



### Ascorbic Acid Tablet, Direct Compression

#### Abstract

Vitamin C, also known as ascorbic acid and L-ascorbic acid, is a vitamin found in food and used as a dietary supplement. The disease scurvy is prevented and treated with vitamin C-containing foods or dietary supplements.

Vitamin C is an essential nutrient involved in the repair of tissue and the enzyme production of certain neurotransmitters. It is required for the functioning of several enzymes and is important for immune system function.

It also functions as an antioxidant. Foods containing vitamin C include citrus fruits, broccoli, Brussels sprouts, raw bell peppers, and strawberries. Prolonged storage or cooking may reduce vitamin C content in foods.

Here, we have made 50 mg ascorbic acid tablet using **HiCel™ 90M** as a binder and it gives very good tablet hardness. In the market available 50 mg, 100 mg and 500 mg dosage tablets of ascorbic acid.

#### Ingredient composition

Sr.No.	Name of ingredients	mg/tablet	Contribution (%)
1.	Ascorbic Acid	50.20	30.06
2.	<b>HiCel™MCC 90M</b>	114	68.26
3.	Colloidal silicon dioxide	1.00	0.60
4.	Sodium starch glycolate	1.00	0.60
5.	Magnesium stearate	0.80	0.48
<b>Total</b>		<b>167.00</b>	<b>100</b>

#### Procedure

HiCel™MCC 90M, colloidal silicon dioxide and sodium starch glycolate blend for 10 mints. Added Ascorbic Acid and mixed 10-15 minutes. At last add magnesium stearate for lubrication and blend for 5 minutes. The powder mixture was ready for direct compression.

## PHARMA APPLICATION LEAFLET

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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	ME303/A04/ 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

#### Tablet Characteristics

Sr.No.	Name of Parameter	Result
1.	Tablet description	Round, flat, white color tablet
2.	Tablet weight	167 mg
3.	Tablet Hardness	69.0 N
4.	Diameter	8.00mm
5.	Friability	<1.00%
6.	Disintegration time (n=6)	10 Sec
7.	Dissolution time (n=6)	45min

#### Dissolution Test Detail

**Dissolution Medium:** Demineralized water, 900 ml. 37±2 °C temperature, at 50 rpm and using with USP dissolution type II apparatus.

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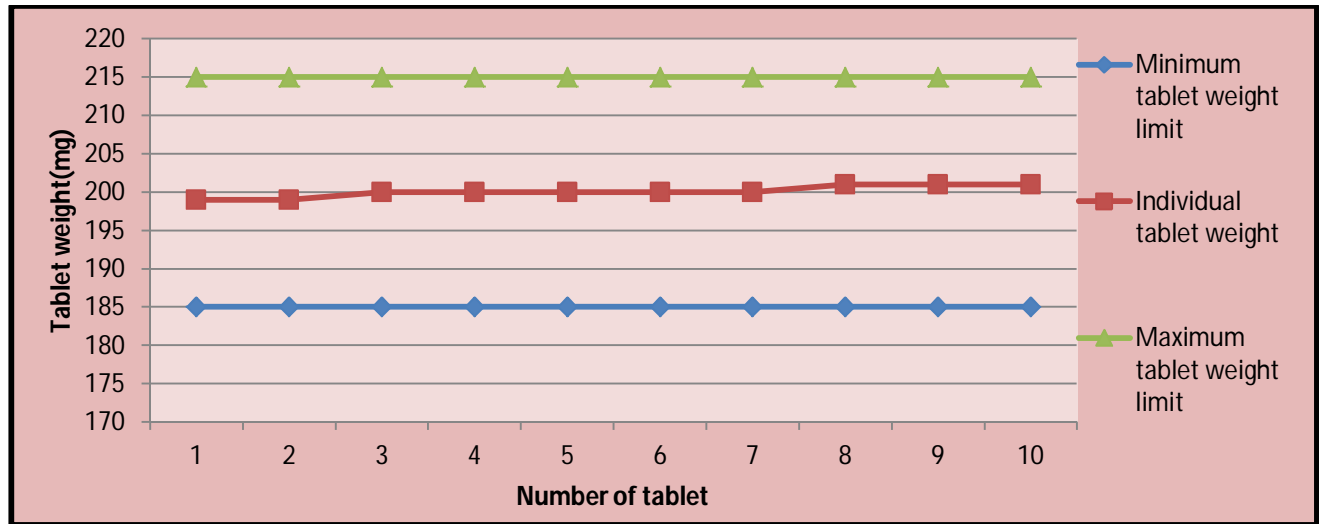


Fig.1 Weight Uniformity of Ascorbic acid tablet

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