

PHARMA APPLICATION LEAFLET

#17/04/003

Acetyl Salicylic Acid (300mg), Direct Compression

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Abstract

Acetyl salicylic acid is also known as "Aspirin". It is non-steroidal anti-inflammatory drug (NSAID). It is a medication used to treat pain, fever or inflammation. It is used long-term to prevent heart attack, ischaemic strokes and blood clots. It is also useful in headache, muscles and joint aches. It has been used

to treat rheumatoid arthritis, rheumatic fever and mild infection. Aspirin is available in market with different doses like 75mg, 150mg and 300mg.

We have used HiCel™MCC 90M to manufacture 300mg aspirin tablets and have found good results in terms of weight uniformity, tablet hardness, percentage friability, disintegration time and dissolution profile.

Ingredient composition

Sr.No.	Name of ingredients	mg/tablet	Contribution (%)
1.	Acetyl Salicylic Acid (Aspirin)	300	50
2.	HiCel™MCC 90M (Microcrystalline Cellulose)	240	40
3.	Povidone K-30	58	9.67
4.	Purified Talc	2	0.33
Total		600	100

Procedure

HiCel™MCC 90M was mixed with Povidone K-30 for 5-10 minutes. Then Acetyl Salicylic Acid was added to the previous mixture and blend for 5-10 minutes. After that purified talc was mixed with them and blend the mixture again for 10 minutes. The powder mixture was ready for direct compression.

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Equipment

Sr.No.	Name of equipment	Application	Model/ make
1.	Tablet punching machine	Tablet Manufacturing	10 station, D tooling/ Proton mini press
2.	Weighing Balance	Weighing	MS204S/A01/ Mettler Toledo
3.	Tablet Hardness Tester	Hardness Test	TH 1050 M/ Labindia
4.	Tablet Friability Tester	Friability Test	FT1020 / Labindia
5.	Tablet Disintegration Tester	Disintegration Test	DT 1000 / Labindia
6.	Dissolution Apparatus	Percentage of drug release	DS 8000 / Labindia
7.	UV Spectrophotometer	Absorbance	1800/ Shimadzu

Dissolution Test Detail

Dissolution Medium: 0.05M acetate buffer, 500 ml. 37 ± 2 °C temperature, at 50 rpm and using with USP dissolution type II apparatus.

Samples withdrawals after 5, 10, 15, 20, 25, 30, 35 and 40 minutes. Samples should be diluted if require and filtered. Check absorbance at $\lambda = 265$ nm.

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Tablet Characteristics

Sr.No.	Name of Parameter	Result
1.	Tablet description	Concave, Round, white color
2.	Tablet weight (n=10)	600 mg
3.	Tablet Hardness(n=10)	53.7N
4.	Thickness (n=10)	6.0 mm
5.	Diameter	12.5mm
6.	Friability (n=10)	<1 %
7.	Disintegration time (n=06)	33 Sec
8.	Dissolution time (n=6)	30 min



Fig.1. Acetyl salicylic acid tablets

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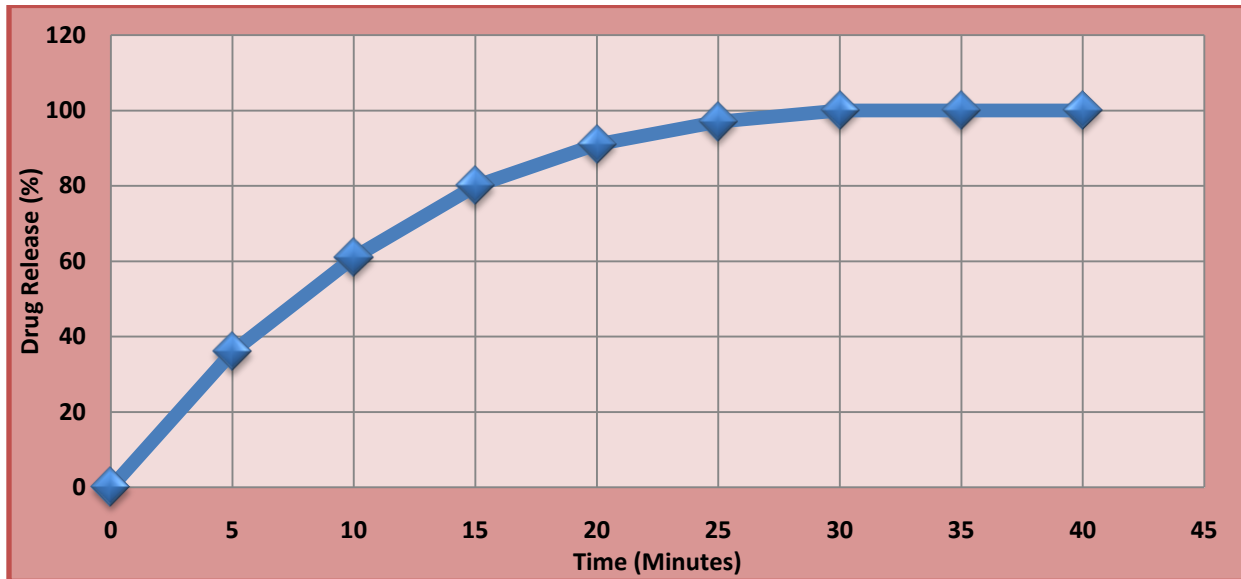


Fig.2. Dissolution profile of Acetyl salicylic acid tablet

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