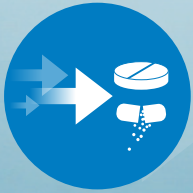


Accelerate Your Formulation Development



Colorcon
HyperStart[®]

Starting formulation recommendation

Process guidance

Reduce development time and cost

Speed to market

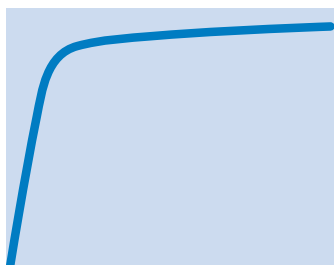


From Core to Coating, Your Supplier of Choice



This document is valid at the time of distribution. Distributed 16-Jun-2019 (UTC)

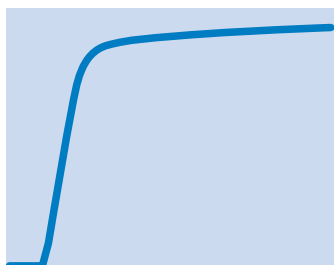
Immediate Release



Tablet/Capsule

- Stabilize moisture sensitive APIs
- Promote content uniformity for low dose APIs
- Improve solubility of poorly soluble APIs
- Improve flow and reduce weight variation in capsule filling
- Uniform sugar sphere substrates for drug layering
- Predictive tool *My Dosage Design*[™] to assist in sphere size selection

Taste-mask Applications

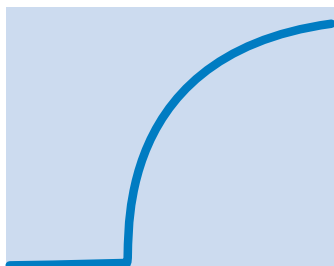


Particle Coating

Ion Exchange
Resination

- Excipients with precedence of use in pediatric applications
- Options for range of oral dosage forms
- Dry powder coating to improve productivity
- Effective for bitter APIs
- Drug release modulation for suspensions

Delayed Release



Tablets/
Multiparticulates

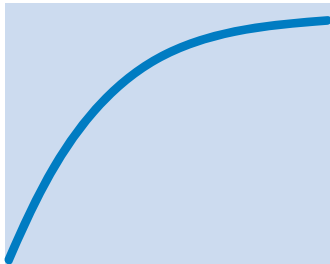
Soft Gel
Capsule

- Seal-coat solutions for enteric coating
- Aqueous and organic based coating options
- Delayed release polymer choices:
 - pH trigger from 5.5-7.0
 - Cellulosics, acrylates, vinyl phthalate
- Uniform sugar spheres for drug layering
- *My Dosage Design*[™] to assist in sphere size selection

- GRAS ethylcellulose/alginate based coating system for nutritional/food products
- Customized color concentrates, to eliminate batch-to-batch color variability

Complete range of release profiles can be achieved through HyperStart[®], Starting Formulation Service. Trial support available through Colorcon's extensive network of laboratories around the world.

Extended Release - First Order



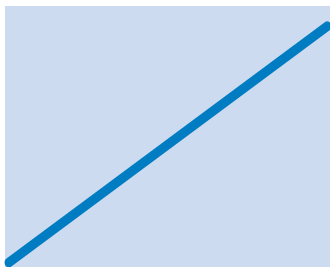
Hydrophilic
Matrix Tablet

BM
Multiparticulates

- Polymer options: hypromellose and polyethylene oxide (PEO)
- Quality by Design support
- Improved productivity

- Aqueous and organic coating options
- Productivity improvement option with dry powder coating
- *My Dosage Design*[™] to assist in sphere size selection

Extended Release - Zero Order



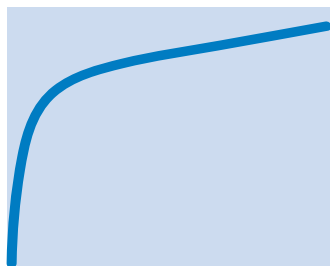
BM Coating on
Matrix Tablet

Push-Pull
Osmotic Pump

- Aqueous and organic barrier membrane coating
- Granulation, compression and coating trial support

- PEO for push and pull layers
- Complete solution from core to coating
- Bilayer compression, coating, laser drilling
- Extended re-test period for PEO & flexible pack sizes

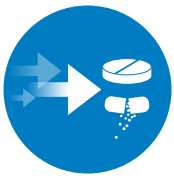
Biphasic (IR+ER)



Bilayer tablet
Drug Layered Matrix

Combined
Multiparticulates

- Bilayers for fixed dose combinations
- Aqueous and organic barrier membrane coatings
- Multiparticulates, including mini-tablets
- Coating expertise for layering of low dose drugs on tablets



Colorcon
HyperStart[®]

Accelerate Your Formulation Development and Reduce Cost

- Starting formulations with process guidance and trial support
- Film coating options for patient adherence and efficient processing
- Printing ink options for product identification
- Predictive tool, *My Dosage Design*[™], to assist in sphere size selection
- Regulatory insight and QbD support for smooth submission process

* Available in some locations. Contact your Colorcon representative for more information.

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www.colorcon.com



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