InstantGMP Compliance Series for Dietary Supplements

Better Compliance through Master Manufacturing Records

Background

- Dietary Supplements are orally ingested products that contain an ingredient that is intended to supplement the diet
- Not controlled by the FDA until 2007
- By 2010 all manufacturers or distributors of dietary supplements had to be in compliance with cGMP requirements
- Now 1 in 4 manufacturers inspected by FDA receive Warning Letters

GMP for Dietary Supplements

- FDA requires compliance with Good Manufacturing Practice (GMP) in manufacturing, packaging, labeling, or holding operations
- Packaging and labeling has to be done per the master manufacturing record
- Meets specifications for identity, purity, strength, composition and limits on contaminants

GMP for Dietary Supplements

- Demonstrate that product has been manufactured, packaged, labeled, and held under conditions to prevent adulteration
- Does not apply to dietary ingredients.
- All requirements for cGMP compliance are the FDA's "Final Rule" on dietary supplements

Highlights of DSHEA Final Rule

- Applies to anyone who manufactures, packages, labels, or holds products
- Establishes requirements for personnel, physical plant and grounds, and equipment and utensils
- Requires written procedures (SOPs)
- Requires specifications

Highlights of DSHEA Final Rule

- Requires a quality control unit to ensure the quality of a dietary supplement
- Requires master manufacturing records for each unique formulation and unique batch size
- Requires a batch production record for each batch

Basics of cGMP Manufacturing

- Instructions and procedures are clear and unambiguous
- Manufacturing processes are clearly defined and controlled
- Facilities designed to minimize cross-contamination and mix-ups
- Operators are trained
- Records demonstrate that all required steps were taken
- Deviations investigated and resolved

Master Manufacturing Record

- Must prepare and follow an MMR for:
  - Manufacturing
  - Packaging
  - Labeling
- One MMR for each unique formulation and each batch size
- Ensures uniformity in the finished product from batch to batch

MMR Must Include:

- Name of the product
- Strength
- Concentration
- Bill of Materials
- Complete list of components
- Weight or measure of each component
- An equipment list with proper cleaning checked

Example MMR Cover Page

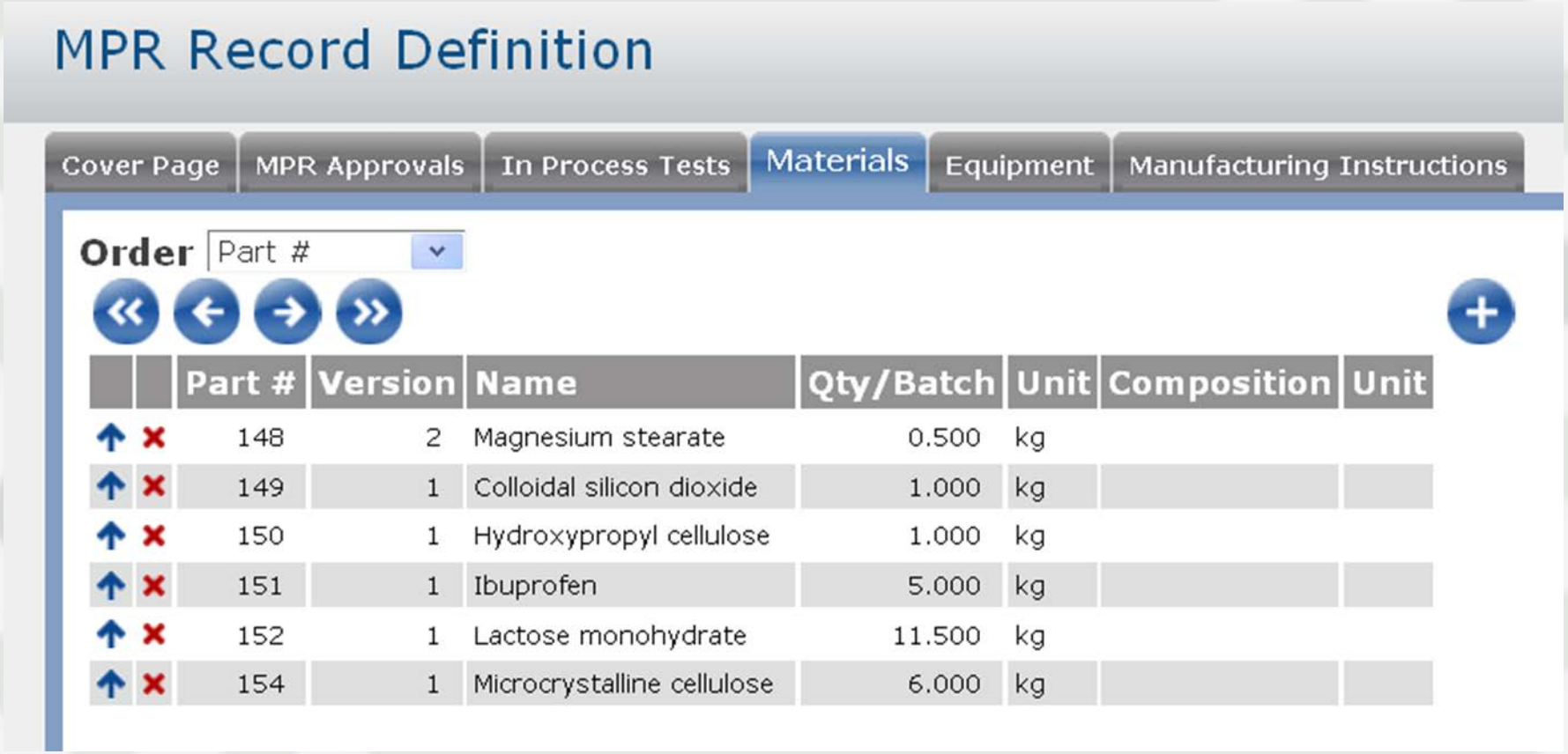
MPR Record Definition

Cover Page | MPR Approvals | In Process Tests | Materials | Equipment | Manufacturing Instructions

Client Product Code	OPC-GIN-001 **Project Title**
Part #	162 Ginseng Tea Packet
Author	
Drug Name	Ginseng Tea
Version Num	1
Formulation Id	GIN-001-01
Drug Strength	100 %
Batch Size	1.000
Unit	
Theoretical Yield	20
Company Name	Optimist Pharma Corp.
Purpose	Prepare tea packets for overseas distribution
Scope	

HTbMprCover01 Update Print

MMR Bill of Materials



Part #	Version	Name	Qty/Batch	Unit	Composition	Unit
148	2	Magnesium stearate	0.500	kg		
149	1	Colloidal silicon dioxide	1.000	kg		
150	1	Hydroxypropyl cellulose	1.000	kg		
151	1	Ibuprofen	5.000	kg		
152	1	Lactose monohydrate	11.500	kg		
154	1	Microcrystalline cellulose	6.000	kg		

MMR Must Include:

- Written instructions for each step
- Specifications at each step where control is necessary
- Procedures for sampling
- Where one person adds components, another person verifies the addition
- Theoretical yield at each step where control is needed
- Expected yield when manufacturing is completed

Definitions

- Theoretical Yield = Quantity of product to be made
- Actual Yield = Total quantity of product measured at the end of manufacturing a batch
- Percent Yield = Actual Yield / Theoretical Yield X 100
- Percent Loss = 100 – Percent Yield

Process Control System

- Covers all stages of manufacturing, packaging, labeling, and holding
- Makes sure product is packaged and labeled as specified in the master manufacturing record
- First step is to use high quality components with well-defined specifications
- Avoids risk of making adulterated product

Master Record Storage/Retention

- Length of time product complaints are likely to arise
- Generally 2 years after date of distribution (not date of manufacture)
- If shelf life dating is used, 1 year past the shelf life date
- Packagers and labelers that return the product to the manufacturer for distribution do not need separate records

Master Record Storage/Retention

- Records are the backbone of a quality system
- FDA must have the means to examine them during an inspection
- If microfilming is used, a suitable reader must be available
- If electronic, must meet 21 CFR Part 11 requirements

Master Records Made Easy

- InstantGMP makes managing Master Manufacturing Records easy
- MMRs collaboration, review and signoff can be done on-line through its web portal
- Version control is automatic
- Part of an electronic cGMP Manufacturing Execution System

Benefits of Electronic Manufacturing

- More efficient than manual systems
- Shrink or eliminate redundant processes and forms
- Trim time and overhead costs
- Reduce errors, omissions and deviations
- Provide opportunities to reorganize and update processes
- Increases throughput, quality and margins

Thank You For Visiting!

Additional presentations and videos on cGMP Manufacturing and Dietary Supplements are located in the Resource Center at:

www.instantgmp.com