

Formulating Capsules

Technique #1 - Capsule Fill or Packing Method

(i.e. Progesterone 100 mg capsule, Size #1)

Example: Full Pack Size #1 Capsule

Progesterone 200mg
 Lactose 400mg

IF: 100% Fill THEN 50% Fill
 200mg Progesterone 100mg Progesterone

IF: 100% Fill THEN 50% Fill
 400mg Lactose 200mg Lactose

Therefore, each capsule should contain 100 mg Progesterone and 200 mg Lactose

This technique can be used when formulating slow release and also when starting with commercial materials.

Technique #2 - Common Filler Reference Chart

Capsule Size	Lactose Anhydrous, USP	Micro-crystalline Cellulose, NF (Avicel PH-105)	Starch, Corn NF	Hydro-mellose 2910 4000 cps, USP (Methocel E4M)	Kaolin, USP	Hydro-mellose 2208 100,000 cps, USP (Methocel K100)	Calcium Carbonate
4	190	110	180	100	165	100	220
3	225	130	205	150	250	150	275
2	300	160	285	188	375	185	350
1	400	230	375	250	540	250	460
0	550	320	510	350	600	350	640
00	775	450	700	475	765	475	925
000	1260	725	1180	620	1700	620	1450

Technique #3 - Rule of Sixes

When the bulk density of powders is 0.6 g/cc, the size of the capsule can be approximated by the rule of sixes.

According to this rule, capsule sizes 0,1,2,3,4 and 5 can hold 6-7, 5, 4, 3, 2 and 1/2-1 grains of the powders, respectively.

Each grain is approximately equivalent to 65mg.

Capsule size	0	1	2	3	4	5
Weight of powders in grains	6-7	5	4	3	2	1/2-1