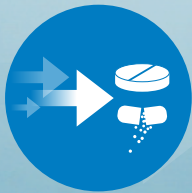


# Accelerate Your Formulation Development



Colorcon  
**HyperStart**<sup>®</sup>

Starting formulation recommendation →

Process guidance →

Reduce development time and cost →

Speed to market →

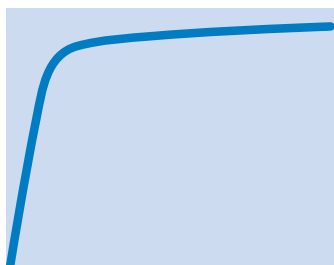


From Core to Coating, Your Supplier of Choice



This document is valid at the time of distribution. Distributed 20-Jan-2019 (UTC)

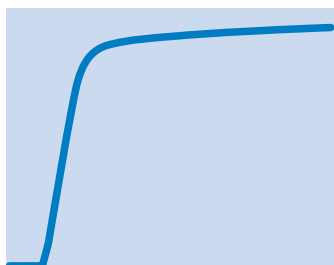
## Immediate Release



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*<sup>™</sup> to assist in sphere size selection

## Taste-mask Applications

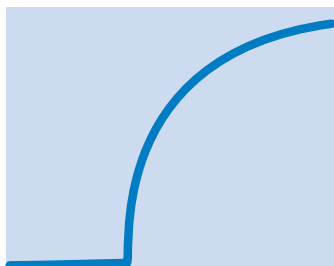


Particle Coating

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

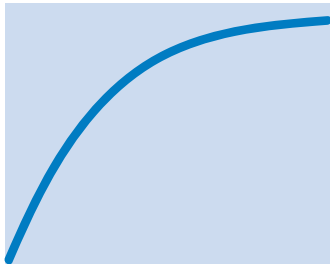
Soft Gel  
Capsule

- 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 pthalate
- Uniform sugar spheres for drug layering
- *My Dosage Design*<sup>™</sup> 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<sup>®</sup>, Starting Formulation Service. Trial support available through Colorcon's extensive network of laboratories around the world.

## Extended Release - First Order

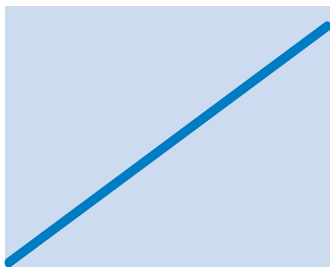


Hydrophilic  
Matrix Tablet  
→  
BM  
Multiparticulates

- 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

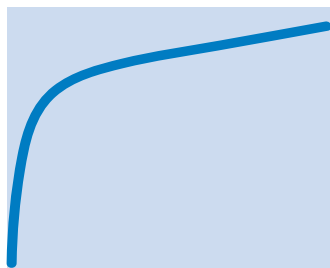


BM Coating on  
Matrix Tablet  
→  
Push-Pull  
Osmotic Pump

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

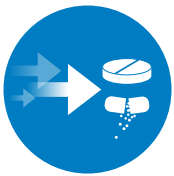
- PEO for push and pull layers
- Complete solution from core to coating
- Bilayer compression, coating, laser drilling
- Extended re-test period for PEO & flexible pack sizes

## 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**<sup>®</sup>

## 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*<sup>™</sup>, 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](http://www.colorcon.com)**



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