Approvals

Signing below certifies that all items in this Cleaning Validation Master Plan have been reviewed and found to be acceptable. The approval of this Master Plan is the responsibility of the listed functional areas of Giles Chemical.

Project Team Member	Functional Area	Signature	Date
Patrick Owen	Engineering		7/22/13
Robert Willis	Maintenance		7/22/13
Monte Plott	Production		7/25/13
Matt Haynes	Operations		7/25/13
Deborah Durbin	Quality		7/22/13

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1.0 PURPOSE

This Cleaning Validation Master Plan outlines the general program that will be used to validate equipment cleaning at Giles Chemical Repackaging located at 396 Smathers Street in Waynesville, NC. The Cleaning Validation Master Plan serves to identify those cleaning procedures requiring validation and the specific functions and responsibilities for the implementation of the program.

Good Manufacturing Practices (GMP) required programs such as Standard Operating Procedures (SOPs), training and change control are described in Sections 6.0 and 9.0 of this document.

The qualification and validation of all equipment, systems and processes utilized within Giles Chemical (IQ, OQ, PQ) are addressed in a seprate Master Validation Plan.

2.0 SCOPE

This Cleaning Validation Master Plan serves as a guideline to the overall strategy for equipment cleaning validation.

This Cleaning Validation Master Plan is applicable to Repackaging. For the multi-product equipment and systems used a, a matrix approach will be used to demonstrate adequate cleaning of all equipment surfaces specific to products. All products manufactured at Giles will be assigned to groups based on ingredients in the product.

2.1 Program Definition

The program at Giles is designed to demonstrate that manual cleaning processes, established through Standard Operating Procedures, effectively and consistently remove product and cleaning agent residues from packaging equipment to pre-determined limits. Within the plan, the cleaning procedures to be validated are identified and the rationale for, and the development of, a product matrix is defined.

2.2 Validation Approach

The following outlines the design and implementation approach for the cleaning validation program at Repackaging.

The purpose of cleaning validation is to establish documented evidence which provides a high degree of assurance that the specific manual cleaning process will consistently yield results meeting pre-determined specifications and quality attributes. Packaging equipment that has direct contact with product will be the primary focus of this program. Related products and equipment will be grouped in order to structure the validation effort. Product groupings are discussed in further detail in Section 2.3.

Cleaning verifications will be done prior to the performance of cleaning validation studies in order to confirm the cleaning procedures. Cleaning validation will consist of three consecutive successful trials. However, batches may be produced between validation studies that are not the subject of the validation, if required by the production schedule. Cleaning validation will be performed on equipment which has been contaminated using personnel, SOPs, cleaning materials and equipment typical of normal operations.

Verification and validation testing are performed in accordance with pre-approved written protocols. Upon completion of the protocol preparation, each protocol will be reviewed for compliance with Giles' validation philosophy and fulfillment of adequate testing to verify conformance to pre-determined acceptance criteria. Execution of each protocol results in documentation and data that support the effectiveness of the cleaning procedure.

The requirements contained within a specific validation protocol take precedence over the policies within this Cleaning Validation Master Plan. These requirements must be fully defined, justified and approved by the same department and representatives that approve of this program.

A team composed of representatives from the appropriate departments (including, but not limited to, Quality, Production, and Operations) will review and approve all protocols prior to their execution. After all validation testing is completed, a final report is prepared which summarizes test results and data, presents conclusions and reports and explains any deviations or variances observed. Upon completion of the protocol execution and final report, representatives from the same departments will review the final report and approve the validation package. The signatures indicate full acceptance of the data and its validity.

2.3 Product Grouping

Products are grouped by active ingredients. The rationale for product grouping is to cover the range of all products. Any variation in product formulation is considered when grouping products (e.g., a different excipient or a second active ingredient).

Once product groups are established, the product scientifically judged to be the "worst case" (i.e. most difficult to clean and least soluble) in each category will be selected for cleaning validation studies. Cleaning validation studies will be performed for each selected product and, if successful, it is presumed that all other products within the same product group can be adequately removed from equipment surfaces using the same cleaning procedures. If a piece of equipment is unique to a particular product, that equipment will be evaluated for the specific product.

Giles products are all Epsom Salt (Magnesium Sulfate Heptahydrate) products. Some products are not intended for human consumption and are "non-USP" or scented bath salts. Cleaning between different packages of USP salt is for removal of build up only. Cleaning is not needed in such cases because the product is the same. However, for switching between non-USP products and USP products cleaning is needed. So Giles has two product groups: USP and non-USP products.

3.0 RESPONSIBILITIES

Equipment Cleaning Validation at Giles will be performed by qualified Quality and Repackaging Production personnel. Giles' validation team has full responsibility for the quality of the validation program, including the final review and approval of the Cleaning Validation Master Plan and preparing/reviewing the specific cleaning SOPs and/or protocols required for this program.

3.1 Quality Assurance or their designee will have the following responsibilities:

3.1.1 Prepare applicable documentation including, but not limited to: protocols (cleaning verification and validation), analytical methods validation, and summary reports.

3.1.2 Coordinate all cleaning verification/validation activities.

3.1.3 Monitor all sampling during cleaning verification/validation.

3.1.4 Review and approve appropriate documentation including, but not limited to: Cleaning Validation Master Plan, cleaning verification/validation protocols, cleaning SOPs, methods validation, sampling methods, summary reports and failure notices and investigations.

3.1.5 Ensure proper analysis of all cleaning verification/validation samples.

3.1.6 Ensuring that analytical methods have been developed and properly validated.

3.1.7 Informing Operations of testing results in a timely fashion so that equipment is removed from quarantine and available for use.

3.1.8 Notifying the appropriate personnel of failed results in order that an investigation can be initiated.

3.1.9 Provide and document operator training in cleaning and related Standard Operating Procedures (SOPs).

3.1.10 Ensure all sampling technicians are adequately trained.

3.1.11 Conduct investigations of failed results and notify Operations of the results of those investigations.

3.1.12 Inspect equipment following cleaning.

3.1.13 Perform all sampling of equipment following cleaning and forward those samples to QC for analysis.

3.2 Operations – Repackaging Production will have the following responsibilities:

3.2.1 Review and approve appropriate documentation including, but not limited to: Cleaning Validation Master Plan, cleaning verification/validation protocols, cleaning SOPs, methods validation, sampling methods and summary reports.

3.2.2 Ensure the completeness of all cleaning Standard Operating Procedures and routinely execute the SOPs during manufacturing.

3.2.3 Ensure that Equipment Usage and Cleaning Logs are maintained properly.

3.2.4 Verify critical cleaning parameters during protocol execution.

3.2.5 Ensure that equipment remains in quarantine as appropriate until release by Quality Control.

3.3 Engineering will have the following responsibilities:

3.3.1 Ensure that all equipment is in good repair and current with respect to preventative maintenance.

3.3.2 Participate, as required, in equipment review for the identification of inspection sites and extent of disassembly.

4.0 VALIDATION

A written Cleaning Validation protocol is prepared for each cleaning validation study. Pre-determined acceptance criteria confirmed during Cleaning Verification are stated in the protocol, defined by the limits of product and cleaning agent residue that may remain on equipment surfaces.

Equipment is cleaned after a normal manufacturing operation following standard procedures. Equipment surfaces and/or final rinse water are sampled for detectable levels of contaminants. If acceptance criteria are met for three (3) consecutive cleaning processes, the cleaning procedure described in the SOP is considered validated and may be routinely implemented (consecutive requires that no intervening failures occur).

If contamination levels exceed established limits in the protocol, a failure investigation is conducted. The investigation should evaluate, but is not limited to, the following: (1) are the established limits realistic and obtainable, (2) is the SOP adequate and (3) are personnel properly trained for equipment cleaning.

Once the investigation is completed and all findings are documented, the necessary revisions are made to the cleaning SOP and validation protocol and the cleaning validation studies are repeated following the modified procedures and/or using the modified limits.
If the cleaning SOP is modified, it is done according to established change control procedures, to include steps which will assure adequate removal of contaminants.

Upon three consecutive processes being completed and meeting all acceptance criteria, a validation final report is prepared summarizing test results and data, presenting a conclusion and explaining any deviations or variances observed.

5.0 PROTOCOLS

A cleaning validation protocol will be prepared for each product based on the equipment used, the equipment cleaning SOPs and the criteria and limits established in this Cleaning Validation Master Plan. The objective of the protocol will be to prove that the manual cleaning procedure reduces product related and cleaning agent residues to acceptable levels. All protocols should contain the following, at a minimum:

Title/Signature Page: Contains the Title of the Protocol, revision number and date, protocol review and approval signatures.

Table of Contents: Lists all the major sections in the document and the corresponding page where it can be found.

Purpose: The objective of the cleaning validation protocol is to verify that the cleaning process results in acceptable limits of product and cleaning agent residues.

Scope: Describes and identifies the boundaries of the protocol as well as the equipment and product to be evaluated.

Responsibilities: Identifies, by department, the individuals responsible for all activities presented in the protocol. This will include activities performed by contract vendors.

Methods: A clear procedure which describes and details the testing, sampling and inspection methods, information to record and sample site identification. Also included will be a diagram of the equipment with sample sites identified. Justification for sample site selection should be included as well.

Instructions for additional cleaning or rinsing of equipment following surface sampling should be included in this section.

Documentation: All documentation required for protocol completion should be included and explained. This will include worksheets for reporting results, verification of critical cleaning process parameters such as identification of cleaning agents (manufacturer, lot number, quantity used), rinse times, etc. and documentation of calculations used to analyze the results.

Revisions/Deviations: All minor revisions, additions or deviations to the approved protocol will be documented with justification under a separate section in the final report with

reference to the specific section(s). If major revisions, additions or deviations are made to the approved protocol, the protocol is to be amended and approved prior to the issuing of the final report. The change control procedure should be outlined in this section.

6.0 Analytical Methods Validation

Analytical methods must be in place for all substances which will be tested for during the cleaning validation effort. This includes cleaning agents as well as active drug substances and key excipients or carriers. These methods must be validated in order to assure that the results obtained during analytical testing are reliable. In particular, the accuracy, limit of quantitation and limit of detection must be established and verified. Validation of analytical methods should be at or below the limit of detection required to meet the established acceptable residue levels.

6.3 Sampling Methods

There are several ways to evaluate cleaning effectiveness e.g., swabbing or rinse water samples. In the development of a sampling method, consideration is given to the applicability of the method for the systems being tested. In addition, the sampling method may impact the results of the analytical testing. This is of particular importance when using swab samples. The swab material, solvents used for wetting and the method of extraction from the swab may all have an effect on the analytical results. Qualification studies for the sampling method should be done and documented under conditions that are similar to those found in the field (surface materials, environment, etc.). Recovery studies should also be performed so that the appropriate qualifiers can be included in the calculations of actual residue.

In the selection of sampling methods, the nature and configuration of the equipment being cleaned must be taken into account. For example, the use of rinse water samples is only meaningful when the total volume of water used can be related to the total surface area of the equipment, such as in a kettle or other confined vessel. The relevance of the information collected must be considered.

6.4 Sample Site Selection

Samples taken will be based on the equipment under study, with particular attention to the most difficult areas of the equipment to be cleaned (hot spots), the areas most likely to contaminate the next batch (critical sites) and the number of samples needed to show that the equipment is cleaned. Examples of hot spots would be instrument ports or sight glasses in a kettle or under the impeller of a mixer. Examples of critical sites would be the filling nozzles of a filler. The locations of samples must be based on an understanding of the equipment and be justifiable.

6.5 Cleanliness Baseline Establishment

Prior to implementation of the cleaning verification/validation activities, a cleanliness baseline should be established for equipment. This represents the visible appearance of the equipment as it is with normal usage. This is done because some chemicals or compounds that come in contact with the equipment may cause discoloration over time. If the equipment is determined to be clean with no removable

product or cleaning agent on the surface, then the visible condition will be determined to be the baseline condition for the equipment and this is incorporated into the visible inspection acceptance criteria. Deviations in appearance will be documented and investigated as discrepancies and a resolution must be found.

6.6 Other Activities

Before executing cleaning validation trials, all aspects of the proposed validation must be reviewed to ensure that:

- Current SOPs related to the cleaning are appropriate.
- SOPs are approved or in draft form.
- All operators are trained in the current cleaning SOPs and the training documented (Section).
- Equipment maintenance, use and cleaning records are established.
- Calibration of validation and process instrumentation is complete.
- Analytical methods are validated.
- Sampling methods are validated.
- The appropriate personnel are trained in sampling and inspection techniques.
- Equipment sampling sites are established and reviewed with operators.

7.0 VALIDATION EXECUTION ACTIVITIES

During the execution of the cleaning verifications or cleaning validations, certain activities will take place.

7.1 Equipment disassembly

Disassembly of equipment permits the requisite inspection, cleaning and monitoring techniques to be performed during the validation. The extent of disassembly required for equipment cleaning is defined in the associated SOP related to the equipment. Validation samples collected will require that maximum disassembly is conducted to perform the required inspections and sampling. However, disassembly will not be performed if it will jeopardize the ability to reassemble for the subsequent production batch or if it will require extensive disassembly/reassembly/post-inspection recleaning to be performed. Routine monitoring, should require no disassembly beyond what is necessary to clean the equipment.

7.2 Sample Evaluation

All sampling and analytical procedures will be validated prior to the start of the validation process. All samples must be labeled at the time of collection in accordance with approved sample identification procedures and then delivered to the laboratory. Data sheets containing date, time, sample location, type of sample (rinse or swab) stage of process and technician's initial/signature for each sample must be used. Directions shall be provided to the laboratory with regard to the specific analyte which is to be tested for.

7.3 Results Evaluation

Data collected during cleaning verification and validation studies are analyzed to determine two primary things. First, is the current cleaning procedure adequate. Second, are the residue limits which have been determined reasonable and appropriate. If samples taken during verification/validation studies demonstrate that the total residue left on the equipment is greater than allowed, the SOP should be re-examined. Additional or extended steps (washes with cleaning agent, water rinses) may be required. The cleaning agent should also be re-evaluated in some cases. If analytical testing demonstrates that the equipment is clean but looks visibly dirty, then the approved residue limits should be re-evaluated.

If unknown substances appear during the analytical test evaluation, then further examination of the validation samples may be required. Identification of unknowns is aided by the processing of blank samples (swab and rinse) for comparative purposes. If an unknown is of a substantial quantity with respect to the standards, then additional analysis may be necessary to identify the unknown. The source should also be identified if possible.

7.4 Acceptance Criteria

The following criteria will be used to determine the acceptability of all cleaning validation trials.

7.4.1 Cleaning agents used during the validation must be fully identified during protocol execution including manufacturer, and quantity used.

7.4.2 Residues remaining after completion of the cleaning procedure must not exceed those limits included in the validation protocols.

7.4.3 Analysis of all swab and/or rinse samples taken must show an acceptable, safe level of residue from cleaning agents.

7.4.4 Upon completion of the cleaning procedure, visual inspection of the equipment will be performed. This inspection must show no visible residual material or particles on any area of the equipment, including hard to clean areas documented in the protocol.

7.5 Final Reports

At the conclusion of all validation studies, a summary report will be prepared. This report will summarize all data, observations and conclusions collected during the course of the validation. At a minimum, the following information should be included in all summary reports.

- Results from all analytical testing and inspections
- Calculations used to analyze the results, as required
- Comparison of the test results to the established acceptance criteria.
- Recommendations and follow-up activities, if necessary
- Conclusions
- A copy of the executed protocol
- Signed approval page

7.6 Documentation

The following documentation is required to support the cleaning validation effort and should be included in the final validation package or its storage location identified.

- An approved cleaning verification/validation protocol
- Validated analytical test methods for all analytical procedures used during the validation
- Equipment cleaning SOPs and any related SOPs (e.g., disassembly)
- Operator training records related to the cleaning related SOPs
- Sampling method suitability records and supporting documentation
- Analyst, sampler and inspector training and qualification records
- Data sheets with in-process cleaning parameters associated with the SOPs
- Summary report documenting the cleaning validation trials, including the executed protocol and all associated data sheets

8.0 POST VALIDATION ACTIVITIES

Following cleaning validation, certain activities are undertaken in an effort to maintain the cleaning program and to assess the need for additional or subsequent validation.

8.1 Routine Monitoring

Following the completion of the validation studies, a routine monitoring program will be established. The program which is developed will utilize the results and conclusions which were collected during the validation testing. Procedures for routine monitoring will include, but are not limited to:

- Sample sites (established by correlating results to "worst case" inspection points)
- Frequency of monitoring
- Limits
- Sampling methods
- Extent of disassembly

8.2 Change Control

A change control program has been implemented at Giles to assure that systems, equipment and processes remain in a state of validation. The change control program will ensure that proposed changes are reviewed and approved by Quality Assurance and other appropriate departments prior to implementing changes. The review will assess the impact of the proposed changes on the existing validation and will define the required tests and documentation to be performed to verify that the system, equipment or process remains in a validated state after major repair or modification. A Standard Operating Procedure for Change Control outlines the steps to follow when a change is proposed.

The change control process is coordinated by Quality Assurance. The submission serves as the written documentation of the propose change and its disposition. The original is maintained in a central file by Quality. Copies are attached to affected validation packages and equipment history files.

Of particular concern with regard to cleaning validation are the cleaning agents used during the cleaning process. The cleaning agents which have been validated for use may not be changed without the review and approval of QA. Sufficient testing must be performed and approved to demonstrate that the new cleaning agent will provide adequate cleaning and that residues are still at the acceptable levels achieved during the initial validation.

9.0 LIMITS DETERMINATION

Acceptable limits for product and cleaning agent residues must be established prior to the initiation of the cleaning validation. In addition, acceptable microbial counts must also be determined.

9.1 Criteria for Product Residues

Giles has one product, Epsom Salt and chemically there is no difference between any of the grades. Scented product does contain up to 3% of an ester based oil scent. There are two criteria which can be used in determining limits for product residues in equipment after cleaning.

- No residue will be visible on any part of the equipment.
- No more than 1 PPM of the ester based oil scent will appear in a subsequent product.

The lowest limit will be used for validation. However, there will always be a visual inspection included in the acceptance criteria.

9.2 Criteria for Cleaning Agents

- No more than 1/1000 of the amount of cleaning agent determined to be "safe" will appear in the daily dose of another product.
- No more than 1 PPM of a cleaning agent will appear in a subsequent product.
- No residue will be visible on any part of the equipment.

The lowest limit will be used for validation. However, there will always be a visual inspection included in the acceptance criteria.

Validation samples may show that equipment is cleaned to a level well below the limits established. In this case the limits should still apply, but additional "alert limits" should be established. Alert limits would reflect the level to which the equipment is capable of being cleaned.

10.0 Training

The training program ensures that the appropriate Giles personnel receive procedural and cGMP training necessary to perform their assigned tasks. Training follows written procedures (SOPs) and covers new employee training as well as ongoing training of personnel. Training documentation are retained and updated per written procedure. The purpose of this section is to define the specific training activities related to cleaning which are to be implemented at Giles.

10.1 Background

An integral part of compliance with cGMPs is the acquisition and retention of personnel with sufficient education, experience and training to do the job properly. This requirement is explicitly stated in Part 211 of Title 21. Training is of particular importance with respect to manually executed procedures, especially cleaning. Demonstration of competence using verbal and written training sessions as well as through field demonstration is necessary to limit procedural variability due to human factors.

10.2 Specific Training Activities

Training activities related to cleaning must demonstrate, at a minimum:

- Personnel performing cleaning and related procedures execute the procedures as written.
- Written procedures (SOPs) are adequate to describe the required activities, including the completion of required documentation.
- Personnel complete the required documentation properly and thoroughly.

Training activities are coordinated and run through the Quality Assurance department. QA will train selected personnel to act as facilitators for this training program. Individuals with sufficient training/education and/or experience with respect to equipment cleaning will be trained as facilitators. Facilitators will review the required SOPs and then go over them with the operators being trained. Following the review session, the facilitator will observe the trainee executing the cleaning or related procedure. The facilitator will verify that all key activities related to the SOP being followed or cGMPs are properly completed. If all activities are satisfactorily completed, the operator is certified for the particular procedure. Certification must be achieved for each SOP separately. All training documentation will be kept in the personnel training files. Major revisions to the SOPs will require retraining and recertification of personnel.

11.0 GLOSSARY

Acceptability Limits - a specified set of operating parameters values that, if deviated from, renders the product quality in question. The acceptability limits should be set at the proven acceptable range values.

Acceptance Criteria - A set of measurable qualities or specifications used to check out system or equipment installation, operation or performance. Conformance with these qualities or specifications provides a high degree of confidence that a system is installed, operates or performs as intended.

Action Levels - A specified set of operating parameter values that, if deviated from, identifies a variation from the normal operating condition and requires documented action to return the system or process to a state of control. The action levels should be set within the proven acceptable range (PAR).

Alert Levels - A specified set of operating parameter values that, if deviated from, identifies a potential variation from normal operating conditions. The alert level is within the proven acceptable range (PAR) and, therefore, does not necessarily mean that product quality is threatened. However, the monitoring frequency of operation and maintenance should increase on the system or process.

Calibration - Documented comparison of a measurement standard or instrument of known accuracy with another standard or instrument to detect, correlate, report and/or eliminate any variation in the accuracy of the item being compared.

Certification - Documented testimony by qualified personnel that a system qualification, validation or revalidation has been performed appropriately and that the results are acceptable.

CFR - Code of Federal Regulations

cGMP - Current Good Manufacturing Practices

Change Control - A formalized program by which qualified representatives review proposed and actual changes to products, processes, equipment or software to determine their potential impact on the validation status.

Contamination - The introduction of unwanted, foreign material into product. Contaminants may be microorganisms, non-viable particulates or a previous product batch.

Control Parameter - Those operation variables that are utilized to specify conditions under which the product is to be manufactured.

Controlled Environment Area - Any area in which the manufacture, processing, packaging or holding of a product occurs in which environmental factors such as humidity, temperature, viable and non-viable particulate quality of the air must be controlled to assure that the product has the purity characteristics that it purports to have.

DEA - Drug Enforcement Agency

Disinfectant - An agent that frees from infection, usually a chemical agent that destroys disease germs or other harmful microorganisms or inactivates viruses.

Disinfection - A process that destroys or inactivates the infectious forms of disease producing microorganism and is often ineffective when applied to bacterial spores.

FDA - Food and Drug Administration

NIST - National Institute of Standards and Technology

Operating Parameter or Variable - Those process operating variables that can be assigned values to be used as control levels or operating limits.

Process Validation (PV) - Establishing documented evidence which provides a high degree of assurance that a specific process will consistently produce a product meeting its predetermined specifications and quality characteristics. It represents the actual studies or trials conducted to show that all systems, subsystems or unit operations of a manufacturing process perform as intended.

Proven Acceptable Range (PAR) - Those values of a control or operating parameter that fall between the proven upper and lower worst case conditions. The PAR values are derived from developmental validation studies whose intent is, primarily, to establish the operational ranges to be used in the production environment.

Qualification - The procedure by which equipment, processes and instrumentation are proven to be designed properly and perform adequately and reproducibility as designed.

Quality Control - A regulatory process whereby the quality of raw materials and produced product is controlled by inspection and tested for the purpose of preventing production of defective product.
Revalidation - The repetition of the validation process or a specific portion of it, to assure that a system is suitable for use after modification or repair. Revalidation is required on a periodic basis to insure that the process or system continues to operate as intended.

Standard Operating Procedure - A description of operations and policies which define essential steps, sequences, and precautionary measures, necessary to assure that operations can be accomplished routinely and in a uniform manner in accordance with specific plant parameters. The SOP represents the detailed description of how an activity is to be performed, what is to occur and/or the expected results, specific to the local facility.

Testing - The determination, by technical or scientific means, of the properties or elements of a product or its components, including functional operation and involving the application of established scientific principles and procedures.

U.S.P. - United States Pharmacopoeia

Validation - A defined strategy of inter-related practices and procedures which in combination with routine production methods and quality control techniques provides documented assurance that a system is performing as intended and/or that a product conforms to its pre-determined specifications.

Validation Final Report - An approved document of the results derived from executing a validation protocol. The report includes a brief summary of conclusions based on test results of the validation status. Proven acceptable ranges for all critical process parameters are designated as determined by the results of the validation study.

Validation Protocol - An approved document stating how validation is conducted. The document includes test parameters, product characteristics, required equipment and procedures and acceptance criteria.

"Worst Case" - A set of conditions encompassing upper and lower processing limits and circumstances, including those within standard operating procedures, which pose the greatest chance of process or product failure when compared to ideal conditions. Such conditions do not necessarily induce produce or process failure.

12.0 REFERENCES

- Code of Federal Regulations, 21 CFR, Part 210 and Part 211.
- Pharmaceutical Process Validation, 2nd edition, Ira Berry and Robert Nash.
- Physician's Desk Reference, edition 51.
- United States Pharmacopoeia, XXIII Revision and The National Formulary.