

Unsuccessful and successful cucurbit[6]uril tablets formulations

Each formulation produces a tablet with an approximately weight of 200 mg, unless stated otherwise.

Formulation 1 - unsuitable	
Excipient	Mass (mg)
Lactose	97.3
Ac-Di-Sol	1.8
Mg Stearate	0.9
CB[6]	100

Reason tablet unsuitable: Powder did not compress into satisfactory tablet.

Formulation 2 - unsuitable	
Excipient	Mass (mg)
Avicel	67.3
Lactose	30
Ac-Di-Sol	1.8
Mg Stearate	0.9
CB[6]	100

Reason tablet unsuitable: Tablets very soft, easy to crumble and sticking to punches.

Formulation 3 (250 mg tablet) - unsuitable	
Excipient	Mass (mg)
Avicel	117.3
Lactose	30
Ac-Di-Sol	1.8
Mg Stearate	0.9
CB[6]	100

Reason tablet unsuitable: Slightly harder tablets compared to formulation 2.

Formulation 4 - unsuitable	
Excipient	Mass (mg)
Avicel	97.3
Lactose	50
Ac-Di-Sol	1.8
Mg Stearate	0.9
CB[6]	50

Reason tablet unsuitable: Tablets improved but pitted and rough.

Formulation 5 - unsuitable	
Excipient	Mass (mg)
Avicel	88.27
Lactose	49.3
Ac-Di-Sol	1.8
Mg Stearate	1.6
CB[6]	59.03

Reason tablet unsuitable: Average hardness 10 kp (range 7-13), within tolerance range (200 mg ± 10%), smoother tablets, but still not smooth enough.

Formulation 6 - unsuitable	
Excipient	Mass (mg)
Avicel	58
Lactose	38.2
Ac-Di-Sol	1.8
Mg Stearate	2
CB[6]	100

Reason tablet unsuitable: Tablets less smooth (more pitted) than formulation 5.

Formulation 7 - unsuitable	
Excipient	Mass (mg)
Avicel	92.2
Lactose	50
Ac-Di-Sol	1.8
Mg Stearate	2
Talc	4
CB[6]	50

Reason tablet unsuitable: Smooth tablets of correct weight tolerance, no pitting, hardness 12 kp (range 8-13) but do not disintegrate readily in water.

Formulation 8 - unsuitable	
Excipient	Mass (mg)
Avicel	95
Lactose	45
Aci-Di-Sol	5
Mg Stearate	1
Talc	4
CB[6]	50

Reason tablet unsuitable: Tablets stick to lower punch and not as smooth as formulation 7, but do disintegrate within 5 min in water.

Formulation 9 - Suitable	
Excipient	Mass (mg)
Avicel	95
Lactose	40
Ac-Di-Sol	8
Mg Stearate	2
Talc	5
CB[6]	50

Tablet suitable: Tablets do not stick to punch, smooth and <20 mins to disintegrate in 75 mL of water.

Formulation 10 - Suitable	
Excipient	Mass (mg)
Avicel	95
Lactose	41-99
Ac-Di-Sol	8
Mg Stearate	2
Talc	5
CB[6]	1-49

Formulation 11 - Suitable	
Excipient	Mass (mg)
Avicel	86
Lactose	0
Ac-Di-Sol	7
Mg Stearate	2
Talc	5
CB[6]	100