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RESEARCH ARTICLE

Preparation and Evaluation of *In-vitro* Taste Masked Orodispersible Tablets of Ketoprofen

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Present study was aimed to develop orodispersible tablets of Ketoprofen using varying proportions of three superdisintegrants namely sodium starch glycolate, croscarmellose sodium and crosspovidone. Effect of these superdisintegrants on wetting and disintegration time was noticed. Kyron T-114 was used to mask the bitter taste along with other flavors and sweeteners. A total of nine batches were prepared by direct compression method. Powder blend was evaluated for different pre compression parameters results of which were within limits. Drug and excepients were found to be compatible as proved by FTIR spectroscopy. Disintegration time of F1-F3 increased by increasing sodium starch glycolate, F4-F6 decreased by increasing concentration of cross carmellose sodium, above 7.2% increase of CCS there was no change in DT. Disintegration time of F7-F9 was decreased by increasing crospovidone. Wetting time for all the formulations (F1-F9) ranged 26-6 seconds. In evaluation of taste masking effect of all nine formulations, F9 was in good category by volunteers. Assay of all nine formulations were satisfactory and complies the specification of given monograph. Dissolution of all nine formulations conducted after 1,2,3,4 & 5 minutes. Formulations containing CP as disintegrant showed good release %age of ketoprofen. By comparing quality control test results of all nine formulations, F9 was selected as optimum formulation.

Keywords: Orodispersible, Ketoprofen, Superdisintegrant, Wetting time, Disintegration

INTRODUCTION

Oral route for the administration of drug is commonly used and most important too as it is safe, easy, simple and economical. It is extensively accepted route of drug administration as compared to other routes. As there is no special training or skill required to administer drugs by this route, so it provides better patient compliance. The most important dosage form administered orally is "Tablet" as it provides many advantages, one of the advantage is that each tablet contains only dose having some active ingredients to ensure better patient compliance.

Patients suffering from dysphagia (trouble in swallowing) show the main drawback of oral dosage forms. This disadvantage leads to failure in compliance in almost 35% of public (Sastry *et al.,* 2000). Dysphagia may results from many diseases like Cardiac problems, Schizophrenia Kinetosis, Neuropathies like Cerebral palsy, Parkinsonism, Motion sickness etc (Siddiqui *et al.,* 2010). One more disadvantage observed by taking solid dosage forms is, water is required for swallowing. Unavailability of water leads to dysphagia even in actively responding patients. While travelling unavailability of water can be a major problem. In asthma and allergy patients may suffer from difficulty to swallow (Watanabe *et al.,* 1995). Considering all these disadvantages, pharmaceutical scientists developed a novel dosage form which is recognized as orodispersible tablets. These tablets disintegrate quickly after putting in mouth without the need of water to swallow or to chew. It dissolves in mouth quickly within seconds. These tablets disperse rapidly when placed in mouth, mostly within seconds, before being swallowed**.** These are also recognized as orally, fast disintegrating tablets, porous tablets, dissolves in mouth, rapimelts, melt in mouth and quickly dissolving tablets. United States pharmacopoeia (USP) and European pharmacopoeia gave the word "orodispersible" to this dosage form.

These tablets are very useful especially for children, elderly, bed ridden patients and the patients who may be busy, suffer from dysphagia, even when water is not easily available (Sastry *et al.,* 2000).

Ketoprofen is non-steroidal anti-inflammatory drug having analgesic and antipyretic properties. It is used for indicative treatment of serious and prolonged rheumatoid arthritis, osteoarthritis, primary dysmenorrhea and from slight to moderate pain related with musculotendinous trauma postoperative or postpartum pain.

The objective of present study is to improve formulation and *in-vitro* characterization of taste masked orodispersible tablets of ketoprofen by using direct compression technique. The aim is to prepare a product that will provide immediate relief from pain related to inflammation and rheumatic disorders for example rheumatoid arthritis, osteoarthritis, and in soft tissue injury. This research also emphasize on taste masking of ketoprofen by using Kyron T-114 in different ratios in addition with other flavoring agents such as dextrose, aspartame, menthol, vanillin and mannitol.

MATERIALS AND METHODS

Development of Ketoprofen orodispersible tablets

The ODTs of Ketoprofen were manufactured by direct compression technique. A total of nine batches were made each comprising 900 tablets. Ketoprofen and Kyron T-114 wet mixture was prepared in three different ratios 1:2, 1:1.5 and 1:1. Three different superdisintegrants namely sodium starch glycolate, croscarmellose sodium and crosspovidone were used in 4.8, 6 and 7.2% concentrations. For each formulation, all the ingredients were weighed individually on a calibrated electronic weighing balance for a batch of 900 tablets. Mannitol, microcrystalline cellulose, PEG 6000 and dextrose anhydrous were sieved individually through 30 mesh screen and added to the MDM mixer. Then, ketoprofen and kyron T-114 mixture dry grains were sieved through 20mesh screen, superdisintegrants were sieved individually through 60 mesh screen and added to the mixer. The above ingredients were mixed for 15 minutes. The vanilline flavor, aspartame, polysucralose, menthol and magnesium stearate were then added to the mixer after passing through 100 mesh screen and mixed with the above mentioned blend for 5 minutes. All the necessary tests were performed on the powder blend and then the blend was compressed into tablets using ZP-35D rotary tablet compression machine fitted with 8mm round punches and dies.

Pre-compression evaluation of powder blend

Pre-compression parameters including angle of repose, bulk and tapped density, compressibility index and hausner's ratio of powder blends of all formulations were calculated.

Angle of Repose was measured by the fixed funnel and free standing cone technique (Apparao *et al.,* 2011).

$$\mathrm{Tan}\,\theta = \frac{2h}{d} \text{ or } \theta = \tan^{-1}(2h/d)$$

Bulk density was measured as per the guidelines of USP 32 described under Method 1 for the measurement of bulk density.

$$Bulk\ density = M/Vo$$

Tapped density (TD) was measured as per the guidelines of USP 32 described under Method 1 (Ramasamy *et al.,* 2012).

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$$Tapped\ \ density = M/Vf$$

Compressibility Index was calculated by the formula (Khinchi *et al.*, 2011).

$$Carr's\ Index\ (\%) = \frac{\text{Tapped Density} - \text{bulk Density}}{\text{Tapped Density}} \times 100$$

Hausner's ratio was calculated by the formula (Moses *et al.,* 2010).

$$\text{Hausner's ratio} = \frac{Tapped\ Density}{Bulk\ density}$$

Drugs-excepients compatibility Study by FTIR Spectroscopy

FTIR spectra of pure excipients were recorded individually and in combination with drug in 1:1 ratio. The infrared scanning range was 1800–600 cm^{-1} and the resolution was 1 cm^{-1}.

Evaluation of compressed tablets

Physical appearance

Tablets from each formulation batch were examined for physical appearance such as color, shape, embossing, breaking line etc.

Weight variation

Twenty tablets were selected arbitrarily from each formulation and weighed individually on a calibrated weighing balance and average weight was calculated and then standard deviation was also calculated (USP 32).

Hardness test

Ten tablets were selected arbitrarily from each formulation and hardness of each tablet was determined by using digital hardness tester and average hardness was calculated along with standard deviation (USP 32).

Thickness test

Thickness of tablets was calculated with the help of digital vernier caliper and average thickness and standard deviation were then calculated (Lachman *et al,* 2009).

Friability Test

Tablets were tested following USP 30 guide lines for the friability test. The friabilator was run at 25 revolutions per minute for a total of 4 minutes or 100 revolutions. Friability was calculated using the formula (Sivadasan *et al.,* 2020).

$$Friability = \frac{\text{Difference in weight}}{weight\ of\ tablet\ before\ test} x100$$

Disintegration Test

Six tablets were selected arbitrarily from each formulation and subjected to disintegration test with the help of USP disintegration apparatus. One tablet was positioned in each tube. Water was used as the immersion fluid at temperature of 37°C ± 2°C (BP 2013). The test was performed three times for each formulation batch. Then the average value was calculated along with standard deviation.

Wetting time

Dissolution depends on disintegration of tablets which in turn depends on wetting of the tablets. A Petri dish with10cm internal diameter having 10 ml of purified water was taken and a piece of tissue paper after folding twice was placed in the center of the dish. The tablet to be tested was positioned on tissue paper and time taken by the water to reach the upper surface of the tablet was recorded in seconds and this time was taken as wetting time of the tablet (Morita *et al.,* 2002). The test was conducted on five tablets from each formulation batch. Then the average value was calculated along with standard deviation.

Taste Evaluation

This study was conducted to evaluate the palatability of various formulations of ODTs tablets of Ketoprofen. Total 11 formulations were chosen for the study, 9 test formulations, one positive control (Placebo for ketoprofen) and one negative control (Placebo for taste enhancers like mannitol, aspartame, dextrose and vanilline). All formulations (formulation code) were randomized. 6 healthy volunteers were selected (3 male and 3 female) aged around 21-22 years and were given volunteer code. Each volunteer was asked to take one tablet from each formulation at interval of 30 minutes and results were calculated. To neutralize the taste buds after tasting each formulation, one half of a bread slice, half glass of water and coca powder was given to each volunteer. Then all data was compiled after completion of this test study and each formulation was evaluated. On the basis of average value of each formulation, different ranks were given (Kulkarni *et al.,* 2012).

Assay

The tablets were tested for assay of Ketoprofen by HPLC. The assay technique for estimation of ketoprofen was established and authenticated with the help of a calibrated gradient system HPLC (LC-10AT series) manufactured by Shimadzu, Japan.

Dissolution Studies

To determine *in-vitro* release of ketoprofen dissolution studies were carried out using USP dissolution apparatus 2 (Paddle Apparatus) at 50rpm. 900 ml of phosphate buffer pH 6.8 was used as dissolution medium and maintained at 37^{o}C ± 0.5C˚. After each minute, sample of 20 ml was withdrawn from each vessel, filtered through a 5-µm whatman No 42 filter paper and then through 0.45 µm polyamide membrane filter and assayed at 258nm. Original volume of dissolution medium in vessel was maintained by replacing with its equal volume (Comoglu *et al.,* 2016).

RESULTS

Pre-compression Evaluation of Powder Blend

Pre-compression parameters were calculated on powder blends of each formulation. The results are given in table 2.

Drug and Excepients Compatibility Study by FTIR Spectroscopy

Compatibility among the drug and excepients was studied with the help of FTIR Spectrometer. The FTIR spectra of pure ketoprofen, crosspovidone, kyron T-114 and mixtures of these excepients with drug have been shown in figures 1-5.

Evaluation of Compressed Tablets

The compressed tablets from all formulations were tested for physical appearance, weight variation, thickness, hardness, friability, disintegration time, wetting time, assay and dissolution and the results are presented in tables 3 and 6.

Physical Appearance

Tablets from all formulations were examined thoroughly for physical appearance and found white colored, round and biconvex.

Weight Variation

Total 20 tablets were randomly selected from each formulation and tested for weight variation. The results shown in table 3 indicated that tablet weights from all the formulation batches are uniform and well within the limit (± 7.5% from the average weight) as given by USP 30.

Hardness Test

10 tablets were selected randomly from each batch and digital hardness tester was used to perform the test. The results are presented in table. All the formulations had average hardness values above 4 kg ranging from 4.07 kg (F9) to 4.53kg (F5) which are good enough to withstand the shocks during handling.

Thickness Test

All tablets had uniform thickness and only slight variation of thickness was seen in the tablets from all formulations as evident from the standard deviation values given in table 3.

Friability Test

The test was performed thrice for each formulation batch and average values along with standard deviations were calculated. The results have been given in table 3. The average friability values for all formulations were ranging from 0.32%-0.50%. These results indicated that all the formulations were strong enough to withstand the shocks and abrasion during manufacturing and transportation.

Disintegration Test

This test is very important for orodispersible tablets as fast disintegration ensures quick release of drug with fast absorption rate resulting in rapid onset of action.

Table 1: Composition of Ketoprofen Orodispersible tablets

Ingredients (mg)	F1	F2	F3	F4	F5	F6	F7	F8	F9
Ketoprofen	50	50	50	50	50	50	50	50	50
Sodium Starch Glycolate	12	15	18	--	--	--	--	--	--
Croscarmellose Sodium	--	--	--	12	15	18	--	--	--
Crospovidone	--	--	--	--	--	--	12	15	18
Kyron T-114	100	75	50	100	75	50	100	75	50
Microcrystalline Cellulose	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Mannitol	46	68	90	46	68	90	46	68	90
Polysucralose	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Aspartame	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Menthol	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Vanilline flavor	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Dextrose anhydrous	20	20	20	20	20	20	20	20	20
PEG 6000	6	6	6	6	6	6	6	6	6
Magnesium Stearate	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Totalweight/Tablet (mg)	250	250	250	250	250	250	250	250	250

Table 2: Results of Pre-compression evaluation of powder blend

Formulation	Angle of Repose ± SD	Bulk Density (g/ml) ± SD	Tapped Density (g/ml) ± SD	Compressibility Index (%) ± SD	Hausner's Ratio ± SD
F1	33.49 ± 0.610	0.569± 0.026	0.674± 0.004	13.645 ± 0.068	1.154± 0.005
F2	32.7 ± 0.796	0.571± 0.023	0.669± 0.005	13.641± 0.033	1.157± 0.010
F3	33.41 ± 0.451	0.578± 0.008	0.681± 0.007	14.010 ± 0.305	1.175± 0.008
F4	32.91± 0.896	0.579± 0.005	0.680± 0.001	14.483± 0.429	1.172± 0.005
F5	33.44± 0.416	0.578 ± 0.004	0.680± 0.003	14.201± 0.474	1.167 ± 0.010
F6	33.52± 0.463	0.577± 0.014	0.677± 0.009	14.502± 0.444	1.173± 0.004
F7	33.41 ± 0.552	0.576± 0.015	0.677± 0.009	14.180± 0.519	1.172 ± 0.007
F8	32.86 ± 0.917	0.571± 0.017	0.676± 0.004	14.496 ± 0.447	1.164 ± 0.004
F9	33.82 ± 0.086	0.578 ± 0.010	0.677 ± 0.006	14.203 ± 0.448	1.173 ± 0.004

Table 3: Results of post compression parameters of tablets

	Weight variation (mg)	Thickness (mm)	Hardness (Kg)	Friability %	Disintegration time (sec)	Wetting time (sec)
F1	250.23 ± 0.901	4.19 ± 0.015	4.19 ± 0.165	0.50 ± 0.04	38 ± 1.52	18 ± 1.00
F2	250.13 ± 0.702	4.18± 0.065	4.32 ± 0.080	0.48 ± 0.05	43 ± 2.08	23 ± 2.51
F3	250.46 ± 0.665	4.19± 0.026	4.20 ± 0.160	0.49 ± 0.05	57 ± 2.08	26 ± 1.53
F4	250.43 ± 0.611	4.19±0.055	4.10 ± 0.090	0.37 ± 0.06	55 ± 2.51	17 ± 2.51
F5	250.60 ± 0.818	4.19±0.030	4.53 ± 0.400	0.37 ± 0.02	47 ± 1.00	12 ± 1.52
F6	250.73 ± 1.001	4.19±0.020	4.15 ± 0.120	0.39 ± 0.02	46 ± 2.00	10 ± 1.52
F7	250.43 ± 0.611	4.19 ± 0.030	4.15 ± 0.087	0.35 ± 0.02	24 ± 1.00	11 ± 2.00
F8	250.40 ± 0.653	4.19 ± 0.040	4.18 ± 0.157	0.34 ± 0.01	20 ± 1.00	7 ± 1.00
F9	250.26 ± 0.602	4.19 ± 0.017	4.07 ± 0.037	0.32 ± 0.01	10 ± 1.00	6 ± 1.00

Table 4: Formulations acceptability and rank by volunteers

Formulation Code	Average points by volunteer	Acceptability	Rank
Negative control	98	**Very Good**	1
F9	80	**Very Good**	2
F8	72	**Good**	4
F7	65	**Acceptable**	7
F6	75	**Very Good**	3
F5	68	**Good**	6
F4	65	**Acceptable**	7
F3	70	**Good**	5
F2	62	**Acceptable**	8
F1	58	**Acceptable**	9
Positive control	17	**Worst**	10

Table 5: Assay results of Ketoprofen tablets

Formulation	%age Assay of Ketoprofen
F1	99.22±0.181
F2	98.32±1.39
F3	99.38±2.49
F4	99.96±2.36
F5	102.99±3.51
F6	103.61±1.38
F7	101.46±4.64
F8	102.56±0.84
F9	101.13±0.68

Table 6: Results of dissolution Studies of formulations

Time (min)	Cumulative Drug Release (%)								
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**	**F9**
1	**45.87**	**49.43**	**51.99**	**53.42**	**52.85**	**52.87**	**55.61**	**52.90**	**58.51**
2	**52.44**	**57.18**	**63.09**	**59.81**	**64.72**	**67.86**	**60.65**	**66.20**	**66.57**
3	**63.07**	**62.61**	**70.82**	**66.19**	**71.19**	**74.66**	**67.09**	**71.00**	**74.77**
4	**68.80**	**67.63**	**78.97**	**69.94**	**76.70**	**81.73**	**76.48**	**80.32**	**86.03**
5	**74.40**	**77.55**	**82.90**	**75.77**	**82.76**	**85.76**	**82.50**	**87.17**	**95.48**

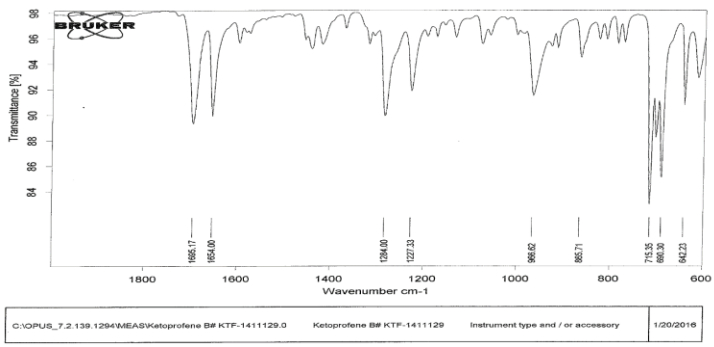

Figure 1. FTIR Spectrum of Pure Ketoprofen

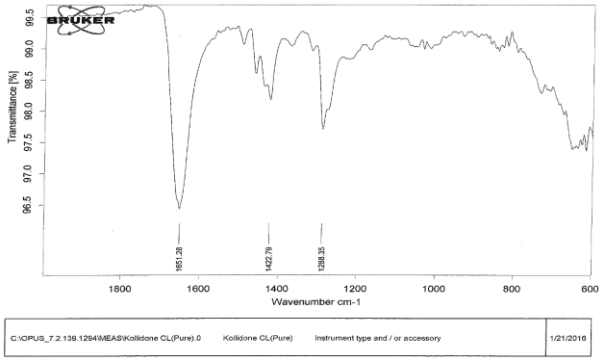

Figure 2. FTIR Spectrum of Pure Crospovidone

Figure 3. FTIR Spectrum of Pure Kyron T-114

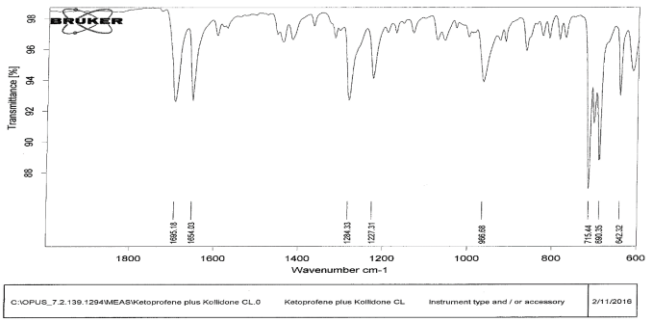

Figure 4. FTIR Spectrum of Ketoprofen & Crospovidone physical mixture

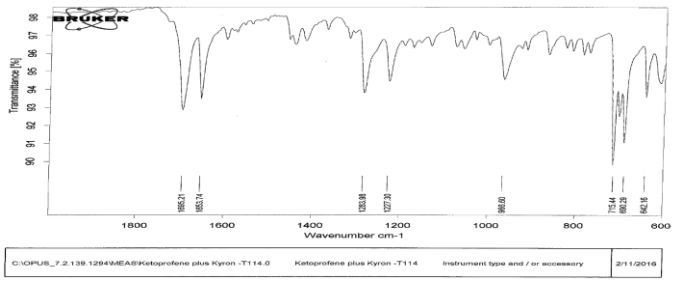

Figure 5. FTIR Spectrum of Ketoprofen and Kyron T-114 physical mixture

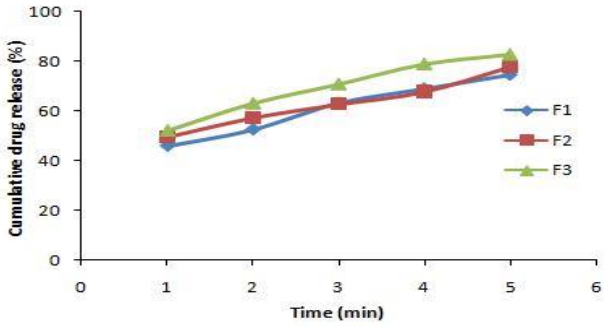

Figure 6. Dissolution profiles of formulations containing SSG

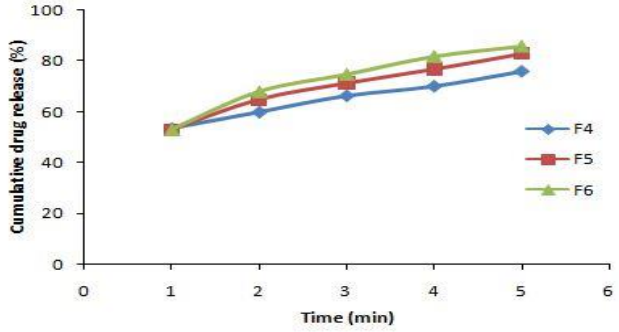

Figure 7. Dissolution profiles of formulations containing CCS

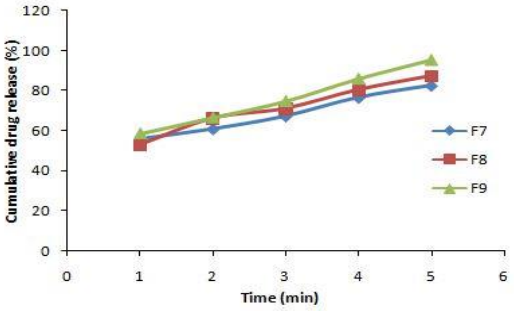

Figure 8. Dissolution profiles of formulations containing CP

Disintegration time of all formulations (F1-F9) was ranged within 8-57 sec as presented in table 3.

Wetting Time

The first stage for the disintegration and dissolution of orodispersible tablets is wetting time so it is most essential parameter to be optimized for these formulations. The wetting time for all formulations (F1-F9) ranged from 6-26 seconds as presented in table 3.

Evaluation of taste masking effect of orodispersible formulations

The results for taste masked evaluation of orodispersible formulations are given in table 4. Acceptability criteria for formulations having points 98-75, 74-70, 65-58 and less than 50 were set as very good, good, acceptable and worst, respectively.

Assay of Ketoprofen Tablets

The results of assay of orodispersible Ketoprofen tablets have been presented in table 5. All the formulations showed results satisfactory and within limits

Dissolution Studies

The results of *in-vitro* dissolution tests of all tablets containing different superdisintegrants have been summarized in table 6. All formulations exhibited good release profiles for ketoprofen. The effects of superdisintegrants on ketoprofin release from orodispersible tablets are presented in figures 6-8.

DISCUSSION

Ketoprofen was successfully formulated as orodispersible tablets by using different superdisintegrants namely sodium starch glycolate, croscarmellose sodium and crosspovidone. Varying proportions of superdisintegrants were used to develop nine batches of tablets by direct compression technique. Kyron T-114 was used to mask the bitter taste along with flavors and sweeteners. The tablets mixture blend in each case was evaluated for different pre compression parameters. The angle of repose values lied from 32.72 to 33.82 for all the formulation batches. So, powder blends of all formulations fall in “good” category describing good flow properties (Mandal, 2015). Bulk and tapped density values were ranging within 0.569-0.579g/ml and 0.669-0.681g/ml, respectively. The values of compressibility index of all batches ranged from 13.641 to 14.502 while the values for Hausner’s ratio ranged from 1.154 to 1.175 which fall in the “good” category as per USP 30. The USP limits of compressibility index and Hausner ratio for good flow properties are 11-15 and 1.12-1.18 respectively. In the development of product, compatibility within different excepients and API is an important consideration. The incompatibilities between drugs and excepients of chemical and physical nature can alter the nature, stability and bioavailability profile of drugs and ultimately their therapeutic efficacy (El-Houssiny *et al.*, 2016). The FTIR spectra showed the compatibility between all ingredients as no interaction observed among drug and excepients. Developed orodispersible tablets of ketoprofen were also characterized for post compression parameters including weight variation, hardness, thickness and friability. All parameters were found to be satisfactory as results were within official limits.

Disintegration time (DT) of formulations (F1-F3) was increased by increasing the concentration of the sodium starch glycolate and it was ranged within 38 sec-57 sec. This may be due to gel formation by SSG which retards the disintegration of the tablets. The DT values of the formulations F4-F6 having varying concentrations of croscarmellose sodium (CCS) as superdisintegrant ranged from 46 second to 55 seconds. These results showed that DT of the tablets decreased from 57 seconds (F4) to 46 seconds (F6) by increasing the concentration of CCS from 4.8% (F4), 6%(F5) and 7.2% (F6) while no further change in DT was observed when concentration of CCS was increased from 7.2% (F6). While formulations F7-F9 having variable amounts of Crospovidone (CP) as superdisintegrant showed remarkable decrease in DT by increasing the concentration of CP. The disintegration times of these formulations ranged from 24-10 seconds. These formulations displayed best disintegration time among all other formulations and this effect may be due to enhanced hydration capacity and high capillary activity of the Crospovidone. Crospovidone also has a low tendency to form gels. The formulation F9 containing 7.2% Crospovidone had the lowest disintegration time of 10 seconds compared to all other formulations (Nasser *et al.,* 2012).

An increase in wetting time (formulations F1-F3) was noted by increasing the concentration of SSG as superdisintegrant. This may be due to the gel forming tendency of SSG. While by raising the concentration of croscarmellose sodium (CCS) in formulations F4-F6, wetting time was decreased from 17-10sec. Formulations developed by Crospovidone (CP) as superdisintegrant (F7-F9) also displayed decrease in wetting time by increasing the concertation of CP and ranged from 11-6 seconds (Setty *et al.,* 2008). So, Crospovidone based formulations (F7-F9) showed lowest wetting times among all other formulations. These results of wetting times confirmed the results of disintegration times of all the formulations as wetting time results were corresponding to disintegration time results. The optimum formulation was F9 having 7.2 % CP showing the lowest disintegration time (10 sec) and wetting time (6 sec) as compared to all other formulations (Morita *et al.,* 2002).

Taste masking evaluation of ketoprofen ODTs was carried out in healthy human volunteers. Formulations F8, F5 and F3 were evaluated as good while formulations F7,

F4, F2 and F1 were evaluated as acceptable by volsunteers. Formulation F6 an F9 were evaluated very good by volunteers. Average points of F9 formulation were 80 which are more than F6. So, F9 was found to be optimum and formulation of choice by volunteers

Assay of all nine formulations were satisfactory and complies the specification of given monograph. By comparing all formulations assay, F9 found optimum formulation. Formulations containing SSG as disintegrant released 74.40%-82.90% of ketofrofen while CCS containing tablets showed 75.77%-85.76% of drug release after 5 minutes. Drug release of 82.50%-95.48% was noted for formulations (F7-F9) containing CP as disintegrant. Among all formulations, F9 was selected as optimum formulation showing 95.48% dissolution of ketoprofen after 5 minutes (Zhao & Augsburger, 2005).

CONCLUSION

Orodispersible tablets of Ketoprofen were developed successfully by direct compression method. A total of nine batches were developed using varying proportions of three superdisintegrants namely sodium starch glycolate, croscarmellose sodium and crospovidone. Polymer Kyron T-114 was used for taste masking in different concentrations. All the batches were evaluated for pre and post compression characterizations. Good flow properties were shown by all formulation blends. All of post compression parameters were found within the acceptable limits. Each formulation revealed agreeable assay results for the drug and each result was within limits.

Disintegration time and wetting time of all batches were determined showing acceptable results. F9 (7.2% crospovidone) showed lowest values for these tests i.e. 10 sec and 6 sec, respectively. The dissolution study was executed by USP type-2 dissolution apparatus (paddle type). Results revealed that each formulation showed good drug release profiles. F9 comprising of 7.2% of crospovidone as disintegrant showed a quick drug release of 95.48%. So, F9 having 7.2% of crosspovidone was proved to be optimum formulation showing lowest wetting and disintegration time and releasing maximum concentration of ketoprofen after 5 minutes. Taste evaluated for F9 formulation was found optimum by volunteers. At the end it was concluded that the development of orodispersible taste masked tablets of Ketoprofen through direct compression was a fruitful.

CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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AUTHOR CONTRIBUTIONS

UR wrote the manuscript and provided the study design. NA performed the experimental work, SA rechecked the manuscript. NA and SK helped in performance of experimental work, NS and NB helped in compilation of data.

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