



# THE BENEFITS OF LIQUID-FILLED CAPSULES (LFCs)

Quick and simple dose adjustments on the fly

Easy to scale up from preclinical to clinical to commercial volumes

Dose escalations without increased demand for active pharmaceutical ingredients (APIs)

Suitable for poorly soluble, low-dose, and highly potent APIs

## LFCs vs. Tablets

The benefits of LFCs can be summarized with the 5 S'



**SPEED** — Faster and more cost-efficient entry into clinic



**SAVINGS** — Quicker formulation leads to lower development costs compared to tablets or other solid oral dosage forms



**SAFETY** — Safer and easier to handle highly potent APIs once wetted







**SCALABILITY** — Easy, incremental dose escalations and fewer steps in the scale up process



**SOLUBILITY** — Better therapeutic outcomes for challenging APIs

# Applications for Challenging APIs

	<b>Highly Potent APIs</b> <ul style="list-style-type: none"><li>• Reduced risk of airborne exposure to operators during the manufacturing process</li></ul>
	<b>Poorly Soluble APIs</b> <ul style="list-style-type: none"><li>• Significantly enhanced bioavailability and solubility when formulated as a liquid in a hard-shell capsule</li></ul>
	<b>Low-Dose APIs</b> <ul style="list-style-type: none"><li>• Greater uniformity for low-dose products versus powder combinations (with a capacity of 0.25µg/capsule)</li><li>• Fewer studies required to achieve drug stability</li></ul>
	<b>APIs Requiring Sustained Release</b> <ul style="list-style-type: none"><li>• Customizable drug formulation and polymer composition of the capsule to accommodate APIs with different properties and desired dissolution profiles</li></ul>

## LFCs Offer Advantages During Each Phase of Drug Development



### Early-Phase Testing

- Speed of development while ensuring quality
- Ease of dosage adjustment



### Late-Phase Testing

- Ease of scale-up
- Fast availability for clinical trial site
- Range of dosage options easily produced



### Commercialization

- Ease of scale-up without significant change in equipment or process
- Wide range of dosage options can be manufactured for commercial use
- Variety of band colors for customized branding opportunities

## DID YOU KNOW?

Altasciences has a 97% success rate at releasing quality batches right, **the first time.**