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# Oral Disintegrating Tablet: A REVIEW

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**ABSTRACT:**

Oral Dispersible Tablets are one of the most well-known dose forms on the market. The different benefits that they provide to patients in terms of significant income from product line extensions include a number of benefits. Oral dispersible pills have been developed for juvenile, geriatric, and bed rest patients, as well as for people and patients who do not have access to water. Several formulations offer the possibility of expanding the product line, particularly for senior people who have difficulty taking traditional oral dosage forms due to hand tremors and dysphasia. In general, swallowing issues occur in young people due to their underdeveloped muscular and neurological systems. Swallowing regular tablets can be difficult or incorrect in particular situations, such as motion sickness or a lack of water. This review covers dispersible tablet needs, primary characteristics, advantages, limitations, formulation issues, various advances for dispersible tablets, assessments, patented technologies, and various spots.

**KEYWORDS:** ODT, Superdisintegrants, Patented Technology, Drug delivery system.

## INTRODUCTION

Despite of tremendous innovations in drug delivery, the oral route remains the preferred route for administration of therapeutic agents because of accurate dosage, low cost therapy, self-medication, non-invasive method and ease of administration leading to high level of patient compliance. [1-3.] Oral administration of drugs is preferred due to its ease of swallowing, distress avoidance, versatility and most significantly, patient compliance.[4] Oral routes of drug administration have wide acceptance up to 50- 60% of total dosage forms. Solid dosage forms are popular because of ease of administration, accurate dosage, self-medication, pain avoidance and most importantly the patient compliance.[5] Over the past three decades, orally disintegrating tablets (ODTs) have gained considerable attention as a preferred alternative to conventional tablets and capsules due to better patient compliance. [6] In the treatment periods, solid dosage forms usually raised administration difficulties in paediatric, geriatric and psychiatric patients and also in some others like bed ridden, uncooperative or travelling patients. [7]

**Definition** The centre for Drug Evaluation and Research (CDER), US FDA defined Oral Disintegrating Tablets (ODT) as "A solid dosage form containing medicinal substances, which disintegrates rapidly, usually within a matter of seconds, when placed upon the tongue." [8]

The significance of these dosage forms is highlighted by the adoption of the term, "Orodispersible Tablet", by the European Pharmacopoeia which describes it as a tablet that can be placed in oral cavity where it disperses rapidly before swallowing [9]

The difficulty in swallowing i.e. dysphasia is a common problem of all age groups, especially the elderly and pediatrics, because of physiological changes associated with these groups. [10] Although chewable tablets have been on the market for some time, they are not the same as the new ODTs. Patients for whom chewing is difficult or painful can use these new tablets easily. ODTs can be used easily in children who have lost their primary teeth but do not have full use of their permanent teeth [11]These dosage forms are preferable alternative for oral medication in improving the quality of life and patient acceptability. Orally disintegrating tablets are known by various names such as oro-dispersible tablets, quick disintegrating tablets, fast disintegrating tablets, fast or rapid dissolving tablets, porous tablets, mouth dissolving tablets and rapimelts. [12]

A key reason that companies choose an ODT over other delivery technologies is that it is a relatively easy and often less risky delivery option to develop. Since the route of administration remains the same, ODTs that are formulated as bioequivalent line extensions or generic versions of an existing oral dosage form have minimal clinical requirements to gain approval. [13]

**SELECTION OF ODT DRUG CANDIDATE** [14]

Drug selection for oral disintegrating tablet. The ideal characteristics of a drug for oral dispersible tablet include

- Ability to permeate the oral mucosa.
- At least partially non-ionized at the oral cavity pH.
- Have the ability to diffuse and partition into the epithelium of the upper GIT.
- Small to moderate molecular weight.
- Low dose drugs preferably less than 50 mg.
- Short half-life and frequent dosing drugs are unsuitable for ODT.
- Drug should have good stability in saliva and water.
- Very bitter or unacceptable taste and odour drugs are unsuitable for ODT

**ADVANTAGES OF ODT** [15]

1. No water needed.
2. No chewing needed.
3. Better taste.
4. Improved stability.
5. Suitable for controlled/sustained release actives.
6. Allows high drug loading.
7. Ability to provide advantages of liquid medication in the form of solid preparation.
8. Cost- effective.
9. Rapid drug therapy intervention.
10. High drug loading is possible.
11. Have acceptable taste and pleasant mouth feeling.

**DIS-ADVANTAGES OF ODT** [16]

Rapid disintegrating tablets are hygroscopic in nature so must be kept at controlled environment i.e. humidity and temperature.

For properly stabilization and safety of stable product, ODT requires special packaging.

Usually have insufficient mechanical strength. Hence, careful handling is required.

Leave unpleasant taste and/or grittiness in mouth if not formulated properly.

**CHALLENGES IN FORMULATION OF ODT** [17-19]

| Challenges | Description |
|---|---|
| Mechanical strength | ODTs are made of porous or soft moulded matrices in order to allow its disintegration in mouth. This makes tablet friable and handling becomes difficult. |

| | |
|---|---|
| Hygroscopicity | Several orally disintegrating dosage forms are hygroscopic and cannot maintain physical integrity under normal conditions of temperature and humidity. Hence, they need protection from humidity which calls for specialized product packaging. |
| Amount of drug | For lyophilized dosage forms, the drug dose must be lower than 400 mg for insoluble drugs and less than 60 mg for soluble drugs. |
| Aqueous solubility | Water-soluble drugs pose various formulation challenges because they form eutectic mixtures, which result in freezing-point depression and the formation of a glassy solid that may collapse upon drying because of loss of supporting structure during the sublimation process. |
| Size of tablet | It has been reported that the easiest size of tablet to swallow is 7-8 mm while the easiest size to handle was one larger than 8 mm. |
| Mouth feel | FDTs should not disintegrate into larger particles in the oral cavity. The particles generated after disintegration of the FDTs should be as small as possible. Moreover addition of flavours and cooling agents like menthol improve the mouth feel |
| Palatability | Many drugs are bitter in taste. So effective taste masking of the bitter drugs must be done so that the taste of the drug is not felt in the oral cavity.<br>As most drugs are unpalatable, tablets should contain the medicament in a taste-masked form. |
| Disintegration time | FDTs should disintegrate in the mouth without additional water or with a very small amount (e.g., 1–2 mL) of water |
| Sensitivity to environmental conditions | FDTs should exhibit low sensitivity to environment conditions such as humidity and temperature as most of the materials used in FDTs are meant to dissolve in minimum quantity of water. |

## SELECTION OF DRUG CANDIDATES FOR ODTS [20]

Several factors must be considered while selecting an appropriate drug candidate for development of orally disintegrating dosage forms. The ultimate characteristics of a drug for dissolution in the mouth and pregastric absorption from ODTs include:

• Free from bitter taste.

• Dose lower than 20 mg.

• Small to moderate molecular weight.

• Good solubility in water and saliva.

• Partially nonionized at the oral cavity's pH.

• Ability to diffuse and partition into the epithelium of the upper GIT (log P >1, or preferably >2).

• Ability to permeate oral mucosal tissue. In contrast, the following characteristics may render a drug unsuitable for delivery as an orally disintegrating dosage form:

• Short half-life and frequent dosing.

• Very bitter or otherwise unacceptable taste because taste masking cannot be successfully achieved.

• Require controlled or sustained release.

## NEED FOR INNOVATIVE DRUG DELIVERY SYSTEM [21]

Orally administered drug delivery is still considered as a standard system in pharmaceutics field and it is still considered safest most convenient, and least expensive method of administration providing best route for patient compliance. However, tablets and capsules have a common drawback of difficulty swallowing, which leads to poor compliance, particularly in the elderly. Designing new dosage forms has become more important in order to increase compliance and make administration more convenient. Because of the presence of food, pH of the stomach, enzymatic degradation, change in GIT motility, and other factors, traditional oral drug delivery presents a drug with a swift and full release that may go as such without generating the desired impact. The area of creating medication delivery systems with organoleptic elegancy and maximal patient acceptability in paediatrics and geriatrics has recently received a lot of attention. There is a lot of creative work being done on drug delivery, with the oral route being favoured due of its convenience of administration, cost-effective therapy, self-medication, and non-invasive technique, which leads to increased patient compliance. One of the parameters in drug delivery design is tablet coating, which is used to reduce poor taste and side effects while improving elegancy and medication absorption.

## CONVENTATIONAL TECHNIQUES IN PREPARATION OF ODT

**1. Freeze drying or Lyophilization**

**2. Sublimation**

**3. Mass extrusion**

**4. Spray drying**

**5. Molding**

**6. Direct compression**

**7. Cotton candy process**

### 1. Freeze-Drying or Lyophilization [22]

Freeze drying is the process in which water is sublimed from the product after it is frozen. Freeze-dried forms offer rapid dissolution than other available solid products. The lyophilisation process imparts glossy amorphous structure to the bulking agent and sometimes to the drug, thereby enhancing the dissolution characteristics of the formulation. The active drug is dissolved or dispersed in an aqueous solution of a carrier/polymer. The mixture is done by weight and poured in the walls of the preformed blister packs. The trays holding the blister packs are passed through liquid nitrogen freezing tunnel to freeze the drug solution or dispersion. Then the frozen blister packs are placed in refrigerated cabinets to continue the freeze drying. After freeze drying the aluminium foil backing is applied on a blister-sealing machine. The freeze drying technique has demonstrated improved absorption and increase in bioavailability.

### 2. Sublimation [23]

The key to rapid disintegration of oral disintegrating tablet is preparation of a porous structure in the tablet matrix. Volatile ingredients are incorporated in the formulation to generate porous matrix so that it can be later subjected to a process of sublimation. Extremely volatile ingredients like ammonium bicarbonate, ammonium carbonate, benzoic acid, camphor, naphthalene, urea, urethane and phthalic anhydride can be compressed along with other excipients into a tablet. These volatile materials afterwards removed by sublimation, which leaves behind a highly porous matrix. Tablets prepared by this technique have reported to usually disintegrate in 10-20 sec. Even solvents like cyclohexane, benzene can be used as pore forming agents. Vacuum drying technique has been very often used by researchers to sublimate the volatile ingredients and thus maximize the porous structure in the tablet matrix. It is likely that a porous hydrophilic matrix will easily pick up the disintegrating medium and break quickly.

### 3. Mass-Extrusion [24]

This technology involves softening the active blend using the solvent mixture of water soluble polyethylene glycol and methanol and subsequent expulsion of softened mass through the extruder or

syringe to get a cylinder of the product into even segments using heated blade to form tablet. The dried cylinder can also be used to coat granules for bitter drugs and thereby achieve taste masking. An important advantage of the hot melt extrusion method is that the drug/carrier mix is only subjected to an elevated temperature for about 1 min, which enables drugs that are somewhat thermo labile to be processed.

4. **Spray Drying** [25]
   Spray drying methods are used to a great extent in pharmaceutical and biochemical procedures. Spray drying provides a rapid and economically efficient way to eliminate solvents and produces highly porous and fine powders. The formulations are compounded by hydrolyzed and non hydrolyzed gelatins as supporting agents, mannitol as bulking agent, croscarmellose sodium or sodium starch glycolate as disintegrating agent. An acidic material (e.g., citric acid) or alkali material (e.g., sodium bicarbonate) is used to improve disintegration and dissolution behaviour. Tablets prepared by the compression of spray dried powder, when immersed in an aqueous medium, showed a disintegration time of 20s

5. **Molding** [26]
   Moulded tablets are made up of water soluble ingredients. The powder mixture is sprinkled with a solvent (usually water or ethanol). The mixture is moulded into tablets under pressure. Applied pressure should be lower than those used in conventional tablet compression. This process is also known as compression moulding. Air drying can be used to remove the solvent. Due to lower pressure; a highly porous structure is created, that enhances the dissolution. The powder blend should be passed through a very fine screen, to improve the dissolution rate. Moulded tablets disintegrate more rapidly and provide improved taste because of their highly water-soluble, sugar components. However, moulded tablets generally do not have high mechanical strength. The chances of breakage of the moulded tablets during tablet handling and opening of blister pockets, is very high. If the hardness enhancing agents are used in the formulation, decrease in disintegration rate is observed. Mechanical strength and good disintegration of the tablets can be improved by using non-conventional equipment and by using multistep processes.

6. **Direct Compression** [27]
   It is the easiest and cost effective tablet manufacturing process. This method can be applied to manufacture ODT by selecting appropriate combinations of excipients, which can provide fast disintegration and optimum physical resistance. Sugar-based excipients are widely used as bulking agents because of their aqueous solubility, sweetness, pleasing mouth feel, and good taste masking. Tablets obtained by conventional compression method are less friable, but disintegrate more slowly. The compression method, with or without wet granulation, is a convenient and cost effective way to prepare tablets with sufficient structural integrity.
7. **Cotton candy process** [28]
   This process is so named as it utilizes a unique spinning mechanism to produce floss-like crystalline structure, which mimic cotton candy. Cotton candy process [14] involves formation of matrix of polysaccharides or saccharides by simultaneous action of flash melting and spinning. The matrix formed is partially recrystallized to have improved flow properties and compressibility. This candy floss matrix is then milled and blended with active ingredients and excipients and subsequently compressed to ODT. This process can accommodate high doses of drug and offers improved mechanical strength. However, high-process temperature limits the use of this process.

## SOME PATENTED TECHNOLOGIES

### Zydis technology [29]

In Zydis technology, the amount of incorporated soluble drug should be less than 60 mg. The particle size of insoluble drugs should be in the range of 50-200 mm to prevent sedimentation during processing. Freeze-drying is a relatively expensive manufacturing process. Zydis formulation has poor stability at higher temperatures and humidity as it readily absorbs water and can undergo degradation. Utilizing a unique lyophilisation process, Zydis is produced via four-steps:

- Step 1 – Mixing: The liquid solution or suspension containing drug is formulated using polymeric structure (gelatin) and a saccharide (mannitol) in water. Mannitol crystallizes during freezing, thereby

providing an elegant appearance and rigidity. Mannitol solubilises readily and improves taste and mouth feel.

- Step 2 – Filling and Freezing: The above liquid containing drug is precisely filled into pre-formed blisters and passed through a specially designed cryogenic freezing process cooled with liquid nitrogen to control the size of ice crystals.
- Step 3 – Lyophilization: The above frozen units are then transferred to freeze dryers for the lyophilization process.
- Step 4 – Sealing: The blister containing dried Zydis units are then sealed via a heat-seal process to protect the product from varying environmental conditions and ensure product stability.

**Quick solv** [10]

Quicksolv (Janssen Pharmaceutica, Beerse, Belgium) Quicksolv is a porous solid form obtained by freezing an aqueous dispersion or solution of the active-containing matrix, then drying the matrix by removing the water using an excess of alcohol (solvent extraction). The final form disintegrates very rapidly but is limited to low drug content and can be used only with those actives that are insoluble in the extraction solvent.

**Nanocrystal Technology** [30]

For ODT, Elan's proprietary NanoCrystal technology can enable formulation and improve compound activity and final product properties. On decreasing the particle size, surface area will increase, this leads to an increase in dissolution rate. This technology provides the following benefits: pharmacokinetics benefits of orally administered nanoparticles, in the form of rapidly disintegrating tablet matrix, extraordinary strength, empower the use of traditional packaging equipment and formats (i.e., bottles or blisters) and a wide range of doses (up to 200 mg of active pharmaceutical ingredient per unit)

**Flashtab Technology** [31]

Prographarm laboratories have patented the Flashtab technology. This technology involves the preparation of rapidly disintegrating tablet which consists of an active ingredient in the form of microcrystal. Drug micro-granules may be prepared by using the conventional techniques like coacervation, extrusion spheronization, simple pan coating methods and microencapsulation. The microcrystal of micro granules of the active ingredient is added to the granulated mixture of excipients prepared by wet or dry granulation, and compressed into tablets. All the processing utilized the conventional tableting technology, and the tablets produced are reported to have good mechanical strength and disintegration time less than one minute.

**Lyoc** [32]

This technique involves preparation of oil in water emulsion, which can be placed directly into blister cavities, followed by freeze-drying. Non-homogeneity during freeze-drying is avoided by incorporating inert filler to increase the viscosity. A high proportion of filler reduces porosity of tablets due to which disintegration is lowered

**Orasolv technology** [32]

CIMA Labs developed Orasolv Technology. In this process active drug is a taste masked. It contains effervescent agents. Direct compression techniques are applied to form tablets at low compression strength in society to minimize oral dissolution time. The fragile and friable tablets are taken out and packed in specially designed pick and place system

**Durasolv technology** [32]

This technology is patented by CIMA Labs. This process consists a drug, diluents and lubricant tablets are developed by this process have good rigidity. Pills are packed into conventional packaging system. This applied science is appropriate for products requiring low amount of active drugs

**Pharmaburst technology** [33]

Pharmaburst technology is patented by SPI pharm. Pharmaburst technology uses off the shelf co-processed excipients to create an ODT that, depending on the type of active ingredients and loading, dissolves within 30-40 seconds. The quantity of Pharmaburst required in a formulation depends on the active ingredients in the tablet. The process involves a dry blend of a drug, flavor and lubricant that are compressed into a tablet on a

standard tablet press with stock tooling. The Manufacture process can be carried out under normal temperature and humidity conditions. The tablets can be packaged in blister packs or bottle.

**Frosta Technology** [34]

Akina patents this technology. The frosta technology is based on the compression of highly plastic granules at low pressure to prepare fast melting tablets. The highly plastic granules are composed of three components: a plastic material, (Maltrin QD M580 and MaltrinM180 are maltodextrin and corn syrup solids) a water penetration enhancer (Mannogem EZ Spray) and a wet binder (sucrose, poly vinyl pyrolidone and hydroxyl propyl methylcellulose). Each of the three components plays an essential role in obtaining tablets with higher strengthened faster disintegration time.

Plastic granules composed of:

i. Porous and plastic material

ii. Water penetration enhancer

iii. Binder.

**Ziplets/advatab** [35]

Ziplet technology patented of Eurand is based on molding of water insoluble drugs with the formulation excipients. This technology uses the addition of a water insoluble inorganic excipient with disintegrants. The water insoluble inorganic excipients enhance disintegration characteristics of tablets in comparison to water soluble sugars.

**Flashdose** [36]

Fuisz has patented Flashdose technology. Nurofen meltlet, a new form of ibuprofen as melt-in-mouth tablets, prepared using flashdose technology is the first commercial product launched by Bioavail Corporation. Flashdose tablets consist of self-binding shearform matrix termed as "floss" Shearform matrices are prepared by flash heat processing.

**WOW tab technolog** [36]

Wow, tab technology is patented by Yamanouchi Pharmaceutical Co. WOW means "Without Water". In this process, a combination of low moldability saccharides and high moldability saccharides is used to obtain a rapidly melting strong tablet. The combination of high and low moldability is used to produce tablets of adequate hardness.

**Advantages:** Adequate dissolution rate and hardness. Wow, tab product can be packed in both into the conventional bottle and blister packs.

**Disadvantages:** No significant change in bioavailability.

## CLASSIFICATION OF SUPERDISINTEGRANT USED IN ODT [37]

1. **Natural polymer**
2. **Synthetic polymer**
3. **Co-processed**

1. Natural Polymer
    - Chitin and Chitosan
    - Guar Gum
    - Gum Karaya
    - Agar and Treated Agar
    - Fenugreek Seed Mucilage
    - Soy Polysaccharide
    - Gellan Gum
    - Mango Peel Pectin
    - Lepidium sativum Mucilage

- Plantago ovata Seed Mucilage
- Aegle marmelos Gum

2. Synthetic Polymers
    - Sodium starch Glycolate
    - Croscarmellose Sodium
    - Crosslinked polyvinylpyrrolidone
    - Low substituted hydroxypropyl cellulose
    - Microcrystalline cellulose
    - Cross-linked alginic acid

3. Co-processed Polymers
    - Ran Explo-S(Microcrystalline cellulose, Silica and sodium starch glycolate)
    - PanExcea MH300G (Microcrystalline cellulose, hydroxypropyl methyl cellulose and crospovidone)

## MARKETED `FORMULATION OF ODT [38]

**Table no 1: Marketed Formulation of ODT**

| **Brand Name** | **Active Ingredient** | **Company** |
|---|---|---|
| Domray MD | Domperidone | Ray Remedies |
| Velrid MD | Domperidone | Shreyam Health Care |
| Vomidon MD | Domperidone | Olcare Lab |
| Zotacet MD | Cetirizine HCl | Zota Pharm |
| Olanex Instab | Olanzapine | Ranbaxy |
| Manza RDT | Olanzapine | Mano Pharma (Orchid) |
| Romilast | Montelukast | Ranbaxy |
| Torrox MT | Rofecoxib | Torrent |
| Ziflam | Rofecoxib | Kopram |
| Valus | Valdecoxib | Glenmark |
| Nimez-MD | Nimesulide | Zota Pharma |
| Mosid MT | Mosapride | Torrent |

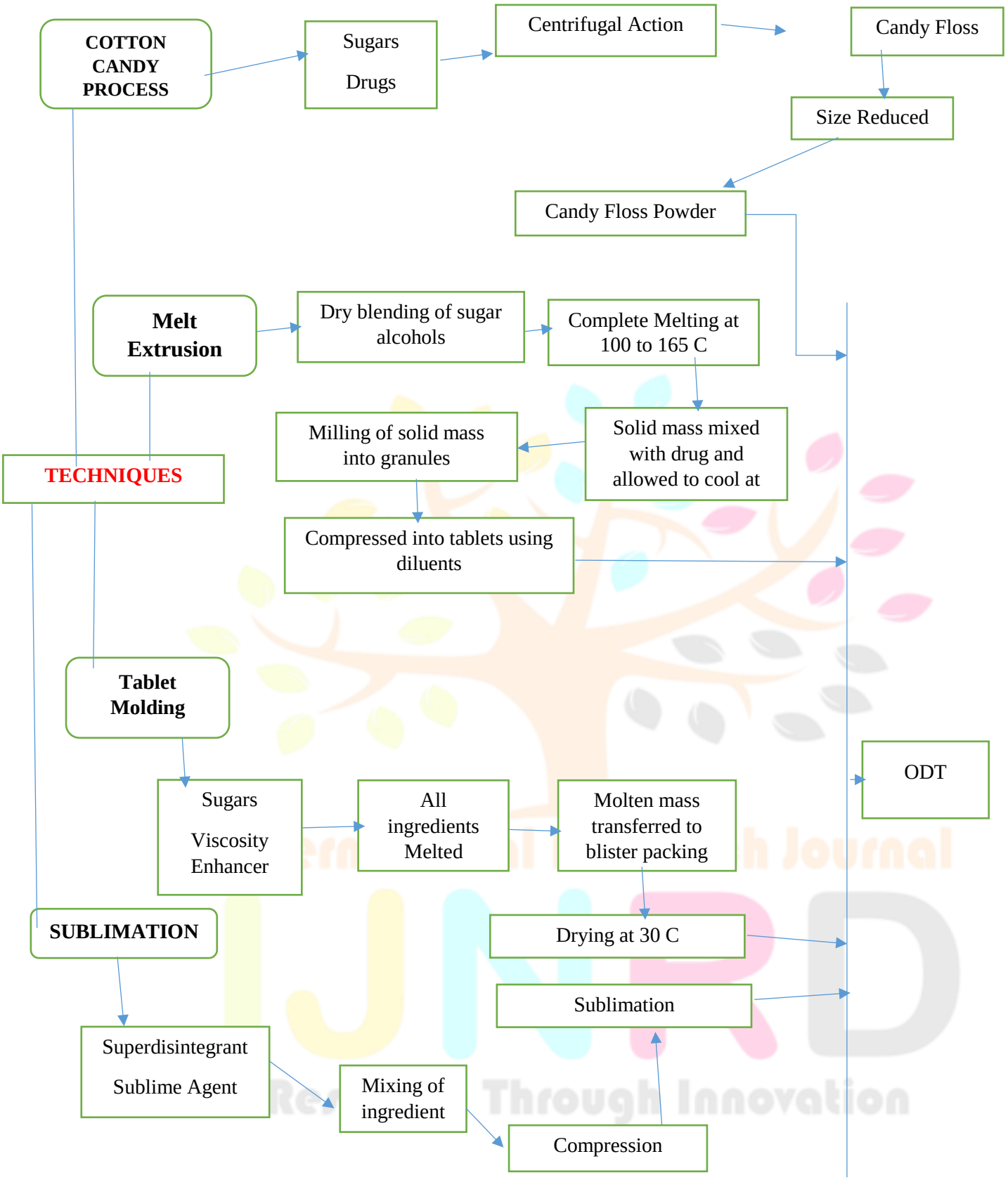


**Figure 1: Schematic representation of the processes involved in the preparation of ODTs by employing heat based technology**

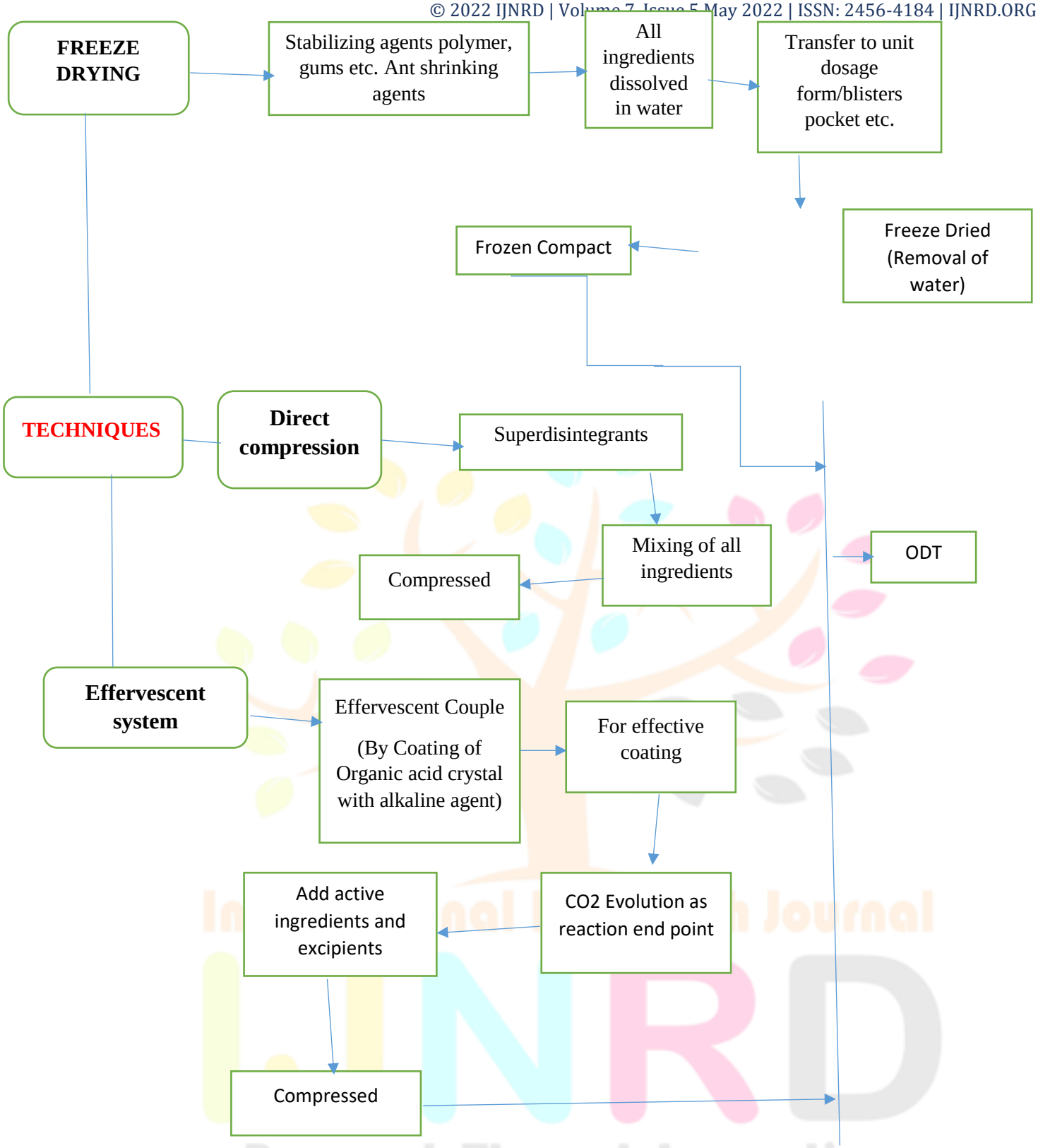


**Figure 2: Schematic representation of the process involved in the different methods for Preparation of ODTs without using heating process**

**Table no 2: Recent Patents**

| TITLE | PATENT NUMBER | PUBLICATION YEAR |
|---|---|---|
| Fast disintegrating tablet | EP1058538B2 | 2012 |
| Disintegrating particle | EP2465539A1 | 2012 |
| Fast dissolving solid | EP2493457A1 | 2012 |
| Rapidly disintegrating tablet | US20120028949 | 2012 |
| Quick dissolve compositions and tablets based thereon | US20120082729 | 2012 |
| Orodispersible tablets | US20120077888 | 2012 |
| Taste-masked orally disintegrating tablets of memantine hydrochloride | EP2583669A1 | 2013 |
| Orally disintegrating tablet | EP2591774A1 | 2013 |
| Mozavaptan formulations | EP2609909A1 | 2013 |
| Coated effervescent tablet | EP2595609A1 | 2013 |
| Orally disintegrating composition comprising mirtazapine | T0418/09 | 2013 |
| Fast release solid oral compositions of entecavir | WO2013072937A2 | 2013 |

## EVALUATION OF TABLET's

1. **Shape and colour of tablets.** [39]
   Uncoated tablets were examined under a lens for the shape of the tablet and color was observed by keeping the tablets in light
2. **Hardness.** [40]
   The crushing strength of the tablets was measured using a Monsanto Hardness Tester (Pfizer). Three tablets from each formulation batch were tested randomly and the average reading was noted. The hardness is measured in $kg/cm^2$
3. **Weight variation test:** [41]
   Each formulation selected twenty tablets in randomized and weighed individually. The percentage deviation was calculated by this formula:

$$\text{Percentage deviation of Weight Variation} = \frac{\left(\text{Individual tablet weight} - \text{Average weight of 20 tablets}\right)}{\text{Average weight of 20 tablets}} \times 100$$

Fig. no 3. Weight Variation formula

4. **Friability:** [42]
   The weight of 10 tablets and placed in Roche friabilator. The percentage friability was calculated by the formula:

$$\% \text{ Friability} = \frac{W1 - W2}{W1} \times 100$$

Fig. no 4. Friability formula

5. **Thickness** [42]
   Thickness of tablet was measured using vernier calipers.
6. **Wetting Time.** [43]
   A petridish containing 6 mL of distilled water was taken. A tablet containing a small quantity of amaranth color was placed on this. Time required for the upper surface of the tablet to become complete red was note.
7. **Disintegration test:** [43]
   It was carried out at 37ºC ± 2ºC in 900 ml of distilled water as disintegration medium. The test using six tablets in each of the six tubes contain one tablet and one disk. The time in seconds for complete disintegration of the tablets was noted

## PACKAGING OF ODT

One of the most significant parts of FDT production is packaging. The goods produced by diverse processes differ significantly in some aspects, particularly mechanical strength. The goods obtained through lyophilization process, which includes technologies like Zydis, Lyoc, Quicksolv and Nanocrystal are porous in nature, have reduced physical resistance are moisture sensitive, and may disintegrate at higher humidity levels. For the reasons stated above, the products obtained will require specific packaging. The backing foil of Zydis unit is usually peelable. Paksolv is special packaging unit for Orasolv tablets prevents vertical movement of the tablet within the depression and protects the tablets from breaking during storage and transport.

## FUTURE PROSPECT

When compared to traditional oral dosage forms orally disintegrating tablets have higher patient acceptance and compliance and may offer improved biopharmaceutical characteristics, efficacy, and safety. Prescription ODT solutions were initially intended to help paediatric, geriatric and psychiatric patients with dysphagia having difficulty in swallowing. ODT's are becoming more commonly available as over the counter medications to treat allergies, cold, and flu symptoms. Those who seek convenient dosing anywhere, anytime, and without water have been added to the target population. Because of availability of new technology, as well as high market acceptability and patient demand, such dosage forms have a bright future. Pharmaceutical businesses can use ODT's for product range extensions or first-to-market goods by paying close attention to technological improvements. With the continuous development of new pharmaceutical excipients, additional unique ODT technologies are expected to emerge in the near future.

## CONCLUSION

Fast dissolving tablets are cutting edge dosage form that were created to address some of the issue that seen in traditional solid dosage forms, such as difficulties swallowing pills in geriatric and juvenile patients. Fast dissolving pills are made to dissolve or disintegrate quickly in the saliva, usually in under 60 seconds (range of 5-60 seconds).When compared to traditional oral dose forms, fast dissolving tablet offer greater patient compliance and acceptance, which may improve biopharmaceutical properties, bioavailability, efficacy, convenience, and safety. Over the last decade, the popularity of FDT have been skyrocketed. FDT's are needed for psychotic patients, immobile patients, geriatric patients, paediatric patients, patients without access to water, and patients who are travelling.

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