1:

A single tablet is placed in a small wire mesh basket attached to the bottom of the shaft connected to a variable speed motor. The basket is immersed in a dissolution medium (as specified in monograph) contained in a 100 ml flask. The flask is cylindrical with a hemispherical bottom. The flask is maintained at 37±0.50C by a constant temperature bath. The motor is adjusted to turn at the specified speed and sample of the fluid are withdrawn at intervals to determine the amount of drug in solutions.

Apparatus-2:

It is same as apparatus-1, except the basket is replaced by a paddle. The dosage form is allowed to sink to the bottom of the flask before stirring. For dissolution test U.S.P. specifies the dissolution test medium and volume, type of apparatus to be used, rpm of the shaft, time limit of the test and assay procedure for. The test tolerance is expressed as a % of the labeled amount of drug dissolved in the time limit

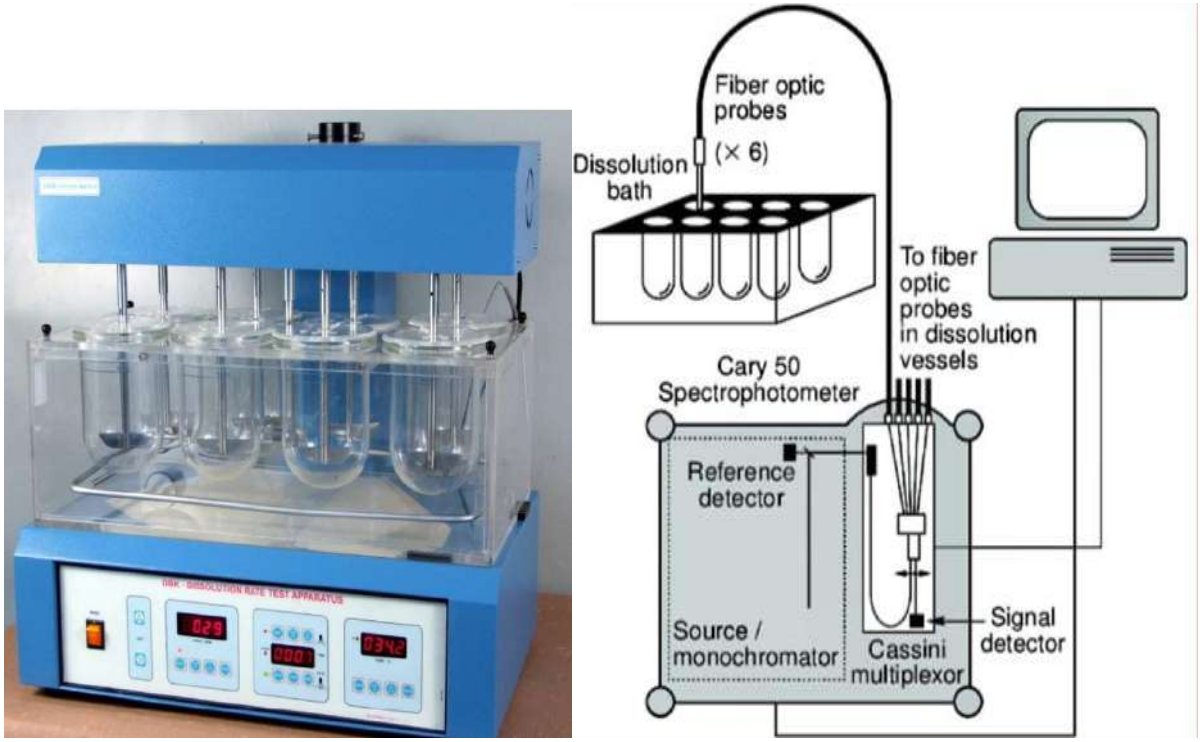

Fig. 5. Dissolution Test Apparatus

CONCLUSION:

Tablet manufacturing and evaluation have become crucial in pharmaceutical research, with tablets demonstrating uniqueness and adaptability. Over the past few decades, advancements in manufacturing and evaluation techniques have been economical and time-saving. The availability of various manufacturing and evaluation parameters has enhanced researchers' scope, allowing tablets to perfectly fit into the ever-changing drug world.

REFERENCES

1. Sachin S.Gaikward and Sanjay J.Kshirsagar, Review on tablet in tablet techniques Beni-suef university journel of basic and applied science, 2020; 9: 1, 1-7. 4. Nagashree K, Solid dosage form: Tablets Research
2. Nagashree K, Solid dosage form: Tablets Research and Review: Journal of pharmaceutical analysis, 2015; 4, (2): 21-71.
3. Mahesh dattatray dokhe, R. Kunkulol, D. Nandal, Tablet in tablet: A review Asian jounal of research in Chemistry and Pharmaceutical science, 2020; 8, (1): 1-6.
4. Aravind singh rathore R. C. Jat, Narendra Sharma, Rahul tiwari, An overview: Matric as controlled drug delivery system, International jounal of research and development in pharmacy and life science, 2013; 2, (4): 482-492.
5. N. G. Raghavendra rao, K. Richard prasanna raj, B. Sanjeev nayak, Review on matrix as sustained release, International journal of pharmaceutical research and allied science, 2013; 2(3): 1-7.
6. Jishan ali ahmed, A review on immediate release tablet dosage form, International jounal of pharmacy and pharmaceutical research, 2015; 2, (3): 1-17.
7. Shubham jangid, Akash yadav, Dinesh kumar jain, Dispersible tablet as a formation for oral delivery system, Journal of advance scientific research, 2023; 14, (1): 8-14.
8. Mahesh dattatray dokhe, R. Kunkulol, D. Nandal, Tablet in tablet: A review Asian jounal of research in chemistry and pharmaceutical science, 2020; 8, (1): 1-6.
9. Kaur harbi, processing technologies for pharmaceutical tablets International research journals of pharmacy, 2012; 3 (7): 20-23.
10. Leon Lachman, Herbert A. Lieberman, Joseph L. Kanig: The theory and Practice of Industrial Pharmacy, Varghese publication house, 3rd edition, 1990, 293-373.
11. Herbert A. Liberman, Martin M. Rieger and Gilbert S. Banker, pharmaceutical dosage forms: Tablets; volume-I.
12. Al-Achi A (2019) Tablets: A Brief Overview. Journal of Pharm Practice and Pharmaceutical Science. 2019(1): 49-52.
13. Nagashree K. Solid dosage forms: Tablets. Research and Reviews: Journal of Pharmaceutical Analysis. 2015.
14. G. Hymavathi, J. Adilakshmi, K. Dwarathi, M. Kavya, G. Pravallika. Review Article on In process Problems and Evaluation Tests of Tablet Manufacturing. International Journal of Research in Pharmaceutical and Nano Sciences. 2012, 3(7).
15. 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.
16. Purushottam R. Patil, Vaibhav D. Bobade, Pankaj L. Sawant and Rajendra P. Marathe. Emerging Trends In Compression Coated Tablet Dosage Forms: A Review. International journal of pharmaceutical sciences and research. 2016, 7(3). 930-938.
17. Devendra Sharma, M. D. Godbole, Ameya lanjewarand Sushil burle, Formulation and evaluation of containing poorly soluble drug by madg method, World jounal of pharmaceutical research, 2017; 6, (3): 1523-1527.
18. Landge R. B, kulkarni P. S, Gsssodge G. R and Hiremath S. N, A detailed report on tablets with special emphasis on its formulation and manufacturing technology, International journal of creative research thoughts (IJCRT), 2022; 10, (3): 624-641.
19. Amrutha JV, Pre and post compression studies of tablets, 2016; 11, (4): 100-109.
20. https://webstor.srmist.edu.in/web_assets/srm_mainsite/files/files/TABLETS.pdf.

21. The theory and practice of Industrial Pharmacy, Leon Lachmann, Herbert A. Lieberman, Joseph L. Kanig. Pg. 293-303, Fourth edition
22. Lachman et al., 1990; Herbert et al., 2006; Kaur, 2012; Hymavathi et al., 2012.
23. Indian Pharmacopoeia, 2010.
24. Hoffman F, Pressman JH, Code CF. Controlled entry of orally administered drugs, physiological considerations. Drug Dev Ind Pharma 1983; 9:1077-1085
25. Gupta A, Garg S, Khar RK. Measurement of Bioadhesive Strength of Mucoadhesive Buccal Tablet: De-sign of an In Vitro Assembly. Ind Drugs 1992; 30: 152-154.
26. Aburahma MH, El-Laithy HM, Hamza YE. Preparation and in vitro/in vivo Characterization of porous sublingual tablets containing ternary kneaded solid system of Vinpocetine with β- Cyclodextrin and hydroxy acid. Sci Pharma 2010; 78: 363-379.
27. Jagdale S, Gattani M, Bhavsar D, Kuchekar B, Chabukswar A. Formulation and Evaluation of Chewable Tablets of Levamisole. Int J Res Pharma Sci 2010; 1: 282-289.
28. Kathiresan K, Vijin P, Moorthi C, Manavalan R. Formulation and Evaluation of loratadine Chewable tablets. Res J Pharm Bio Chem Sci 2010; 2: 763-774.
29. Yong CS, Jung JH, Rhee JD, Kim CK, Choi HG. Physiological Characterization and Evaluation of Buccal Adhesive Tablets Containing Omeprazole. Drug Dev Ind Pharm 2001, 27: 447-445.
30. Yong CS, Jung JH, Rhee JD, Kim CK, Choi HG. Physiological Characterization and Evaluation of Buccal Adhesive Tablets Containing Omeprazole. Drug Dev Ind Pharm 2001, 27: 447-445.
31. Carr RL. Evaluating flow properties of powder. Chem Eng 1965; 72: 163-168.
32. Al-Suwayeh SA, Al-Omran MF, Saleh SI. Bioavailability Assessment of Diclofenac sodium chewable tablets. Saudi Pharma J 2003; 11: 32-36.
33. Parrot EL. Student experiments in pharmaceutical technology II. Flowability of powders. Amer J Pharm Educ 1996; 30: 205.
34. The theory and practice of Industrial Pharmacy, Leon Lachmann, Herbert A. Lieberman, Joseph L. Kanig. Pg. 293-303, Fourth edition.
35. Tejaswi et al., 2020; Sharma et al., 2011.
36. Agyilirah GA, Green M, Ducret R. Evaluation of the gastric retention properties of a cross linked polymer coated tablet versus those of a non-disintegrating tablets. Int J Pharma 1991; 75: 241-247.
37. Valenta C, Kast CE, Harich I, Bernkop-Schnurch A. Development and In Vitro Evaluation of a Mucoadhesive Vaginal Delivery System for Progesterone. J Cont Release 2001, 77: 323-332.
38. Mullarney MP, Hancock BC, Carlson GT, Ladipo DD, Langdon BA. The powder flow and compact mechanical properties of sucrose and three high-intensity sweeteners used in chewable tablets. Int J Pharma 2003; 257: 227–236.
39. Sharma P, Hamsa V. Formulation and evaluation of buccal mucoadhesive patches of Terbutaline Sulfate, STP Pharma Sci 2001; 11: 275-281.
40. Agyilirah GA, Green M, Ducret R. Evaluation of the gastric retention properties of a cross linked polymer coated tablet versus those of a non-disintegrating tablets. Int J Pharma 1991; 75: 241-247.
41. Wang D, Miller R, Zheng J. Comparative population pharmacokinetic-pharmacodynamic analysis for piroxicam–betacyclodextrin and piroxicam. J Clini Pharmaco 2000 ;(11):1257–1266.

HOW TO CITE: Ganesh U. Chavan, Payal V. Suradkar, Trupti D. Hudekar, A Comprehensive Review On: Tablet, Int. J. of Pharm. Sci., 2024, Vol 2, Issue 10, 794-805. https://doi.org/10.5281/zenodo.13963865