



2009 Equipment List



FORMULATION DEVELOPMENT

PROCESSING

Mixing

4 qt. and 16 qt. Patterson-Kelly (P-K) V-Blender

Turbula T10B Mixer

Omni Homogenizer Model 17105

Omni Homogenizer

Fisher Mixers

Microfluidics Model 110 Microfluidizer*

Granulation/Drying

Vector Fluid Bed Granulator/Dryer with Top Spray Insert and Wurster Column

Vector High Shear Granulator with Jacketed Vessels

Particle Sizing

Quadro Comil Model 197

Fitzpatrick Model J Mill*

Encapsulation

In-Cap Automatic Capsule Filler*

MF-30 Encapsulator (Manual Fill)

Schaefer Capsule Bander*

Tableting and Coating

Globe Pharma Rotary Tablet Press, 10 Station, Type Bb Tooling (2)

Tri-Layer Tablet Press 24 stations

Vector LDCS Tablet Coater with 11.5" and 15" Perforated Pan Inserts

Carver Single Station Press

In Process/Physical Testing

ATM Sonic Sifter

Brookfield Digital Rheometer

Ohaus Moisture Analyzer

Mitutoyo Thickness Gauges

Advanced Instruments Osmometer

Vankel Hardness Tester

Vanderkamp Hardness Tester

VanKel Disintegration Tester

VanKel Friabilator

VanKel Tap Density Tester

Transfer/Packaging

Baxa Repeater Pumps

Induction Sealer

MasterFlex Peristaltic Pumps

Spring Torque Tester

Miscellaneous

Nuaire Laminar Flow Hood

cGMP MANUFACTURING

SOLIDS PROCESSING

Mixing

4 qt., 8 qt. and 16 qt. Patterson-Kelly V-Blenders

1 cu.ft., 3 cu.ft. and 5 cu.ft. Patterson-Kelly Cross-Flow V-Blenders

Granulation/Drying

Vector Fluid Bed Processor

Vector High Shear Granulator

Particle Size Reduction

Quadro Comil Model 194 (2)

Encapsulation

Capsugel Ultra 8 II*

PAM Model MF-30/AL-90

Capsugel Xcelodose 600S Precision Micro-Filling*

System/Automated Encapsulator

Capsugel CFS1200 Liquid Encapsulator*

IN-CAP Automatic Capsule Filler

Tableting and Coating

Globe Pharma Press, 10 Station, Type B Tooling with Tablet Deduster

Vankel Hardness Tester

Vector Model HCT-60 Tablet Coating System (24" Pan)*

LIQUID/SEMI-SOLIDS PROCESSING

Mixing

Lee, 1000L Jacketed Kettle with Homogenizer*

Stainless Steel Jacketed Tank (100 gallon)*

NesLab Refrigerated Chiller Unit

Lightnin EV 1 Mixer

Omni Macro Homogenizer

Transfer

Single Piston Bottle Filler

MasterFlex Peristaltic Pumps

Baxa Repeater Pumps

Lyophilization

Labconco Freezone 8L with 4 shelf stoppering

Finishing/Packaging

Cap Torque Testers*

Capsule Polishers *

Kalish Bicaptight Bottle Capper*

King Tablet/Capsule Counter*

Lepel Induction Sealer (2)*

Loma Metal Detector*

SADE P2 Tablet/Capsule Check Weigher (2)*

Tablet/Capsule Inspection Belt (2)*

Blister-packaging*

ANALYTICAL AND PREFORMULATION

Liquid Chromatography

Shimadzu LC-2010 with UV/Vis, PDA, Fluorescence, ELS and Electrochemical Detectors

Shimadzu LC-MS 2010 with PDA/Fraction collection

Gas Chromatography

Shimadzu GC-17A

Data Collection/Management

Shimadzu Class-VP Chromatography Data System

Dissolution

(USP Apparatus I and Apparatus II)

VanKel VK7000 Dissolution Baths (USP Type 1 and 2)

VanKel VK8000 Autosampler

VanKel VK750D Heaters/Circulators

VanKel Bio-Dis Apparatus (USP Type 3)

Particle Size Analysis

Cilas 1190 Laser Diffraction Particle Size Analyzer with Powder and Liquid Molecules

Cilas Microscope Particle shape analyzer

ATM Sonic Sifter

Additional Analytical Tools

Mettler Coulometric Karl Fischer Titrator

Advanced Instruments Model 3320 Osmometer

BrookField RV-DVIII+ Rheometer (with Small Sample Adapter)

Preformulation

Bruker D-8 X-ray Diffraction System*

Heraeus SunTest CPS+ and SunCool Temperature Controller

Preformulation (cont'd)

Nikon Polarizing Microscope (Several Varying strength objectives) with Digital Camera

Shimadzu IRAffinity-1 FTIR

Sirius GLpKa*

TA Instruments Q100 Modulated DSC*

TA Instruments Q500 TGA with Hi-Res and Modulated Modes*

TA Instruments Vapor Sorption Analyzer*

cGMP Stability Chambers

(ICH Conditions)

Walk-In Room

5°C*

25°C/60% RH*

30°C/65% RH (2)*

40°C/75% RH (2)*

Reach-In Chambers

5°C

25°C/40% RH

30°C/65% RH (2)

40°C/75% RH (2)

cGMP Storage Refrigerators

Revco Ultima -20°C

Revco Ultima -50°C

Revco -80°C

Warehouse Refrigerator for QA retains* Storage 2-8°C

Data Handling

Stability Laboratory Information Management Software (SLIM™)*