

# Hard Empty Capsules

Empty capsules are a great way to create custom supplement formulations and have several advantages over tablets and/or raw powders. LFA provides three different types of capsules in a range of standard sizes that will meet the unique needs of numerous products.

The types of capsules we offer are:

- **Gelatin** - Our empty gelatin capsules are GMO free and derived from completely natural sources of beef/pork, water, and a plasticizing agent such as glycerin. These capsules are affordable, come in a multitude of colors, and are easily digested.
- **HPMC** - The empty Hydroxypropyl Methylcellulose (HPMC) capsules LFA carries are derived from plant cellulose, making it suitable for vegetarians and vegans. HPMC is also a stable polymer with a low moisture content that makes it ideal for moisture-sensitive ingredients.
- **Vegetable** - LFA's empty vegetable capsules are made from tapioca, which is naturally fermented into starch-free and vegetarian pullulan. Optimal for health-conscious manufacturers and consumers, our vegetable capsules are also certified organic.



## Main Benefits of Hard Capsules

- Masks unpleasant tastes in powders
- Allows powders to be dispensed in an uncompressed form
- Gives versatility to easily prepare any doses compared to formulating a tablet
- Easy to swallow due to their shape and texture
- Can have a longer shelf life than tablets due to the layer they create around the ingredients

## Specifications

Empty Capsule Size										
Capsule size	000	00E	00	0E	0	1	2	3	4	5
Empty Capsule Volume Capacity (ml)										
Capacity	1.37	1.00	0.90	0.78	0.68	0.48	0.36	0.27	0.20	0.13
Empty Capsule Overall Closed Length										
mm (tolerance)	26.1 (± 0.3)	25.3 (±0.3)	23.4 (±0.3)	23.5 (±0.3)	21.6 (±0.3)	19.4 (±0.3)	17.6 (±0.3)	15.7 (±0.3)	14.3 (±0.3)	11.1 (±0.4)
in (tolerance)	1.029 (±0.0012)	0.906 (±0.012)	0.921 (±0.012)	0.909 (±0.012)	0.85 (±0.012)	0.764 (±0.012)	0.693 (±0.012)	0.618 (±0.012)	0.563 (±0.012)	0.437 (±0.016)
Empty Capsule External Diameter										
Cap	9.91 mm 0.390 in	8.58 mm 0.338 in	8.56 mm 0.337 in	7.65 mm 0.301 in	7.64 mm 0.301 in	6.96 mm 0.274 in	6.39 mm 0.252 in	5.85 mm 0.230 in	5.33 mm 0.210 in	4.91 mm 0.193 in
Body	9.55 mm 0.375 in	8.25 mm 0.376 in	8.23 mm 0.322 in	7.36 mm 0.289 in	7.35 mm 0.289 in	6.63 mm 0.261 in	6.12 mm 0.240 in	5.60 mm 0.220 in	5.08 mm 0.200 in	4.68 mm 0.184 in
Empty Capsule Quantity Per Case										
Capsules per box	50,000	65,000	70,000	90,000	100,000	125,000	175,000	200,000	350,000	350,000