



Patheon
Development and Commercial Manufacturing



Finished Dose Forms



Solid.....
Sterile.....



PatheonTM
Performance the World Over

As a leading global CDMO, Patheon has expertise in a wide variety of solid and sterile dose forms. Every step of the way – from early development and formulation, to clinical trial manufacture to commercial supply – Patheon is able to provide solutions to help you achieve your goals.

Solid Dose Forms - Specialized

Dosage Form		Application
	Bilayer tablets <i>IR or CR/SR</i>	Fixed dose combination containing 2 API's OR immediate-release layer + controlled-release layer in a tablet dosage form.
	Trilayer tablets <i>IR or CR/SR</i>	Fixed dose combination OR immediate-release layer + controlled-release layer separated by middle placebo layer in a tablet dosage form.
	Microtablets <i>IR or CR/SR</i>	Low dose tablets. Can be filled in device, capsule or sachet.
	Beads in capsules <i>IR or CR/SR</i>	Beads manufactured by extrusion, spheronization or by drug layering for immediate-release or controlled-release.
	Coated beads <i>IR or CR/SR</i>	Beads manufactured by extrusion, spheronization or by drug layering and polymer coating for immediate-release or controlled-release.
	Tablets in capsules <i>IR or CR/SR</i>	Over-encapsulation for manufacturing of blinded clinical supply.
	Fast dispersible tablets <i>IR</i>	Tablet disintegrates/disperses as a suspension in a spoonful of water, tablet is divisible into 4 parts for titrating the dose. Useful in pediatric dispersible dosage form.
	Laser-drilled CR tablets <i>CR/SR</i>	Osmotic release of drug over a defined time period – e.g., 8 hrs, 16 hrs or 24 hrs – controlled-release/zero order release of drug.
	Liquid-filled capsules <i>IR or CR/SR</i>	Drug solubilized/suspended in a vehicle to improve solubility/bioavailability/absorption. Ideal for Phase I and beyond.
	Biphasic liquid-filled capsules <i>IR or CR/SR</i>	Drug solubilized/suspended in a biphasic vehicle to improve solubility/bioavailability/absorption. Ideal for Phase I and beyond.
	Bilayer chewable tablets <i>IR</i>	Fixed dose combination of 2 API's in a chewable tablet form – high dose compounds.
	Beads in liquid-filled capsules <i>IR or CR/SR</i>	Coated beads filled in a liquid vehicle – fixed-dose combination or combine an immediate-release with a controlled-release of drug.
	Hydrophilic gel matrix <i>CR/SR</i>	Technique to control the release of active substance from a dosage form.
	Polymer matrix <i>CR/SR</i>	Technique to control the release of active substance from a dosage form.
	Wax matrix <i>CR/SR</i>	Technique to control the release of active substance from a dosage form.
	Pulsatile release <i>CR/SR</i>	Technique to control the release of active substance from a dosage form.
	Polymer coating <i>CR/SR</i>	Technique to control the release of active substance from a dosage form.
	Sublingual tablets <i>IR</i>	Single layer tablets in a range of physical shapes and sizes for sublingual administration.

Solid Dose Forms - Softgels



Dosage Form	Application
Softgel capsules <i>IR or CR/SR</i>	One piece, hermetically sealed shell that creates a shell wall that is strong and durable to protect the inner fill materials from atmospheric oxidation to maintain potency and shelf-life. Can be filled with oils, non-aqueous liquids, solids in a paste or solutions.
Softgels within softgel <i>IR or CR/SR</i>	Softgel encapsulated dose that enables combinations of multiple delivery systems in a single dose, the delivery of incompatible materials, active ingredients, can contain: solid, liquid forms, and hard capsules; both fast and sustained-release in one single dose, gastric or intestinal release in the same dose, and delivery of incompatible compounds through individual doses with different release profiles.
Tablets within softgel <i>IR or CR/SR</i>	
VeggieGels™ <i>IR or CR/SR</i>	Polysaccharides-based shell soft capsules, free from animal derivatives, containing carrageenan, modified starch, plasticizers and water, offers a broader range of high pH fill formulations.
G-Tabs™ <i>IR or CR/SR</i>	Tablet coated with a one or two-toned color gelatin to reduce counterfeiting, make tablets easier to swallow and uniquely brand the tablet.
Twist-off capsules	Softgel capsule with twist-off cap allowing access to a measured dose for topical application.

Solid Dose Forms - Conventional



Dosage Form	Application
Uncoated <i>IR or CR/SR</i>	Single layer tablets in a range of shapes and physical sizes with or without break marks, embossing or logos.
Coated <i>IR or CR/SR</i>	Single layer tablets in a range of shapes physical sizes with or without break-marks, embossing or logos.
Powder-filled capsules <i>IR</i>	Two-piece gelatin or HPMC capsules in a range of sizes. Multiple color variations.
Powders/Granules/ Coated Beads/ Multiparticulates <i>IR</i>	Bottles and sachets. Packaged in bottles and sachets of varying dimensions and fill volumes.

Sterile Dose Forms



Dosage Form	Application
Vials	Aseptic filling (terminal sterilization where required) of solutions, suspensions or emulsions, into clear or amber glass vials. Available in different sizes and stopper/cap combinations ^{1,2} .
Lyo vials	Aseptic filling and lyophilization in a range of vial sizes ^{3,4} .
Prefilled syringes	Various tip configurations in both glass and plastic to match therapeutic dosing needs.
Cartridges	Various cartridge configurations in both glass and plastic to match therapeutic dosing needs.

Development and Commercial Dose Forms at a Glance

		Americas					Europe				
		Cincinnati USA	Manatí Puerto Rico	Toronto Canada	Whitby Canada	Barranquilla Colombia	Bourgoin France	Swindon UK	Milton Park UK	Ferentino Italy	Monza Italy
Solid Dose											
Specialized	Bilayer tablets	•		•	•						•
	Trilayer tablets	•			•						
	Microtablets	•		•				•	•		
	Beads in capsules	•		•			•	•			•
	Coated beads	•		•				•			
	Tablets in capsules			•	•			•	•		
	Fast dispersible tablets	•	•	•	•			•			
	Laser-drilled CR tablets	•									
	Liquid-filled capsules	•		•				•	•		
	Biphasic liquid-filled capsules	•									
	Bilayer chewable tablets	•		•	•						
	Beads in liquid-filled capsules	•		•	•						
	Hydrophilic gel matrix	•	•	•	•		•	•	•		•
	Polymer matrix	•		•	•			•			
	Wax matrix			•							
	Pulsatile release	•		•	•						
	Polymer coating	•		•	•		•	•			
Sublingual tablets	•		•	•		•	•				
Softgels	Softgel capsules	•				•					
	Softgels within softgel					•					
	Tablets within softgel					•					
	VeggieGels™					•					
	G-Tabs™					•					
Twist-off capsules					•						
Conventional	Uncoated	•	•	•	•		•	•	•	•	
	Coated	•	•	•	•		•	•	•	•	
	Powder-filled capsules	•	•	•	•		•	•	•	•	
	Powders/Granules/Coated Beads/Multiparticulates	•	•	•	•		•	•	•	•	

Sterile Dose Forms											
	Vials ^{1,2}							•		•	•
	Lyo vials ^{3,4}							• ⁵		•	•
	Prefilled syringes ⁶										•
	Cartridges ⁶										•

¹ Vial sizes – 2 ml, 3 ml, 4 ml, 5 ml, 6 ml, 7 ml, 7.9 ml, 8 ml, 10 ml, 11 ml, 12 ml, 15 ml, 20 ml, 22 ml, 25 ml, 30 ml, 50 ml, 60 ml, 100 ml, 200 ml, 250 ml, 300 ml, and 500 ml.

² Vial stopper sizes – 13 mm, 20 mm, 28 mm, 32 mm and Omega caps, based on vial size.

³ Lyo vial sizes – 2 ml, 5 ml, 7 ml, 8 ml, 10 ml, 12 ml, 15 ml, 20 ml, 22 ml, 25 ml, 30 ml, 50 ml, 60 ml, 100 ml.

⁴ Lyophilic vial stopper sizes – 13 mm, 20 mm, based on vial size.

⁵ Cephalosporin only.

⁶ Prefilled syringes and cartridges – 0.5 ml to 20 ml with fill range from 0.1 ml to 20 ml.

IR – Immediate-release CR/SR – Controlled-release or Sustained-release

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For more information about Patheon's wide variety of dose forms, contact your Patheon representative or email us at doingbusiness@patheon.com

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