§291.51 Purpose

The purpose of this subchapter is to provide standards for the preparation, labeling, and distribution of [compounded] radiopharmaceuticals by licensed nuclear pharmacies, pursuant to a radioactive prescription drug order. The intent of this subchapter is to establish a minimum acceptable level of pharmaceutical care to the patient so that the patient's health is protected while contributing to positive patient outcomes. The board has determined that this subchapter is necessary to protect the health and welfare of the citizens of this state.

§291.52 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise. Any term not defined in this section shall have the definition set forth in the Act, §551.003.


2. Accurately as prescribed--Dispensing, delivering, and/or distributing a prescription drug order or radioactive prescription drug order:

   (A) to the correct patient (or agent of the patient) for whom the drug or device was prescribed;

   (B) with the correct drug in the correct strength, quantity, and dosage form ordered by the practitioner; and

   (C) with correct labeling (including directions for use) as ordered by the practitioner. Provided, however, that nothing herein shall prohibit pharmacist substitution if substitution is conducted in strict accordance with applicable laws and rules, including Subchapter A, Chapter 562 of the Act.

3. ACPE--Accreditation Council for Pharmacy Education.

4. Administer--The direct application of a prescription drug and/or radiopharmaceutical, by injection, inhalation, ingestion, or any other means to the body of a patient by:

   (A) a practitioner, an authorized agent under his supervision, or other person authorized by law; or

   (B) the patient at the direction of a practitioner.

5. [Airborne particulate cleanliness class--The level of cleanliness specified by the maximum allowable number of particles per cubic meter of air as specified in the International Organization of Standardization (ISO) Classification Air Cleanliness (ISO 14644-1). For example:}
(A) ISO Class 5 (formerly Class 100) is an atmospheric environment that contains less than 3,520 particles 0.5 microns in diameter per cubic meter of air (formerly stated as 100 particles 0.5 microns in diameter per cubic foot of air);

(B) ISO Class 7 (formerly Class 10,000) is an atmospheric environment that contains less than 352,000 particles 0.5 microns in diameter per cubic meter of air (formerly stated as 10,000 particles 0.5 microns in diameter per cubic foot of air); and

(C) ISO Class 8 (formerly Class 100,000) is an atmospheric environment that contains less than 3,520,000 particles 0.5 microns in diameter per cubic meter of air (formerly stated as 100,000 particles 0.5 microns in diameter per cubic foot of air).

(6) Ancillary supplies--Supplies necessary for the administration of compounded sterile radiopharmaceuticals.

(7) Aseptic processing--The technique involving procedures designed to preclude contamination of drugs, packaging, equipment, or supplies by microorganisms during processing.

(8) Authentication of product history--Identifying the purchasing source, the intermediate handling, and the ultimate disposition of any component of a radioactive drug.

(9) Authorized nuclear pharmacist--A pharmacist who:

(A) has completed the specialized training requirements specified by this subchapter for the preparation and distribution of radiopharmaceuticals; and

(B) is named on a Texas radioactive material license, issued by the Texas Department of State Health Services, Radiation Control Program.

(10) Authorized user--Any individual named on a Texas radioactive material license, issued by the Texas Department of State Health Services, Radiation Control Program.

(11) Automated compounding or drug dispensing device--An automated device that compounds, measures, counts, packages, and/or labels a specified quantity of dosage units for a designated drug product.

(12) Biological Safety Cabinet, Class II--A ventilated cabinet for personnel, product, and environmental protection having an open front with inward airflow for personnel protection, downward HEPA filtered laminar airflow for product protection, and HEPA filtered exhausted air for environmental protection.

(13) Board--The Texas State Board of Pharmacy.

(14) Clean room or controlled area--A room in which the concentration of airborne particles is controlled to meet a specified airborne particulate cleanliness class. Microorganisms in the environment are monitored so that a microbial level for air, surface, and personnel gear are not exceeded for a specified cleanliness class.

(15) Component--Any ingredient intended for use in the compounding of a drug preparation, including those that may not appear in such preparation.
Compounding--The preparation, mixing, assembling, packaging, or labeling of a drug or device:

(A) as the result of a practitioner's prescription drug or medication order based on the practitioner-patient-pharmacist relationship in the course of professional practice;

(B) for administration to a patient by a practitioner as the result of a practitioner's initiative based on the practitioner-patient-pharmacist relationship in the course of professional practice;

(C) in anticipation of prescription drug or medication orders based on routine, regularly observed prescribing patterns; or

(D) for or as an incident to research, teaching, or chemical analysis and not for sale or dispensing, except as allowed under §562.154 or Chapter 563 of the Act.

Controlled substance--A drug, immediate precursor, or other substance listed in Schedules I - V or Penalty Groups 1-4 of the Texas Controlled Substances Act, as amended, or a drug, immediate precursor, or other substance included in Schedule I, II, III, IV, or V of the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970, as amended (Public Law 91-513).

Critical site--Sterile ingredients of compounded sterile preparations and locations on devices and components used to prepare, package, and transfer compounded sterile preparations that provide opportunity for exposure to contamination.

Dangerous drug--A drug or device that:

(A) is not included in Penalty Group 1, 2, 3, or 4, Chapter 481, Health and Safety Code, and is unsafe for self-medication; or

(B) bears or is required to bear the legend:

(i) "Caution: federal law prohibits dispensing without prescription" or "Rx only" or another legend that complies with federal law; or

(ii) "Caution: federal law restricts this drug to use by or on the order of a licensed veterinarian."

Data communication device--An electronic device that receives electronic information from one source and transmits or routes it to another (e.g., bridge, router, switch, or gateway).

Deliver or delivery--The actual, constructive, or attempted transfer of a prescription drug or device, radiopharmaceutical, or controlled substance from one person to another, whether or not for a consideration.

Designated agent--

(A) an individual, including a licensed nurse, physician assistant, nuclear medicine technologist, or pharmacist:
(i) who is designated by a practitioner and authorized to communicate a prescription drug order to a pharmacist; and

(ii) for whom the practitioner assumes legal responsibility;

(B) a licensed nurse, physician assistant, or pharmacist employed in a health care facility to whom a practitioner communicates a prescription drug order; or

(C) a registered nurse or physician assistant authorized by a practitioner to administer a prescription drug order for a dangerous drug under Subchapter B, Chapter 157 (Occupations Code).

(16) [23] Device--An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related articles, including any component parts or accessory that is required under federal or state law to be ordered or prescribed by a practitioner.


(18) [25] Dispense--Preparing, packaging, compounding, or labeling for delivery a prescription drug or device, or a radiopharmaceutical in the course of professional practice to an ultimate user or his agent by or pursuant to the lawful order of a practitioner.

(19) [26] Dispensing pharmacist--The authorized nuclear pharmacist responsible for the final check of the dispensed prescription before delivery to the patient.

(20) [27] Distribute--The delivering of a prescription drug or device, or a radiopharmaceutical other than by administering or dispensing.

(21) [28] Electronic radioactive prescription drug order--A radioactive prescription drug order which is transmitted by an electronic device to the receiver (pharmacy).

(22) [29] Internal test assessment--Validation of tests for quality control necessary to insure the integrity of the test.

(23) [30] Nuclear pharmacy technique--The mechanical ability required to perform the nonjudgmental, technical aspects of preparing and dispensing radiopharmaceuticals.

(24) [31] Original prescription--The:

(A) original written radioactive prescription drug orders; or

(B) original verbal or electronic radioactive prescription drug orders maintained either manually or electronically by the pharmacist.

(25) [32] Pharmacist-in-charge--The pharmacist designated on a pharmacy license as the pharmacist who has the authority or responsibility for a pharmacy's compliance with laws and rules pertaining to the practice of pharmacy.
Pharmacy technician—An individual whose responsibility in a pharmacy is to provide technical services that do not require professional judgment regarding preparing and distributing drugs and who works under the direct supervision of and is responsible to a pharmacist.

Pharmacy technician trainee—An individual who is registered with the board as a pharmacy technician trainee and is authorized to participate in a pharmacy's technician training program.

Process validation—Documented evidence providing a high degree of assurance that a specific process will consistently produce a product meeting its predetermined specifications and quality attributes.

Quality assurance—The set of activities used to ensure that the process used in the preparation of sterile radiopharmaceuticals lead to preparations that meet predetermined standards of quality.

Radiopharmaceutical--A prescription drug or device that exhibits spontaneous disintegration of unstable nuclei with the emission of a nuclear particle(s) or photon(s), including any nonradioactive reagent kit or nuclide generator that is intended to be used in preparation of any such substance.

Radioactive drug quality control--The set of testing activities used to determine that the ingredients, components (e.g., containers), and final radiopharmaceutical prepared meets predetermined requirements with respect to identity, purity, non-pyrogenicity, and sterility and the interpretation of the resulting data in order to determine the feasibility for use in humans and animals including internal test assessment, authentication of product history, and the keeping of mandatory records.

Radioactive drug service--The act of distributing radiopharmaceuticals; the participation in radiopharmaceutical selection and the performance of radiopharmaceutical drug reviews.

Radioactive prescription drug order--An order from a practitioner or a practitioner's designated agent for a radiopharmaceutical to be dispensed.

Sterile radiopharmaceutical--A dosage form of a radiopharmaceutical free from living micro-organisms.

Therapeutic prescription drug order--A radioactive prescription drug order issued for a specific patient for a therapeutic purpose.

Ultimate user--A person who has obtained and possesses a prescription drug or radiopharmaceutical for administration to a patient by a practitioner.

§291.53 Personnel

(a) Pharmacists-in-Charge.

(1) General.
(A) Every nuclear pharmacy shall have an authorized nuclear pharmacist designated on the nuclear pharmacy license as the pharmacist-in-charge who shall be responsible for a nuclear pharmacy's compliance with laws and regulations, both state and federal, pertaining to the practice of nuclear pharmacy.

(B) The nuclear pharmacy pharmacist-in-charge shall see that directives from the board are communicated to the owner(s), management, other pharmacists, and interns of the nuclear pharmacy.

(C) Each Class B pharmacy shall have one pharmacist-in-charge who is employed on a full-time basis, who may be the pharmacist-in-charge for only one such pharmacy; provided, however, such pharmacist-in-charge may be the pharmacist-in-charge of:

(i) more than one Class B pharmacy, if the additional Class B pharmacies are not open to provide pharmacy services simultaneously; or

(ii) during an emergency, up to two Class B pharmacies open simultaneously if the pharmacist-in-charge works at least 10 hours per week in each pharmacy for no more than a period of 30 consecutive days.

(2) Responsibilities. The pharmacist-in-charge shall have the responsibility for, at a minimum, the following:

(A) ensuring that radiopharmaceuticals are dispensed and delivered safely and accurately as prescribed;

(B) developing a system to assure that all pharmacy personnel responsible for compounding and/or supervising the compounding of radiopharmaceuticals within the pharmacy receive appropriate education and training and competency evaluation;

(C) determining that all pharmacists involved in compounding sterile radiopharmaceuticals obtain continuing education appropriate for the type of compounding done by the pharmacist;

(D) supervising a system to assure appropriate procurement of drugs and devices and storage of all pharmaceutical materials including radiopharmaceuticals, components used in the compounding of radiopharmaceuticals, and drug delivery devices;

(E) assuring that the equipment used in compounding is properly maintained;

(F) developing a system for the disposal and distribution of drugs from the Class B pharmacy;

(G) developing a system for bulk compounding or batch preparation of radiopharmaceuticals;

(H) developing a system for the compounding, sterility assurance, and quality control of sterile radiopharmaceuticals;

(I) maintaining records of all transactions of the Class B pharmacy necessary to maintain accurate control over and accountability for all pharmaceutical materials including radiopharmaceuticals, required by applicable state and federal laws and rules;
(J) developing a system to assure the maintenance of effective controls against the theft or diversion of prescription drugs, and records for such drugs;

(K) assuring that the pharmacy has a system to dispose of radioactive and cytotoxic waste in a manner so as not to endanger the public health; and

(L) legally operating the pharmacy, including meeting all inspection and other requirements of all state and federal laws or rules governing the practice of pharmacy.

(b) Owner. The owner of a Class B pharmacy shall have responsibility for all administrative and operational functions of the pharmacy. The pharmacist-in-charge may advise the owner on administrative and operational concerns. The owner shall have responsibility for, at a minimum, the following, and if the owner is not a Texas licensed pharmacist, the owner shall consult with the pharmacist-in-charge or another Texas licensed pharmacist:

(1) establishing policies for procurement of prescription drugs and devices and other products dispensed from the Class B pharmacy;

(2) establishing policies and procedures for the security of the prescription department including the maintenance of effective controls against the theft or diversion of prescription drugs;

(3) if the pharmacy uses an automated pharmacy dispensing system, reviewing and approving all policies and procedures for system operation, safety, security, accuracy and access, patient confidentiality, prevention of unauthorized access, and malfunction;

(4) providing the pharmacy with the necessary equipment and resources commensurate with its level and type of practice; and

(5) establishing policies and procedures regarding maintenance, storage, and retrieval of records in a data processing system such that the system is in compliance with state and federal requirements.

(c) Authorized nuclear pharmacists.

(1) General.

(A) The pharmacist-in-charge shall be assisted by a sufficient number of additional authorized nuclear pharmacists as may be required to operate the pharmacy competently, safely, and adequately to meet the needs of the patients of the pharmacy.

(B) All personnel performing tasks in the preparation and distribution of radiopharmaceuticals shall be under the direct supervision of an authorized nuclear pharmacist. General qualifications for an authorized nuclear pharmacist are the following. A pharmacist shall:

(i) meet minimal standards of training and experience in the handling of radioactive materials in accordance with the requirements of the Texas Regulations for Control of Radiation of the Radiation Control Program, Texas Department of State Health Services;

(ii) be a pharmacist licensed by the board to practice pharmacy in Texas; and
(iii) submit to the board either:

(I) written certification that he or she has current board certification as a nuclear pharmacist by the Board of Pharmaceutical Specialties; or

(II) written certification signed by a preceptor authorized nuclear pharmacist that he or she has achieved a level of competency sufficient to independently operate as an authorized nuclear pharmacist and has satisfactorily completed 700 hours in a structured educational program consisting of both:

(-a-) 200 hours of didactic training in a program accepted by the Radiation Control Program, Texas Department of State Health Services in the following areas:

(-1-) radiation physics and instrumentation;

(-2-) radiation protection;

(-3-) mathematics pertaining to the use and measurement of radioactivity;

(-4-) radiation biology; and

(-5-) chemistry of radioactive material for medical use; and

(-b-) 500 hours of supervised practical experience in a nuclear pharmacy involving the following:

(-1-) shipping, receiving, and performing related radiation surveys;

(-2-) using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides;

(-3-) calculating, assaying, and safely preparing dosages for patients or human research subjects;

(-4-) using administrative controls to avoid adverse medical events in the administration of radioactive material; and

(-5-) using procedures to prevent or minimize contamination and using proper decontamination procedures.

(C) [The board may issue a letter of notification that the evidence submitted by the pharmacist meets the requirements of subparagraph (B)(i) - (iii) of this paragraph and has been accepted by the board and that, based thereon, the pharmacist is recognized as an authorized nuclear pharmacist.]

(D) Authorized nuclear pharmacists are solely responsible for the direct supervision of pharmacy technicians and pharmacy technician trainees and for delegating nuclear pharmacy techniques and additional duties, other than those listed in paragraph (3) (2) of this subsection, to pharmacy technicians and pharmacy technician trainees. Each authorized nuclear pharmacist shall:
(i) verify the accuracy of all acts, tasks, or functions performed by pharmacy technicians and pharmacy technician trainees; and

(ii) be responsible for any delegated act performed by pharmacy technicians and pharmacy technician trainees under his or her supervision.

(E) All authorized nuclear pharmacists while on duty, shall be responsible for complying with all state and federal laws or rules governing the practice of pharmacy.

(F) The dispensing pharmacist shall ensure that the drug is dispensed and delivered safely and accurately as prescribed.

(2) Special requirements for compounding.

(A) Non-sterile preparations. All pharmacists engaged in compounding non-sterile preparations, including radioactive preparations [radiopharmaceuticals] shall meet the training requirements specified in §291.131 of this title (relating to Pharmacies Compounding Non-Sterile Preparations).

(B) Sterile Preparations. All pharmacists engaged in compounding sterile preparations, including radioactive preparations [radiopharmaceuticals] shall meet the training requirements specified in §291.133 of this title (relating to Pharmacies Compounding Sterile Preparations).

(3) Duties. Duties which may only be performed by an authorized nuclear pharmacist are as follows:

(A) receiving verbal therapeutic prescription drug orders and reducing these orders to writing, either manually or electronically;

(B) receiving verbal, diagnostic prescription drug orders in instances where patient specificity is required for patient safety (e.g., radiolabeled blood products, radiolabeled antibodies) and reducing these orders to writing, either manually or electronically;

(C) interpreting and evaluating radioactive prescription drug orders;

(D) selecting drug products; and

(E) performing the final check of the dispensed prescription before delivery to the patient to ensure that the radioactive prescription drug order has been dispensed accurately as prescribed.

(d) Pharmacy Technicians and Pharmacy Technician Trainees.

(1) General. All pharmacy technicians and pharmacy technician trainees shall meet the training requirements specified in §297.6 of this title (relating to Pharmacy Technician and Pharmacy Technician Trainee Training).

(2) Special requirements for compounding.
(A) Non-sterile preparations. All pharmacy technicians and pharmacy technician trainees engaged in compounding non-sterile preparations, including radioactive preparations, shall meet the training requirements specified in §291.131 of this title.

(B) Sterile Preparations. All pharmacy technicians and pharmacy technician trainees engaged in compounding sterile preparations, including radioactive preparations, shall meet the training requirements specified in §291.133 of this title.

(3) Duties.

(A) Pharmacy technicians and pharmacy technician trainees may not perform any of the duties listed in subsection (c)(3) of this section.

(B) An authorized nuclear pharmacist may delegate to pharmacy technicians and pharmacy technician trainees any nuclear pharmacy technique which is associated with the preparation and distribution of radiopharmaceuticals provided:

(i) an authorized nuclear pharmacist verifies the accuracy of all acts, tasks, and functions performed by pharmacy technicians and pharmacy technician trainees; and

(ii) pharmacy technicians and pharmacy technician trainees are under the direct supervision of and responsible to a pharmacist.

(4) Ratio of authorized nuclear pharmacist to pharmacy technicians and pharmacy technician trainees.

(A) The ratio of authorized nuclear pharmacists to pharmacy technicians and pharmacy technician trainees may be 1:4, provided at least one of the four is a pharmacy technician and is trained in the handling of radioactive materials.

(B) The ratio of authorized nuclear pharmacists to pharmacy technician trainees may not exceed 1:3.

§291.54 Operational Standards

(a) Licensing requirements.

(1) It is unlawful for a person to provide radioactive drug services unless such provision is performed by a person licensed to act as an authorized nuclear pharmacist, as defined by the board, or is a person acting under the direct supervision of an authorized nuclear pharmacist acting in accordance with the Act and its rules, and the regulations of the Texas Department of State Health Services, Radiation Control Program. Subsection (a) of this section does not apply to:
(A) a licensed practitioner or his or her designated agent for administration to his or her patient, provided no person may receive, possess, use, transfer, own, acquire, or dispose of radiopharmaceuticals except as authorized in a specific or a general license as provided in accordance with the requirements of the Texas Department of State Health Services, Radiation Control Program, Texas Administrative Code, Title 25, Part 1, Subchapter F, §289.252 relating to Licensing of Radioactive Material, or the Act;

(B) institutions and/or facilities with nuclear medicine services operated by practitioners and who are licensed by the Texas Department of State Health Services, Radiation Control Program, to prescribe, administer, and dispense radioactive materials (drugs and/or devices).

(2) An applicant for a Class B pharmacy shall provide evidence to the board of the possession of a Texas Department of State Health Services radioactive material license or proof of application for a radioactive material license.

(3) A Class B pharmacy shall register with the board on a pharmacy license application provided by the board, following the procedures specified in §291.1 of this title (relating to Pharmacy License Application).

(4) A Class B pharmacy which changes ownership shall notify the board within ten days of the change of ownership and apply for a new and separate license as specified in §291.3 of this title (relating to Required Notifications).

(5) A Class B pharmacy which changes location and/or name shall notify the board within ten days of the change and file for an amended license as specified in §291.3 of this title.

(6) A Class B pharmacy owned by a partnership or corporation which changes managing officers shall notify the board in writing of the names of the new managing officers within ten days of the change, following the procedures in §291.3 of this title.

(7) A Class B pharmacy shall notify the board in writing within ten days of closing, following the procedures in §291.5 of this title (relating to Closing a Pharmacy).

(8) A separate license is required for each principal place of business and only one pharmacy license may be issued to a specific location.

(9) A fee as specified in §291.6 of this title (relating to Pharmacy License Fees) will be charged for the issuance and renewal of a license and the issuance of an amended license.

(10) A Class B pharmacy, licensed under the provisions of the Act, §560.051(a)(2), which also operates another type of pharmacy which would otherwise be required to be licensed under the Act, §560.051(a)(1), concerning community pharmacy (Class A), is not required to secure a license for such other type of pharmacy; provided, however, such licensee is required to comply with the provisions of §291.31 of this title (relating to Definitions); §291.32 of this title (relating to Personnel); §291.33 of this title (relating to Operational Standards); §291.34 of this title (relating to Records); and §291.35 of this title (relating to Official Prescription Requirements), to the extent such rules are applicable to the operation of the pharmacy.

(11) A Class B [(nuclear)] pharmacy engaged in the compounding of non-sterile [non-radioactive] preparations, including radioactive preparations, shall comply with the provisions of §291.131 of this title (relating to Pharmacies Compounding Non-Sterile Preparations).

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(12) A Class B [nuclear] pharmacy engaged in the compounding of sterile [non-radioactive] preparations, including radioactive preparations, shall comply with the provisions of §291.133 of this title (relating to Pharmacies Compounding Sterile Preparations).

(13) A Class B pharmacy may not renew a pharmacy license unless the pharmacy has been inspected by the board within the last renewal period.

(b) Risk levels for compounded sterile radiopharmaceuticals. Risk Levels for sterile compounded radiopharmaceuticals shall be as listed below.

(1) Low-risk level compounded sterile radiopharmaceuticals.

(A) Low-risk level compounded sterile radiopharmaceuticals are those compounded under all of the following conditions.

(i) The compounded sterile preparations are compounded with aseptic manipulations entirely within ISO Class 5 or better air quality using only sterile ingredients, products, components, and devices.

(ii) The compounding involves only transfer, measuring, and mixing manipulations with closed or sealed packaging systems that are performed promptly and attentively.

(iii) Manipulations are limited to aseptically opening ampuls, penetrating sterile stoppers on vials with sterile needles and syringes, and transferring sterile liquids in sterile syringes to sterile administration devices and packages of other sterile products.

(iv) For a low-risk preparation, in the absence of passing a sterility test, the storage periods cannot exceed the following periods: before administration, 48 hours at controlled room temperature, for not more than 14 days if stored in cold temperatures, and for 45 days if stored in a frozen state at minus 20 degrees Celsius or colder. For delayed activation device systems, the storage period begins when the device is activated.

(B) Examples of low-risk compounding include radiopharmaceuticals compounded from sterile components in closed sterile containers and with a volume of 100 mL or less for a single-dose injection or not more than 30 mL taken from a multidose container.

(2) Medium-risk level compounded sterile radiopharmaceuticals.

(A) Medium-risk level compounded sterile radiopharmaceuticals are those compounded aseptically under low-risk conditions and one or more of the of the following conditions exists.

(i) Multiple individual or small doses of sterile products are combined or pooled to prepare a compounded sterile radiopharmaceuticals that will be administered either to multiple patients or to one patient on multiple occasions.

(ii) The compounding process includes complex aseptic manipulations other than the single-volume-transfer.

(iii) The compounding process requires unusually long duration, such as that required to complete the dissolution or homogeneous mixing.
(iv) The sterile compounded radiopharmaceuticals do not contain broad-spectrum bacteriostatic substances, and they are administered over several days.

(v) For a medium-risk preparation, in the absence of passing sterility test, the storage periods cannot exceed the following time periods: before administration, the compounded sterile preparations are properly stored and are exposed for not more than 30 hours at controlled room temperature for not more than 7 days at a cold temperature, and for 45 days in solid frozen state at minus 20 degrees or colder.

(B) Examples of medium-risk compounding include the following.

(i) Compounding of total parenteral nutrition fluids using a manual or automated device during which there are multiple injections, detachments, and attachments of nutrient source products to the device or machine to deliver all nutritional components to a final sterile container.

(ii) Filling of reservoirs of injection and infusion devices with multiple sterile drug products and evacuations of air from those reservoirs before the filled device is dispensed.

(iii) Filling of reservoirs of injection and infusion devices with volumes of sterile drug solutions that will be administered over several days at ambient temperatures between 25 and 40 degrees Celsius (77 and 104 degrees Fahrenheit).

(iv) Transfer of volumes from multiple ampuls or vials into a single, final sterile container or product.

(3) High-risk level compounded sterile radiopharmaceuticals.

(A) High-risk level compounded sterile radiopharmaceuticals are those compounded under any of the following conditions.

(i) Non-sterile ingredients, including manufactured products are incorporated, or a non-sterile device is employed before terminal sterilization.

(ii) Sterile ingredients, components, devices, and mixtures are exposed to air quality inferior to ISO Class 5. This includes storage in environments inferior to ISO Class 5 of opened or partially used packages of manufactured sterile products that lack antimicrobial preservatives.

(iii) Non-sterile preparations are exposed no more than 6 hours before being sterilized.

(iv) It is assumed, and not verified by examination of labeling and documentation from suppliers or by direct determination, that the chemical purity and content strength of ingredients meet their original or compendial specifications in unopened or in opened packages of bulk ingredients.

(v) For a high-risk preparation, in the absence of passing sterility test, the storage periods cannot exceed the following time periods: before administration, the compounded sterile preparations are properly stored and are exposed for not more than 24 hours at controlled room temperature for not more than 3 days at a cold temperature, and for 45 days in solid frozen state at minus 20 degrees or colder.
(B) Examples of high-risk compounding include the following.

(i) Dissolving non-sterile bulk drug and nutrient powders to make solutions, which will be terminally sterilized.

(ii) Sterile ingredients, components, devices, and mixtures are exposed to air quality inferior to ISO Class 5. This includes storage in environments inferior to ISO Class 5 of opened or partially used packages of manufactured sterile products that lack antimicrobial preservatives.

(iii) Measuring and mixing sterile ingredients in non-sterile devices before sterilization is performed.

(iv) Assuming, without appropriate evidence or direct determination, that packages of bulk ingredients contain at least 95% by weight of their active chemical moiety and have not been contaminated or adulterated between uses.

(c) Environment.

(1) Special requirements for the compounding of sterile radiopharmaceuticals. When the pharmacy compounds sterile radiopharmaceuticals, the following is applicable.

(A) Low and Medium Risk Preparations.

(i) The pharmacy shall have a designated controlled area for the compounding of sterile radiopharmaceuticals that is functionally separate from areas for the preparation of non-sterile radiopharmaceuticals and is constructed to minimize the opportunities for particulate and microbial contamination. This controlled area for the preparation of sterile radiopharmaceuticals shall:

(I) have a controlled environment that is aseptic or contains an aseptic environmental control device(s). If the aseptic environmental control device is located within the controlled area, the controlled area must extend a minimum of six feet from the device and clearly marked to identify the separation between the controlled and non-controlled area;

(II) be clean, well lighted, and of sufficient size to support sterile compounding activities;

(III) be used only for the compounding of sterile radiopharmaceuticals;

(IV) be designed to avoid outside traffic and airflow;

(V) be designed such that hand sanitizing and gowning occurs outside the controlled area but accessible without use of the hands of the compounding personnel;

(VI) have non-porous and washable floors or floor covering to enable regular disinfection;

(VII) be ventilated in a manner not interfering with aseptic environmental control conditions;

(VIII) have walls, ceilings, and fixtures, shelving, counters, and cabinets that are smooth, impervious, free from cracks and crevices, and nonshedding (acoustical ceiling tiles that are coated with an acrylic paint are acceptable);
— (IX) have drugs and supplies stored on shelving areas above the floor to permit adequate
floor cleaning; and
— (X) contain only the appropriate compounding supplies and not be used for bulk storage for
supplies and materials. Objects that shed particles may not be brought into the controlled area.
(ii) The pharmacy shall prepare sterile radiopharmaceuticals in a primary engineering control
device, such as a vertical air flow hood, which is capable of maintaining at least ISO Class 5
conditions during normal activity.
— (I) The primary engineering control shall:
— (a) be located in the buffer area or room and placed in the buffer area in a manner as to
avoid conditions that could adversely affect its operation such as strong air currents from
opened doors, personnel traffic, or air streams from the heating, ventilating and air condition
system;
— (b) be certified by an independent contractor according to the International Organization
of Standardization (ISO) Classification of Particulate Matter in Room Air (ISO 14644-1) for
operational efficiency at least every six months and when it is relocated, in accordance with the
manufacturer’s specifications; and
— (c) have pre-filters inspected periodically and replaced as needed, in accordance with
written policies and procedures and the manufacturer's specification, and the inspection and/or
replacement date documented.
— (II) The compounding aseptic isolator or compounding aseptic containment isolator must
be placed in an ISO Class 8 buffer area unless the isolator meets all of the following conditions.
— (a) The isolator must provide isolation from the room and maintain ISO Class 5 during
dynamic operating conditions including transferring ingredients, components, and devices into
and out of the isolator and during preparation of compounded sterile preparations.
— (b) Particle counts sampled approximately 6 to 12 inches upstream of the critical
exposure site must maintain ISO Class 5 levels during compounding operations.
— (c) The pharmacy shall maintain documentation from the manufacturer that the isolator
meets this standard when located in worse than ISO Class 7 environments.
— (B) High-risk Preparations. In addition to the requirements in subparagraph (A)(i)(I) of this
paragraph, when high-risk preparations are compounded, the aseptic environment control
device(s) shall be located in a controlled area that maintains at least an ISO Class 7
environment.
— (C) Automated compounding device(s). If automated compounding device(s) are used, the
pharmacy shall have a method to calibrate and verify the accuracy of automated compounding
devices used in aseptic processing and document the calibration and verification on a routine
basis.

(b) Environment.
(1) General requirements.

(A) The pharmacy shall be arranged in an orderly fashion and kept clean. All required equipment shall be clean and in good operating condition.

(B) The pharmacy shall have a sink with hot and cold running water within the pharmacy, exclusive of restroom facilities, available to all pharmacy personnel and maintained in a sanitary condition.

(C) The pharmacy shall be properly lighted and ventilated.

(D) The temperature of the pharmacy shall be maintained within a range compatible with the proper storage of drugs. The temperature of the refrigerator shall be maintained within a range compatible with the proper storage of drugs requiring refrigeration.

(E) If the pharmacy has flammable materials, the pharmacy shall have a designated area for the storage of flammable materials. Such area shall meet the requirements set by local and state fire laws.

(2) Security requirements.

(A) All areas occupied by a pharmacy shall be capable of being locked by key, combination or other mechanical or electronic means to prohibit unauthorized access, when a pharmacist is not on-site except as provided in subparagraph (B) of this paragraph.

(B) The pharmacy may authorize personnel to gain access to that area of the pharmacy containing dispensed [sterile] radiopharmaceuticals, in the absence of the pharmacist, for the purpose of retrieving [dispensed prescriptions] the radiopharmaceuticals to be delivered [deliver to patients]. If the pharmacy allows such after-hours access, the area containing the dispensed [sterile] radiopharmaceuticals shall be an enclosed and lockable area separate from the area containing undispensed prescription drugs. A list of the authorized personnel having such access shall be in the pharmacy's policy and procedure manual.

(C) Each pharmacist while on duty shall be responsible for the security of the prescription department, including provisions for effective control against theft or diversion of prescription drugs, and records for such drugs

(c) [41] Prescription dispensing and delivery.

(1) Generic Substitution. A pharmacist may substitute on a prescription drug order issued for a brand name product provided the substitution is authorized and performed in compliance with Chapter 309 of this title (relating to Substitution of Drug Products).

(2) Prescription containers (immediate inner containers).

(A) A drug dispensed pursuant to a radioactive prescription drug order shall be dispensed in an appropriate immediate inner container as follows.

(i) If a drug is susceptible to light, the drug shall be dispensed in a light-resistant container.
(ii) If a drug is susceptible to moisture, the drug shall be dispensed in a tight container.

(iii) The container should not interact physically or chemically with the drug product placed in it so as to alter the strength, quality, or purity of the drug beyond the official requirements.

(B) Immediate inner prescription containers or closures shall not be re-used.

(3) Delivery containers (outer containers).

(A) Prescription containers may be placed in suitable containers for delivery which will transport the radiopharmaceutical safely in compliance with all applicable laws and regulations.

(B) Delivery containers may be re-used provided they are maintained in a manner to prevent cross contamination.

(4) Labeling.

(A) The immediate inner container of a radiopharmaceutical shall be labeled with:

(i) standard radiation symbol;

(ii) the words "caution-radioactive material" or "danger, radioactive material";

(iii) the name of the radiopharmaceutical or its abbreviation; and

(iv) the unique identification number of the prescription.

(B) The outer container of a radiopharmaceutical shall be labeled with:

(i) the name, address, and phone number of the pharmacy;

(ii) the date dispensed;

(iii) the directions for use, if applicable;

(iv) the unique identification number of the prescription;

(v) the name of the patient if known, or the statement, "for physician use" if the patient is unknown;

(vi) the standard radiation symbol;

(vii) the words "caution-radioactive material" or "danger, radioactive material";

(viii) the name of the radiopharmaceutical or its abbreviation;

(ix) the amount of radioactive material contained in millicuries (mCi), microcuries (uCi), or bequerels (Bq) and the corresponding time that applies to this activity, if different from the requested calibration date and time;
(x) the initials or identification codes of the person preparing the product and the authorized
nuclear pharmacist who checked and released the final product unless recorded in the
pharmacy’s data processing system. The record of the identity of these individuals shall not be
altered in the pharmacy’s data processing system.

(xi) if a liquid, the volume in milliliters;

(xii) the requested calibration date and time; and

(xiii) the expiration date and/or time.

(C) The amount of radioactivity shall be determined by radiometric methods for each
individual preparation immediately at the time of dispensing and calculations shall be made to
determine the amount of activity that will be present at the requested calibration date and time,
due to radioactive decay in the intervening period, and this activity and time shall be placed on
the label per requirements set out in paragraph (4) of this subsection.

(d) [[e]] Equipment. The following minimum equipment is required in a nuclear pharmacy:

(1) vertical laminar flow hood;

(2) dose calibrator;

(3) a calibrated system or device (i.e., thermometer) to monitor the temperature to ensure that
proper storage requirements are met, if [sterile] preparations are stored in the refrigerator;

(4) if applicable, a Class A prescription balance, or analytical balance and weights. Such
balance shall be properly maintained and subject to periodic inspection by the board.

(5) scintillation analyzer;

(6) microscope and hemocytometer;

(7) equipment and utensils necessary for the proper compounding of prescription drug or
medication orders. Such equipment and utensils used in the compounding process shall be:

(A) of appropriate design, appropriate capacity, and be operated within designed operational
limits;

(B) of suitable composition so that surfaces that contact components, in-process material, or
drug products shall not be reactive, additive, or absorptive so as to alter the safety, identity,
strength, quality, or purity of the drug product beyond acceptable standards;

(C) cleaned and sanitized immediately prior to each use; and

(D) routinely inspected, calibrated (if necessary), or checked to ensure proper performance;

(8) appropriate disposal containers for used needles, syringes, etc., and if applicable, cytotoxic
waste from the preparation of chemotherapeutic agents, and/or biohazardous waste;

(9) all necessary supplies, including:
(A) disposable needles, syringes, and other aseptic mixing;
(B) disinfectant cleaning solutions;
(C) hand washing agents with bactericidal action;
(D) disposable, lint free towels or wipes;
(E) appropriate filters and filtration equipment;
(F) radioactive [cytotoxic] spill kits, if applicable; and
(G) masks, caps, coveralls or gowns with tight cuffs, shoe covers, and gloves, as applicable.

(10) adequate glassware, utensils, gloves, syringe shields and remote handling devices, and adequate equipment for product quality control;
(11) adequate shielding material;
(12) data processing system including a printer or comparable equipment;
(13) radiation dosimeters for visitors and personnel and log entry book;
(14) exhaust/fume hood with monitor, for storage and handling of all volatile radioactive drugs if applicable, to be determined by the Texas Department of State Health Services, Radiation Control Program; and
(15) adequate radiation monitor(s).

(e) Library. A nuclear pharmacy shall maintain a reference library which shall include the following in hard copy or electronic format current or updated copies of the following:

(1) current copies of the following:

(A) Texas Pharmacy Act and rules;
(B) Texas Dangerous Drug Act and rules;
(C) Texas Controlled Substances Act and rules; and
(D) Federal Controlled Substances Act and rules (or official publication describing the requirements of the Federal Controlled Substances Act and rules); and

(2) a current or updated version of Chapter 797 of the USP/NF concerning Pharmacy Compounding Sterile Preparations and other USP chapters applicable to the practice (e.g., USP Chapter 823 Radiopharmaceuticals for Positron Emission Tomography - Compounding); and

(3) a minimum of one current or updated text dealing with nuclear medicine science.

(f) Radiopharmaceuticals and/or radioactive materials.
(1) General requirements.

(A) Radiopharmaceuticals may only be dispensed pursuant to a radioactive prescription drug order.

(B) An authorized nuclear pharmacist may distribute radiopharmaceuticals to authorized users for patient use. A nuclear pharmacy may [also] furnish radiopharmaceuticals for departmental or physicians’ use if such authorized users maintain a Texas radioactive materials license[... and the radiopharmaceutical is labeled “for physician use, provided such distribution is documented in the control system].

(C) An authorized nuclear pharmacist may transfer to authorized users radioactive materials not intended for drug use in accordance with the requirements of the Texas Department of State Health Services, Radiation Control Program, Texas Administrative Code, Title 25, Part 1, Subchapter F, §289.252 relating to Licensing of Radioactive Material.

(D) The transportation of radioactive materials from the nuclear pharmacy must be in accordance with current state and federal transportation regulations.

(2) Procurement and storage.

(A) The pharmacist-in-charge shall have the responsibility for the procurement and storage of drugs, but may receive input from other appropriate staff relative to such responsibility.

(B) Prescription drugs and devices shall be stored within the prescription department or a locked storage area.

(C) All drugs shall be stored at the proper temperature, as defined in the USP/NF and §291.15 of this title (relating to Storage of Drugs).

(D) The pharmacy’s generator(s) shall be stored and eluted in an ISO Class 7 or ISO Class 8 environment as specified in §291.133 of this title.

(3) Out-of-date and other unusable drugs or devices.

(A) Any drug or device bearing an expiration date shall not be dispensed beyond the expiration date of the drug or device.

(B) Outdated and other unusable drugs or devices shall be removed from dispensing stock and shall be quarantined together until such drugs or devices are disposed of properly.

[(h) Loading bulk drugs into automated compounding devices.

---(1) Automated compounding device may be loaded with bulk drugs only by an authorized nuclear pharmacist or by supportive personnel under the direction and direct supervision of an authorized pharmacist.

---(2) The label of an automated compounding device container shall indicate the brand name and strength of the drug; or if no brand name, then the generic name, strength, and name of the manufacturer or distributor.]
Records of loading bulk drugs into an automated compounding device shall be maintained to show:

(A) name of the drug, strength, and dosage form;

(B) manufacturer or distributor;

(C) manufacturer’s lot number;

(D) expiration date;

(E) quantity added to the automated compounding device;

(F) date of loading;

(G) name, initials, or electronic signature of the person loading the automated compounding device; and

(H) name, initials, or electronic signature of the responsible authorized nuclear pharmacist.

The automated compounding device shall not be used until an authorized nuclear pharmacist verifies that the system is properly loaded and affixes his or her signature or electronic signature to the record specified in paragraph (3) of this subsection.

(i) Sterile radiopharmaceuticals.

(A) Beyond-use date. The beyond-use date assigned shall be based on:

(i) established manufacturer’s guidelines;

(ii) published literature; or

(iii) in-house or contracted stability studies.

(B) The method for establishing beyond-use dates shall be documented.

(2) Radioactive Drug Quality control. There shall be a documented, ongoing quality control program that monitors and evaluates personnel performance, equipment and facilities. Procedures shall be in place to assure that the pharmacy is capable of consistently preparing radiopharmaceuticals which are sterile and stable. Quality control procedures shall include, but are not limited to, the following:

(A) recall procedures;

(B) storage and dating;

(C) documentation of appropriate functioning of refrigerator, freezer, and other equipment;
(D) documentation of aseptic environmental control device(s) certification at least every year and the regular replacement of pre-filters as necessary;

(E) a process to evaluate and confirm the quality of the prepared radiopharmaceutical; and

(F) documentation of facility maintenance such as cleaning and environmental testing.]

§291.133 Pharmacies Compounding Sterile Preparations

(a) Purpose. Pharmacies compounding sterile preparations, prepackaging pharmaceutical products, and distributing those products shall comply with all requirements for their specific license classification and this section. The purpose of this section is to provide standards for the:

1. compounding of sterile preparations pursuant to a prescription or medication order for a patient from a practitioner in Class A-S, Class B, Class C-S, and Class E-S pharmacies;

2. compounding, dispensing, and delivery of a reasonable quantity of a compounded sterile preparation in Class A-S, Class B, Class C-S, and Class E-S pharmacies to a practitioner's office for office use by the practitioner;

3. compounding and distribution of compounded sterile preparations by a Class A-S pharmacy for a Class C-S pharmacy; and

4. compounding of sterile preparations by a Class C-S pharmacy and the distribution of the compounded preparations to other Class C or Class C-S pharmacies under common ownership.

(b) Definitions. In addition to the definitions for specific license classifications, the following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise.

1. ACPE--Accreditation Council for Pharmacy Education.

2. Airborne particulate cleanliness class--The level of cleanliness specified by the maximum allowable number of particles per cubic meter of air as specified in the International Organization of Standardization (ISO) Classification Air Cleanliness (ISO 14644-1). For example:

   A) ISO Class 5 (formerly Class 100) is an atmospheric environment that contains less than 3,520 particles 0.5 microns in diameter per cubic meter of air (formerly stated as 100 particles 0.5 microns in diameter per cubic foot of air);

   B) ISO Class 7 (formerly Class 10,000) is an atmospheric environment that contains less than 352,000 particles 0.5 microns in diameter per cubic meter of air (formerly stated as 10,000 particles 0.5 microns in diameter per cubic foot of air); and

   C) ISO Class 8 (formerly Class 100,000) is an atmospheric environment that contains less than 3,520,000 particles 0.5 microns in diameter per cubic meter of air (formerly stated as 100,000 particles 0.5 microns in diameter per cubic foot of air).
(3) Ancillary supplies--Supplies necessary for the preparation and administration of compounded sterile preparations.

(4) Ante-area--An ISO Class 8 or better area where personnel may perform hand hygiene and garbing procedures, staging of components, order entry, labeling, and other high-particulate generating activities. It is also a transition area that:

(A) provides assurance that pressure relationships are constantly maintained so that air flows from clean to dirty areas; and

(B) reduces the need for the heating, ventilating and air conditioning (HVAC) control system to respond to large disturbances.

(5) Aseptic Processing--A mode of processing pharmaceutical and medical preparations that involves the separate sterilization of the preparation and of the package (containers-closures or packaging material for medical devices) and the transfer of the preparation into the container and its closure under at least ISO Class 5 conditions.

(6) Automated compounding device--An automated device that compounds, measures, and/or packages a specified quantity of individual components in a predetermined sequence for a designated sterile preparation.

(7) Batch--A specific quantity of a drug or other material that is intended to have uniform character and quality, within specified limits, and is produced during a single preparation cycle.

(8) Batch preparation compounding--Compounding of multiple sterile preparation units, in a single discrete process, by the same individual(s), carried out during one limited time period. Batch preparation/compounding does not include the preparation of multiple sterile preparation units pursuant to patient specific medication orders.

(9) Beyond-use date--The date or time after which the compounded sterile preparation shall not be stored or transported or begin to be administered to a patient. The beyond-use date is determined from the date or time the preparation is compounded.

(10) Biological Safety Cabinet, Class II--A ventilated cabinet for personnel, product or preparation, and environmental protection having an open front with inward airflow for personnel protection, downward HEPA filtered laminar airflow for product protection, and HEPA filtered exhausted air for environmental protection.

(11) Buffer Area--An ISO Class 7, or, if a Class B pharmacy, ISO Class 8 or better, area where the primary engineering control area is physically located. Activities that occur in this area include the preparation and staging of components and supplies used when compounding sterile preparations.

(12) Clean room--A room in which the concentration of airborne particles is controlled to meet a specified airborne particulate cleanliness class. Microorganisms in the environment are monitored so that a microbial level for air, surface, and personnel gear are not exceeded for a specified cleanliness class.
(13) Component--Any ingredient intended for use in the compounding of a drug preparation, including those that may not appear in such preparation.

(14) Compounding--The preparation, mixing, assembling, packaging, or labeling of a drug or device:

(A) as the result of a practitioner's prescription drug or medication order based on the practitioner-patient-pharmacist relationship in the course of professional practice;

(B) for administration to a patient by a practitioner as the result of a practitioner's initiative based on the practitioner-patient-pharmacist relationship in the course of professional practice;

(C) in anticipation of prescription drug or medication orders based on routine, regularly observed prescribing patterns; or

(D) for or as an incident to research, teaching, or chemical analysis and not for sale or dispensing, except as allowed under §562.154 or Chapter 563 of the Occupations Code.

(15) Compounding Aseptic Isolator--A form of barrier isolator specifically designed for compounding pharmaceutical ingredients or preparations. It is designed to maintain an aseptic compounding environment within the isolator throughout the compounding and material transfer processes. Air exchange into the isolator from the surrounding environment shall not occur unless it has first passed through a microbial retentive filter (HEPA minimum).

(16) Compounding Aseptic Containment Isolator--A compounding aseptic isolator designed to provide worker protection from exposure to undesirable levels of airborne drug throughout the compounding and material transfer processes and to provide an aseptic environment for compounding sterile preparations. Air exchange with the surrounding environment should not occur unless the air is first passed through a microbial retentive filter (HEPA minimum) system capable of containing airborne concentrations of the physical size and state of the drug being compounded. Where volatile hazardous drugs are prepared, the exhaust air from the isolator should be appropriately removed by properly designed building ventilation.

(17) Critical Area--An ISO Class 5 environment.

(18) Critical Sites--A location that includes any component or fluid pathway surfaces (e.g., vial septa, injection ports, beakers) or openings (e.g., opened ampuls, needle hubs) exposed and at risk of direct contact with air (e.g., ambient room or HEPA filtered), moisture (e.g., oral and mucosal secretions), or touch contamination. Risk of microbial particulate contamination of the critical site increases with the size of the openings and exposure time.

(19) Device--An instrument, apparatus, implement, machine, contrivance, implant, in-vitro reagent, or other similar or related article, including any component part or accessory, that is required under federal or state law to be ordered or prescribed by a practitioner.

(20) Direct Compounding Area--A critical area within the ISO Class 5 primary engineering control where critical sites are exposed to unidirectional HEPA-filtered air, also known as first air.
(21) **Disinfectant**—An agent that frees from infection, usually a chemical agent but sometimes a physical one, and that destroys disease-causing pathogens or other harmful microorganisms but may not kill bacterial and fungal spores. It refers to substances applied to inanimate objects.

(22) **First Air**—The air exiting the HEPA filter in a unidirectional air stream that is essentially particle free.

(23) **Hazardous Drugs**—Drugs that, studies in animals or humans indicate exposure to the drugs, have a potential for causing cancer, development or reproductive toxicity, or harm to organs. **For the purposes of this chapter, radiopharmaceuticals are not considered hazardous drugs.**

(24) **Hot water**—The temperature of water from the pharmacy's sink maintained at a minimum of 105 degrees F (41 degrees C).

(25) **HVAC**—Heating, ventilation, and air conditioning.

(26) **Immediate use**—A sterile preparation that is not prepared according to USP 797 standards (i.e., outside the pharmacy and most likely not by pharmacy personnel) which shall be stored for no longer than one hour after completion of the preparation.

(27) **IPA**—Isopropyl alcohol (2-propanol).

(28) **Labeling**—All labels and other written, printed, or graphic matter on an immediate container of an article or preparation or on, or in, any package or wrapper in which it is enclosed, except any outer shipping container. The term "label" designates that part of the labeling on the immediate container.

(29) **Media-Fill Test**—A test used to qualify aseptic technique of compounding personnel or processes and to ensure that the processes used are able to produce sterile preparation without microbial contamination. During this test, a microbiological growth medium such as Soybean-Casein Digest Medium is substituted for the actual drug preparation to simulate admixture compounding. The issues to consider in the development of a media-fill test are the following: media-fill procedures, media selection, fill volume, incubation, time and temperature, inspection of filled units, documentation, interpretation of results, and possible corrective actions required.

(30) **Multiple-Dose Container**—A multiple-unit container for articles or preparations intended for potential administration only and usually contains antimicrobial preservatives. The beyond-use date for an opened or entered (e.g., needle-punctured) multiple-dose container with antimicrobial preservatives is 28 days, unless otherwise specified by the manufacturer.

(31) **Negative Pressure Room**—A room that is at a lower pressure compared to adjacent spaces and, therefore, the net flow of air is into the room.

(32) **Office use**—The administration of a compounded drug to a patient by a practitioner in the practitioner's office or by the practitioner in a health care facility or treatment setting, including a hospital, ambulatory surgical center, or pharmacy in accordance with Chapter 562 of the Act, or for administration or provision by a veterinarian in accordance with §563.054 of the Act.

(33) **Pharmacy Bulk Package**—A container of a sterile preparation for potential use that contains many single doses. The contents are intended for use in a pharmacy admixture
program and are restricted to the preparation of admixtures for infusion or, through a sterile
transfer device, for the filling of empty sterile syringes. The closure shall be penetrated only one
time after constitution with a suitable sterile transfer device or dispensing set, which allows
measured dispensing of the contents. The pharmacy bulk package is to be used only in a
suitable work area such as a laminar flow hood (or an equivalent clean air compounding area).

(34) Prepackaging--The act of repackaging and relabeling quantities of drug products from a
manufacturer's original container into unit dose packaging or a multiple dose container for
distribution within a facility licensed as a Class C pharmacy or to other pharmacies under
common ownership for distribution within those facilities. The term as defined does not prohibit
the prepackaging of drug products for use within other pharmacy classes.

(35) Preparation or Compounded Sterile Preparation--A sterile admixture compounded in a
licensed pharmacy or other healthcare-related facility pursuant to the order of a licensed
prescriber. The components of the preparation may or may not be sterile products.

(36) Primary Engineering Control--A device or room that provides an ISO Class 5 environment
for the exposure of critical sites when compounding sterile preparations. Such devices include,
but may not be limited to, laminar airflow workbenches, biological safety cabinets, compounding
aseptic isolators, and compounding aseptic containment isolators.

(37) Product--A commercially manufactured sterile drug or nutrient that has been evaluated for
safety and efficacy by the U.S. Food and Drug Administration (FDA). Products are accompanied
by full prescribing information, which is commonly known as the FDA-approved manufacturer's
labeling or product package insert.

(38) Positive Control--A quality assurance sample prepared to test positive for microbial
growth.

(39) [Positive Pressure Room--A room that is at a higher pressure compared to adjacent spaces
and, therefore, the net airflow is out of the room.]

[(40)] Quality assurance--The set of activities used to ensure that the process used in the
preparation of sterile drug preparations lead to preparations that meet predetermined standards
of quality.

[(40)] Quality control--The set of testing activities used to determine that the ingredients,
components (e.g., containers), and final compounded sterile preparations prepared meet
predetermined requirements with respect to identity, purity, non-pyrogenicity, and sterility.

[(41)] Reasonable quantity--An amount of a compounded drug that:

(A) does not exceed the amount a practitioner anticipates may be used in the practitioner's
office or facility before the beyond use date of the drug;

(B) is reasonable considering the intended use of the compounded drug and the nature of the
practitioner's practice; and

(C) for any practitioner and all practitioners as a whole, is not greater than an amount the
pharmacy is capable of compounding in compliance with pharmaceutical standards for identity,
strength, quality, and purity of the compounded drug that are consistent with United States Pharmacopoeia guidelines and accreditation practices.

(42) Segregated Compounding Area--A designated space, either a demarcated area or room, that is restricted to preparing low-risk level compounded sterile preparations with 12-hour or less beyond-use date. Such area shall contain a device that provides unidirectional airflow of ISO Class 5 air quality for preparation of compounded sterile preparations and shall be void of activities and materials that are extraneous to sterile compounding.

(43) Single-dose container--A single-unit container for articles or preparations intended for parenteral administration only. It is intended for a single use. A single-dose container is labeled as such. Examples of single-dose containers include pre-filled syringes, cartridges, fusion-sealed containers, and closure-sealed containers when so labeled.

(44) SOPs--Standard operating procedures.

(45) Sterilizing Grade Membranes--Membranes that are documented to retain 100% of a culture of 10^7 microorganisms of a strain of Brevundimonas (Pseudomonas) diminuta per square centimeter of membrane surface under a pressure of not less than 30 psi (2.0 bar). Such filter membranes are nominally at 0.22-μm or 0.2-μm nominal pore size, depending on the manufacturer’s practice.

(46) Sterilization by Filtration--Passage of a fluid or solution through a sterilizing grade membrane to produce a sterile effluent.

(47) Terminal Sterilization--The application of a lethal process, e.g., steam under pressure or autoclaving, to sealed final preparation containers for the purpose of achieving a predetermined sterility assurance level of usually less than 10^-6 or a probability of less than one in one million of a non-sterile unit.

(48) Unidirectional Flow--An airflow moving in a single direction in a robust and uniform manner and at sufficient speed to reproducibly sweep particles away from the critical processing or testing area.

(49) USP/NF--The current edition of the United States Pharmacopeia/National Formulary.

(c) Personnel.

(1) Pharmacist-in-charge.

(A) General. The pharmacy shall have a pharmacist-in-charge in compliance with the specific license classification of the pharmacy.

(B) Responsibilities. In addition to the responsibilities for the specific class of pharmacy, the pharmacist-in-charge shall have the responsibility for, at a minimum, the following concerning the compounding of sterile preparations:

(i) developing a system to ensure that all pharmacy personnel responsible for compounding and/or supervising the compounding of sterile preparations within the pharmacy receive appropriate education and training and competency evaluation;
(ii) determining that all personnel involved in compounding sterile preparations obtain continuing education appropriate for the type of compounding done by the personnel;

(iii) supervising a system to ensure appropriate procurement of drugs and devices and storage of all pharmaceutical materials including pharmaceuticals, components used in the compounding of sterile preparations, and drug delivery devices;

(iv) ensuring that the equipment used in compounding is properly maintained;

(v) developing a system for the disposal and distribution of drugs from the pharmacy;

(vi) developing a system for bulk compounding or batch preparation of drugs;

(vii) developing a system for the compounding, sterility assurance, quality assurance, and quality control of sterile preparations; and

(viii) if applicable, ensuring that the pharmacy has a system to dispose of hazardous waste in a manner so as not to endanger the public health.

(2) Pharmacists.

(A) General.

(i) A pharmacist is responsible for ensuring that compounded sterile preparations are accurately identified, measured, diluted, and mixed and are correctly purified, sterilized, packaged, sealed, labeled, stored, dispensed, and distributed.

(ii) A pharmacist shall inspect and approve all components, drug preparation containers, closures, labeling, and any other materials involved in the compounding process.

(iii) A pharmacist shall review all compounding records for accuracy and conduct in-process and final checks and verification of calculations to ensure that errors have not occurred in the compounding process.

(iv) A pharmacist is responsible for ensuring the proper maintenance, cleanliness, and use of all equipment used in the compounding process.

(v) A pharmacist shall be accessible at all times, 24 hours a day, to respond to patients’ and other health professionals’ questions and needs.

(B) Prior to September 1, 2015 - initial training and continuing education.

(i) All pharmacists who compound sterile preparations for administration to patients or supervise pharmacy technicians and pharmacy technician trainees compounding sterile preparations shall:

(I) complete through a single course, a minimum of 20 hours of instruction and experience in the areas listed in paragraph (4)(D) of this subsection. Such training may be obtained through:
(a) completion of a structured on-the-job didactic and experiential training program at this pharmacy which provides 20 hours of instruction and experience. Such training may not be transferred to another pharmacy unless the pharmacies are under common ownership and control and use a common training program; or

(b) completion of a recognized course in an accredited college of pharmacy or a course sponsored by an ACPE accredited provider which provides 20 hours of instruction and experience;

(ii) possess knowledge about:

(a) aseptic processing;

(b) quality control and quality assurance as related to environmental, component, and finished preparation release checks and tests;

(c) chemical, pharmaceutical, and clinical properties of drugs;

(d) container, equipment, and closure system selection; and

(e) sterilization techniques.

(ii) The required experiential portion of the training programs specified in this subparagraph must be supervised by an individual who has already completed training as specified in this paragraph or paragraph (3) of this subsection.

(iii) All pharmacists engaged in compounding sterile preparations shall obtain continuing education appropriate for the type of compounding done by the pharmacist.

(C) Effective September 1, 2015 - initial training and continuing education.

(i) All pharmacists who compound sterile preparations or supervise pharmacy technicians and pharmacy technician trainees compounding sterile preparations shall comply with the following:

(I) complete through a single course, a minimum of 20 hours of instruction and experience in the areas listed in paragraph (4)(D) of this subsection. Such training shall be obtained through completion of a recognized course in an accredited college of pharmacy or a course sponsored by an ACPE accredited provider;

(II) complete a structured on-the-job didactic and experiential training program at this pharmacy which provides sufficient hours of instruction and experience in the facility’s sterile compounding processes and procedures. Such training may not be transferred to another pharmacy unless the pharmacies are under common ownership and control and use a common training program; and

(III) possess knowledge about:

(a) aseptic processing;
(-b-) quality control and quality assurance as related to environmental, component, and finished preparation release checks and tests;

(-c-) chemical, pharmaceutical, and clinical properties of drugs;

(-d-) container, equipment, and closure system selection; and

(-e-) sterilization techniques.

(ii) The required experiential portion of the training programs specified in this subparagraph must be supervised by an individual who is actively engaged in performing sterile compounding and is qualified and has completed training as specified in this paragraph or paragraph (3) of this subsection.

(iii) In order to renew a license to practice pharmacy, during the previous licensure period, a pharmacist engaged in sterile compounding shall complete a minimum of:

(I) two hours of ACPE-accredited continuing education relating to one or more of the areas listed in paragraph (4)(D) of this subsection if the pharmacist is engaged in compounding low and medium risk sterile preparations; or

(II) four hours of ACPE-accredited continuing education relating to one or more of the areas listed in paragraph (4)(D) of this subsection if the pharmacist is engaged in compounding high risk sterile preparations.

(3) Pharmacy technicians and pharmacy technician trainees.

(A) General. All pharmacy technicians and pharmacy technician trainees shall meet the training requirements specified in §297.6 of this title (relating to Pharmacy Technician and Pharmacy Technician Trainee Training).

(B) Prior to September 1, 2015 - initial training and continuing education. In addition to specific qualifications for registration, all pharmacy technicians and pharmacy technician trainees who compound sterile preparations for administration to patients shall:

(i) have initial training obtained either through completion of:

(I) a single course, a minimum of 40 hours of instruction and experience in the areas listed in paragraph (4)(D) of this subsection. Such training may be obtained through:

(a-) completion of a structured on-the-job didactic and experiential training program at this pharmacy which provides 40 hours of instruction and experience. Such training may not be transferred to another pharmacy unless the pharmacies are under common ownership and control and use a common training program; or

(b-) completion of a course sponsored by an ACPE accredited provider which provides 40 hours of instruction and experience; or

(II) a training program which is accredited by the American Society of Health-System Pharmacists. Individuals enrolled in training programs accredited by the American Society of
Health-System Pharmacists may compound sterile preparations in a licensed pharmacy provided:

(a-) the compounding occurs only during times the individual is assigned to a pharmacy as a part of the experiential component of the American Society of Health-System Pharmacists training program;

(b-) the individual is under the direct supervision of and responsible to a pharmacist who has completed training as specified in paragraph (2) of this subsection; and

(c-) the supervising pharmacist conducts in-process and final checks.

(ii) acquire the required experiential portion of the training programs specified in this subparagraph under the supervision of an individual who has already completed training as specified in paragraph (2) of this subsection or this paragraph.

(C) Effective September 1, 2015 - initial training and continuing education.

(i) Pharmacy technicians and pharmacy technician trainees may compound sterile preparations provided the pharmacy technicians and/or pharmacy technician trainees are supervised by a pharmacist who has completed the training specified in paragraph (2) of this subsection, conducts in-process and final checks, and affixes his or her initials to the appropriate quality control records.

(ii) All pharmacy technicians and pharmacy technician trainees who compound sterile preparations for administration to patients shall:

(I) have initial training obtained either through completion of:

(a-) a single course, a minimum of 40 hours of instruction and experience in the areas listed in paragraph (4)(D) of this subsection. Such training shall be obtained through completion of a course sponsored by an ACPE accredited provider which provides 40 hours of instruction and experience; or

(b-) a training program which is accredited by the American Society of Health-System Pharmacists.

(II) and

(a-) complete a structured on-the-job didactic and experiential training program at this pharmacy which provides sufficient hours of instruction and experience in the facility’s sterile compounding processes and procedures. Such training may not be transferred to another pharmacy unless the pharmacies are under common ownership and control and use a common training program; and

(b-) possess knowledge about:

(-1-) aseptic processing;

(-2-) quality control and quality assurance as related to environmental, component, and finished preparation release checks and tests;
(-3-) chemical, pharmaceutical, and clinical properties of drugs;

(-4-) container, equipment, and closure system selection; and

(-5-) sterilization techniques.

(iii) Individuals enrolled in training programs accredited by the American Society of Health-System Pharmacists may compound sterile preparations in a licensed pharmacy provided:

(I) the compounding occurs only during times the individual is assigned to a pharmacy as a part of the experiential component of the American Society of Health-System Pharmacists training program;

(II) the individual is under the direct supervision of and responsible to a pharmacist who has completed training as specified in paragraph (2) of this subsection; and

(III) the supervising pharmacist conducts in-process and final checks.

(iv) The required experiential portion of the training programs specified in this subparagraph must be supervised by an individual who is actively engaged in performing sterile compounding, is qualified and has completed training as specified in paragraph (2) of this subsection or this paragraph.

(v) In order to renew a registration as a pharmacy technician, during the previous registration period, a pharmacy technician engaged in sterile compounding shall complete a minimum of:

(I) two hours of ACPE accredited continuing education relating to one or more of the areas listed in paragraph (4)(D) of this subsection if the pharmacy technician is engaged in compounding low and medium risk sterile preparations; or

(II) four hours of ACPE accredited continuing education relating to one or more of the areas listed in paragraph (4)(D) of this subsection if pharmacy technician is engaged in compounding high risk sterile preparations.

(4) Evaluation and testing requirements.

(A) All pharmacy personnel preparing sterile preparations shall be trained conscientiously and skillfully by expert personnel through multimedia instructional sources and professional publications in the theoretical principles and practical skills of aseptic manipulations, garbing procedures, aseptic work practices, achieving and maintaining ISO Class 5 environmental conditions, and cleaning and disinfection procedures before beginning to prepare compounded sterile preparations.

(B) All pharmacy personnel preparing sterile preparations shall perform didactic review and pass written and media-fill testing of aseptic manipulative skills initially followed by:

(i) every 12 months for low- and medium-risk level compounding; and

(ii) every six months for high-risk level compounding.
(C) Pharmacy personnel who fail written tests or whose media-fill test vials result in gross microbial colonization shall:

(i) be immediately re-instructed and re-evaluated by expert compounding personnel to ensure correction of all aseptic practice deficiencies; and

(ii) not be allowed to compound sterile preparations for patient use until passing results are achieved.

(D) The didactic and experiential training shall include instruction, experience, and demonstrated proficiency in the following areas:

(i) aseptic technique;

(ii) critical area contamination factors;

(iii) environmental monitoring;

(iv) structure and engineering controls related to facilities;

(v) equipment and supplies;

(vi) sterile preparation calculations and terminology;

(vii) sterile preparation compounding documentation;

(viii) quality assurance procedures;

(ix) aseptic preparation procedures including proper gowning and gloving technique;

(x) handling of hazardous drugs, if applicable;

(xi) cleaning procedures; and

(xii) general conduct in the clean room.

(E) The aseptic technique of each person compounding or responsible for the direct supervision of personnel compounding sterile preparations shall be observed and evaluated by expert personnel as satisfactory through written and practical tests, and media-fill challenge testing, and such evaluation documented.

(F) Media-fill tests must be conducted at each pharmacy where an individual compounds sterile preparations. No preparation intended for patient use shall be compounded by an individual until the on-site media-fill tests indicate that the individual can competently perform aseptic procedures, except that a pharmacist may temporarily compound sterile preparations and supervise pharmacy technicians compounding sterile preparations without media-fill tests provided the pharmacist completes the on-site media-fill tests within seven days of commencing work at the pharmacy.
(G) Media-fill tests procedures for assessing the preparation of specific types of sterile preparations shall be representative of the most challenging or stressful conditions encountered by the pharmacy personnel being evaluated for each risk level and for sterilizing high-risk level compounded sterile preparations.

(H) Media-fill challenge tests simulating high-risk level compounding shall be used to verify the capability of the compounding environment and process to produce a sterile preparation.

(I) Commercially available sterile fluid culture media, such as Soybean-Casein Digest Medium shall be able to promote exponential colonization of bacteria that are most likely to be transmitted to compounding sterile preparations from the compounding personnel and environment. Media-filled vials are generally incubated at 20 to 25 degrees Celsius or at 30 to 35 degrees Celsius for a minimum of 14 days. If two temperatures are used for incubation of media-filled samples, then these filled containers should be incubated for at least 7 days at each temperature. Failure is indicated by visible turbidity in the medium on or before 14 days.

(J) The pharmacist-in-charge shall ensure continuing competency of pharmacy personnel through in-service education, training, and media-fill tests to supplement initial training. Personnel competency shall be evaluated:

(i) during orientation and training prior to the regular performance of those tasks;

(ii) whenever the quality assurance program yields an unacceptable result;

(iii) whenever unacceptable techniques are observed; and

(iv) at least on an annual basis for low- and medium-risk level compounding, and every six months for high-risk level compounding.

(K) The pharmacist-in-charge shall ensure that proper hand hygiene and garbing practices of compounding personnel are evaluated prior to compounding sterile preparations intended for patient use and whenever an aseptic media fill is performed.

(i) Sampling of compounding personnel glove fingertips shall be performed for all risk level compounding.

(ii) All compounding personnel shall demonstrate competency in proper hand hygiene and garbing procedures and in aseptic work practices (e.g., disinfection of component surfaces, routine disinfection of gloved hands).

(iii) Sterile contact agar plates shall be used to sample the gloved fingertips of compounding personnel after garbing in order to assess garbing competency and after completing the media-fill preparation (without applying sterile 70% IPA).

(iv) The visual observation shall be documented and maintained to provide a permanent record and long-term assessment of personnel competency.

(v) All compounding personnel shall successfully complete an initial competency evaluation and gloved fingertip/thumb sampling procedure no less than three times before initially being allowed to compound sterile preparations for patient use. Immediately after the compounding personnel completes the hand hygiene and garbing procedure (e.g., donning of sterile gloves...
prior to any disinfection with sterile 70% IPA), the evaluator will collect a gloved fingertip and thumb sample from both hands from the compounding personnel onto agar plates by lightly pressing each fingertip into the agar. The plates will be incubated for the appropriate incubation period and at the appropriate temperature. Re-evaluation of all compounding personnel shall occur at least annually for compounding personnel who compound low and medium risk level preparations and every six months for compounding personnel who compound high risk level preparations.

(L) The pharmacist-in-charge shall ensure surface sampling shall be conducted in all ISO classified areas on a periodic basis. Sampling shall be accomplished using contact plates at the conclusion of compounding. The sample area shall be gently touched with the agar surface by rolling the plate across the surface to be sampled.

(5) Documentation of Training. The pharmacy shall maintain a record of the training and continuing education on each person who compounds sterile preparations. The record shall contain, at a minimum, a written record of initial and in-service training, education, and the results of written and practical testing and media-fill testing of pharmacy personnel. The record shall be maintained and available for inspection by the board and contain the following information:

(A) name of the person receiving the training or completing the testing or media-fill tests;

(B) date(s) of the training, testing, or media-fill challenge testing;

(C) general description of the topics covered in the training or testing or of the process validated;

(D) name of the person supervising the training, testing, or media-fill challenge testing; and

(E) signature or initials of the person receiving the training or completing the testing or media-fill challenge testing and the pharmacist-in-charge or other pharmacist employed by the pharmacy and designated by the pharmacist-in-charge as responsible for training, testing, or media-fill challenge testing of personnel.

(d) Operational Standards.

(1) General Requirements.

(A) Sterile preparations may be compounded:

(i) upon presentation of a practitioner’s prescription drug or medication order based on a valid pharmacist/patient/prescriber relationship;

(ii) in anticipation of future prescription drug or medication orders based on routine, regularly observed prescribing patterns; or

(iii) in reasonable quantities for office use by a practitioner and for use by a veterinarian.

(B) Sterile compounding in anticipation of future prescription drug or medication orders must be based upon a history of receiving valid prescriptions issued within an established
pharmacist/patient/prescriber relationship, provided that in the pharmacist's professional
judgment the quantity prepared is stable for the anticipated shelf time.

(i) The pharmacist's professional judgment shall be based on the criteria used to determine
a beyond-use date outlined in paragraph (6)(G) of this subsection.

(ii) Documentation of the criteria used to determine the stability for the anticipated shelf time
must be maintained and be available for inspection.

(iii) Any preparation compounded in anticipation of future prescription drug or medication
orders shall be labeled. Such label shall contain:

(I) name and strength of the compounded preparation or list of the active ingredients and
strengths;

(II) facility's lot number;

(III) beyond-use date as determined by the pharmacist using appropriate documented
criteria as outlined in paragraph (6)(G) of this subsection;

(IV) quantity or amount in the container;

(V) appropriate ancillary instructions, such as storage instructions or cautionary
statements, including hazardous drug warning labels where appropriate; and

(VI) device-specific instructions, where appropriate.

(C) Commercially available products may be compounded for dispensing to individual
patients or for office use provided the following conditions are met:

(i) the commercial product is not reasonably available from normal distribution channels in a
timely manner to meet individual patient's needs;

(ii) the pharmacy maintains documentation that the product is not reasonably available due to
a drug shortage or unavailability from the manufacturer; and

(iii) the prescribing practitioner has requested that the drug be compounded as described in
subparagraph (D) of this paragraph.

(D) A pharmacy may not compound preparations that are essentially copies of commercially
available products (e.g., the preparation is dispensed in a strength that is only slightly different
from a commercially available product) unless the prescribing practitioner specifically orders the
strength or dosage form and specifies why the individual patient needs the particular strength
or dosage form of the preparation or why the preparation for office use is needed in the
particular strength or dosage form of the preparation. The prescribing practitioner shall provide
documentation of a patient specific medical need and the preparation produces a clinically
significant therapeutic response (e.g., the physician requests an alternate preparation due to
hypersensitivity to excipients or preservative in the FDA-approved product, or the physician
requests an effective alternate dosage form) or if the drug product is not commercially available.
The unavailability of such drug product must be documented prior to compounding. The
methodology for documenting unavailability includes maintaining a copy of the wholesaler's
notification showing back-ordered, discontinued, or out-of-stock items. This documentation must be available in hard-copy or electronic format for inspection by the board.

(E) A pharmacy may enter into an agreement to compound and dispense prescription/medication orders for another pharmacy provided the pharmacy complies with the provisions of §291.125 of this title (relating to Centralized Prescription Dispensing).

(F) Compounding pharmacies/pharmacists may advertise and promote the fact that they provide sterile prescription compounding services, which may include specific drug preparations and classes of drugs.

(G) A pharmacy may not compound veterinary preparations for use in food producing animals except in accordance with federal guidelines.

(H) Compounded sterile preparations, including hazardous drugs and radiopharmaceuticals, shall be prepared only under conditions that protect the pharmacy personnel in the preparation and storage areas.

(2) Microbial Contamination Risk Levels. Risk Levels for sterile compounded preparations shall be as outlined in Chapter 797, Pharmacy Compounding--Sterile Preparations of the USP/NF and as listed in this paragraph.

(A) Low-risk level compounded sterile preparations.

(i) Low-Risk conditions. Low-risk level compounded sterile preparations are those compounded under all of the following conditions.

(I) The compounded sterile preparations are compounded with aseptic manipulations entirely within ISO Class 5 or better air quality using only sterile ingredients, products, components, and devices.

(II) The compounding involves only transfer, measuring, and mixing manipulations using not more than three commercially manufactured packages of sterile products and not more than two entries into any one sterile container or package (e.g., bag, vial) of sterile product or administration container/device to prepare the compounded sterile preparation.

(III) Manipulations are limited to aseptically opening ampuls, penetrating disinfected stoppers on vials with sterile needles and syringes, and transferring sterile liquids in sterile syringes to sterile administration devices, package containers of other sterile products, and containers for storage and dispensing.

(IV) For a low-risk preparation, in the absence of direct sterility testing results or appropriate information sources that justify different limits, the storage periods may not exceed the following periods: before administration the compounded sterile preparation is stored properly and are exposed for not more than 48 hours at controlled room temperature, for not more than 14 days if stored at a cold temperature, and for 45 days if stored in a frozen state between minus 25 degrees Celsius and minus 10 degrees Celsius. For delayed activation device systems, the storage period begins when the device is activated.

(ii) Examples of Low-Risk Compounding. Examples of low-risk compounding include the following.
(I) Single volume transfers of sterile dosage forms from ampuls, bottles, bags, and vials using sterile syringes with sterile needles, other administration devices, and other sterile containers. The solution content of ampules shall be passed through a sterile filter to remove any particles.

(II) Simple aseptic measuring and transferring with not more than three packages of manufactured sterile products, including an infusion or diluent solution to compound drug admixtures and nutritional solutions.

(III) Preparation of radiopharmaceuticals from FDA-approved drug products.

(B) Low-Risk Level compounded sterile preparations with 12-hour or less beyond-use date. Low-risk level compounded sterile preparations are those compounded pursuant to a physician's order for a specific patient under all of the following conditions.

(i) The compounded sterile preparations are compounded in compounding aseptic isolator or compounding aseptic containment isolator that does not meet the requirements described in paragraph (6)(A)(ii)(II) of this subsection relating to Low and Medium Risk Preparations or the compounded sterile preparations are compounded in laminar airflow workbench or a biological safety cabinet that cannot be located within the [an ISO Class 7] buffer area.

(ii) The primary engineering control device shall be certified and maintain ISO Class 5 for exposure of critical sites and shall be located in a segregated compounding area restricted to sterile compounding activities that minimizes the risk of contamination of the compounded sterile preparation.

(iii) The segregated compounding area shall not be in a location that has unsealed windows or doors that connect to the outdoors or high traffic flow, or that is adjacent to construction sites, warehouses, or food preparation.

(iv) For a low-risk preparation compounded as described in clauses (i) - (iii) of this subparagraph, administration of such compounded sterile preparations must commence within 12 hours of preparation or as recommended in the manufacturers' package insert, whichever is less. However, the administration of sterile radiopharmaceuticals, with documented testing of chemical stability, may be administered beyond 12 hours of preparation.

(C) Medium-risk level compounded sterile preparations.

(i) Medium-Risk Conditions. Medium-risk level compounded sterile preparations, are those compounded aseptically under low-risk conditions and one or more of the following conditions exists.

(I) Multiple individual or small doses of sterile products are combined or pooled to prepare a compounded sterile preparation that will be administered either to multiple patients or to one patient on multiple occasions.

(II) The compounding process includes complex aseptic manipulations other than the single-volume transfer.
(III) The compounding process requires unusually long duration, such as that required to complete the dissolution or homogenous mixing (e.g., reconstitution of intravenous immunoglobulin or other intravenous protein products).

(IV) The compounded sterile preparations do not contain broad spectrum bacteriostatic substances and they are administered over several days (e.g., an externally worn infusion device).

(V) For a medium-risk preparation, in the absence of direct sterility testing results the beyond use dates may not exceed the following time periods: before administration, the compounded sterile preparations are properly stored and are exposed for not more than 30 hours at controlled room temperature, for not more than 9 days at a cold temperature, and for 45 days in solid frozen state between minus 25 degrees Celsius and minus 10 degrees Celsius.

(ii) Examples of medium-risk compounding. Examples of medium-risk compounding include the following.

(I) Compounding of total parenteral nutrition fluids using a manual or automated device during which there are multiple injections, detachments, and attachments of nutrient source products to the device or machine to deliver all nutritional components to a final sterile container.

(II) Filling of reservoirs of injection and infusion devices with more than three sterile drug products and evacuations of air from those reservoirs before the filled device is dispensed.

(III) Filling of reservoirs of injection and infusion devices with volumes of sterile drug solutions that will be administered over several days at ambient temperatures between 25 and 40 degrees Celsius (77 and 104 degrees Fahrenheit).

(IV) Transfer of volumes from multiple ampuls or vials into a single, final sterile container or product.

(D) High-risk level compounded sterile preparations.

(i) High-risk Conditions. High-risk level compounded sterile preparations are those compounded under any of the following conditions.

(I) Non-sterile ingredients, including manufactured products not intended for sterile routes of administration (e.g., oral) are incorporated or a non-sterile device is employed before terminal sterilization.

(II) Any of the following are exposed to air quality worse than ISO Class 5 for more than 1 hour:

(-a-) sterile contents of commercially manufactured products;

(-b-) CSPs that lack effective antimicrobial preservatives; and

(-c-) sterile surfaces of devices and containers for the preparation, transfer, sterilization, and packaging of CSPs.
(III) Compounding personnel are improperly garbed and gloved.

(IV) Non-sterile water-containing preparations are exposed no more than 6 hours before being sterilized.

(V) It is assumed, and not verified by examination of labeling and documentation from suppliers or by direct determination, that the chemical purity and content strength of ingredients meet their original or compendial specifications in unopened or in opened packages of bulk ingredients.

(VI) For a sterilized high-risk level preparation, in the absence of passing a sterility test, the storage periods cannot exceed the following time periods: before administration, the compounded sterile preparations are properly stored and are exposed for not more than 24 hours at controlled room temperature, for not more than 3 days at a cold temperature, and for 45 days in solid frozen state between minus 25 degrees Celsius and minus 10 degrees Celsius.

(VII) All non-sterile measuring, mixing, and purifying devices are rinsed thoroughly with sterile, pyrogen-free water, and then thoroughly drained or dried immediately before use for high-risk compounding. All high-risk compounded sterile solutions subjected to terminal sterilization are prefiltered by passing through a filter with a nominal pore size not larger than 1.2 micron preceding or during filling into their final containers to remove particulate matter. Sterilization of high-risk level compounded sterile preparations by filtration shall be performed with a sterile 0.2 micrometer or 0.22 micrometer nominal pore size filter entirely within an ISO Class 5 or superior air quality environment.

(ii) Examples of high-risk compounding. Examples of high-risk compounding include the following.

(I) Dissolving non-sterile bulk drug powders to make solutions, which will be terminally sterilized.

(II) Exposing the sterile ingredients and components used to prepare and package compounded sterile preparations to room air quality worse than ISO Class 5 for more than one hour.

(III) Measuring and mixing sterile ingredients in non-sterile devices before sterilization is performed.

(IV) Assuming, without appropriate evidence or direct determination, that packages of bulk ingredients contain at least 95% by weight of their active chemical moiety and have not been contaminated or adulterated between uses.

(3) Immediate Use Compounded Sterile Preparations. For the purpose of emergency or immediate patient care, such situations may include cardiopulmonary resuscitation, emergency room treatment, preparation of diagnostic agents, or critical therapy where the preparation of the compounded sterile preparation under low-risk level conditions would subject the patient to additional risk due to delays in therapy. Compounded sterile preparations are exempted from the requirements described in this paragraph for low-risk level compounded sterile preparations when all of the following criteria are met.
(A) Only simple aseptic measuring and transfer manipulations are performed with not more than three sterile non-hazardous commercial drug and diagnostic radiopharmaceutical drug products, including an infusion or diluent solution, from the manufacturers' original containers and not more than two entries into any one container or package of sterile infusion solution or administration container/device.

(B) Unless required for the preparation, the compounding procedure occurs continuously without delays or interruptions and does not exceed 1 hour.

(C) During preparation, aseptic technique is followed and, if not immediately administered, the finished compounded sterile preparation is under continuous supervision to minimize the potential for contact with nonsterile surfaces, introduction of particulate matter of biological fluids, mix-ups with other compounded sterile preparations, and direct contact of outside surfaces.

(D) Administration begins not later than one hour following the completion of preparing the compounded sterile preparation.

(E) When the compounded sterile preparations is not administered by the person who prepared it, or its administration is not witnessed by the person who prepared it, the compounded sterile preparation shall bear a label listing patient identification information such as name and identification number(s), the names and amounts of all ingredients, the name or initials of the person who prepared the compounded sterile preparation, and the exact 1-hour beyond-use time and date.

(F) If administration has not begun within one hour following the completion of preparing the compounded sterile preparation, the compounded sterile preparation is promptly and safely discarded. Immediate use compounded sterile preparations shall not be stored for later use.

(G) Hazardous drugs shall not be prepared as immediate use compounded sterile preparations.

(4) Single-dose and multiple dose containers.

(A) Opened or needle punctured single-dose containers, such as bags bottles, syringes, and vials of sterile products shall be used within one hour if opened in worse than ISO Class 5 air quality. Any remaining contents must be discarded.

(B) Single-dose containers, including single-dose large volume parenteral solutions and single-dose vials, exposed to ISO Class 5 or cleaner air may be used up to six hours after initial needle puncture.

(C) Opened single-dose fusion sealed containers shall not be stored for any time period.

(D) Multiple-dose containers may be used up to 28 days after initial needle puncture unless otherwise specified by the manufacturer.

(5) Library. In addition to the library requirements of the pharmacy's specific license classification, a pharmacy shall maintain current or updated copies in hard-copy or electronic format of each of the following:
(A) a reference text on injectable drug preparations, such as Handbook on Injectable Drug Products;

(B) a specialty reference text appropriate for the scope of pharmacy services provided by the pharmacy, e.g., if the pharmacy prepares hazardous drugs, a reference text on the preparation of hazardous drugs; [and]

(C) the United States Pharmacopeia/National Formulary containing USP Chapter 71, Sterility Tests, USP Chapter 85, Bacterial Endotoxins Test, Pharmaceutical Compounding--Nonsterile Preparations, USP Chapter 795, USP Chapter 797, Pharmaceutical Compounding--Sterile Preparations, and USP Chapter 1163, Quality Assurance in Pharmaceutical Compounding; and

(D) any additional USP/NF chapters applicable to the practice of the pharmacy (e.g., Chapter 800, Hazardous Drugs—Handling in Healthcare Settings, Chapter 823, Positron Emission Tomography Drugs for Compounding, Investigational, and Research Uses.

(6) Environment. Compounding facilities shall be physically designed and environmentally controlled to minimize airborne contamination from contacting critical sites.

(A) Low and Medium Risk Preparations.

(i) A pharmacy that prepares low- and medium-risk preparations shall have a clean room for the compounding of sterile preparations that is constructed to minimize the opportunities for particulate and microbial contamination. The clean room shall:

(I) be clean, well lit, and of sufficient size to support sterile compounding activities;

(II) be maintained at a comfortable temperature (e.g., 20 degrees Celsius or cooler) allowing compounding personnel to perform flawlessly when attired in the required aseptic compounding garb;

(III) be used only for the compounding of sterile preparations;

(IV) be designed such that hand sanitizing and gowning occurs outside the buffer area but allows hands-free access by compounding personnel to the buffer area;

(V) have non-porous and washable floors or floor covering to enable regular disinfection;

(VI) be ventilated in a manner to avoid disruption from the HVAC system and room cross-drafts;

(VII) have walls, ceilings, floors, fixtures, shelving, counters, and cabinets that are smooth, impervious, free from cracks and crevices (e.g., coved), non-shedding and resistant to damage by disinfectant agents;

(VIII) have junctures of ceilings to walls coved or caulked to avoid cracks and crevices;

(IX) have drugs and supplies stored on shelving areas above the floor to permit adequate floor cleaning;
(X) contain only the appropriate compounding supplies and not be used for bulk storage for supplies and materials. Objects that shed particles shall not be brought into the clean room. **A Class B pharmacy may use low-linting absorbent materials in the primary engineering control device:**

(XI) contain an ante-area that [provides at least an ISO class 8 air quality and] contains a sink with hot and cold running water that enables hands-free use with a closed system of soap dispensing to minimize the risk of extrinsic contamination. **A Class B pharmacy may have a sink with hot and cold running water that enables hands-free use with a closed system of soap dispensing immediately outside the ante-area if antiseptic hand cleansing is performed using a waterless alcohol-based surgical hand scrub with persistent activity following manufacturers’ recommendations once inside the ante-area;** and

(XII) contain a buffer area [designed to maintain at least ISO Class 7 conditions for 0.5-μm and larger particles under dynamic working conditions]. The following is applicable for the buffer area.

(-a-) There shall be some demarcation designation that delineates the ante-area from the buffer area. The demarcation shall be such that it does not create conditions that could adversely affect the cleanliness of the area.

(-b-) The buffer area shall be segregated from surrounding, unclassified spaces to reduce the risk of contaminants being blown, dragged, or otherwise introduced into the filtered unidirectional airflow environment, and this segregation should be continuously monitored.

(-c-) A buffer area that is not physically separated from the ante-area shall employ the principle of displacement airflow as defined in Chapter 797, Pharmaceutical Compounding--Sterile Preparations, of the USP/NF, with limited access to personnel.

(-d-) The buffer area shall not contain sources of water (i.e., sinks) or floor drains other than distilled or sterile water introduced for facilitating the use of heat block wells for radiopharmaceuticals.

(ii) The pharmacy shall prepare sterile preparations in a primary engineering control device, such as a laminar air flow hood, biological safety cabinet, compounding aseptic isolator, compounding aseptic containment isolator which is capable of maintaining at least ISO Class 5 conditions for 0.5-μm particles while compounding sterile preparations.

(I) The primary engineering control shall:

(-a-) be located in the buffer area and placed in the buffer area in a manner as to avoid conditions that could adversely affect its operation such as strong air currents from opened doors, personnel traffic, or air streams from the heating, ventilating and air condition system.

(-b-) be certified by a qualified independent contractor according to the International Organization of Standardization (ISO) Classification of Particulate Matter in Room Air (ISO 14644-1) for operational efficiency at least every six months and whenever the device or room is relocated or altered or major service to the facility is performed, in accordance with the manufacturer's specifications;
(-c-) have pre-filters inspected periodically and replaced as needed, in accordance with written policies and procedures and the manufacturer's specification, and the inspection and/or replacement date documented; and

(-d-) be located in a buffer area that has a minimum differential positive pressure of 0.02 to 0.05 inches water column as applicable.

(II) The compounding aseptic isolator or compounding aseptic containment isolator must be placed in the [an ISO Class 7] buffer area unless the isolator meets all of the following conditions.

(-a-) The isolator must provide isolation from the room and maintain ISO Class 5 during dynamic operating conditions including transferring ingredients, components, and devices into and out of the isolator and during preparation of compounded sterile preparations.

(-b-) Particle counts sampled approximately 6 to 12 inches upstream of the critical exposure site must maintain ISO Class 5 levels during compounding operations.

(-c-) The pharmacy shall maintain documentation from the manufacturer that the isolator meets this standard when located in worse than ISO Class 7 environments.

(B) High-risk Preparations.

(i) In addition to the requirements in subparagraph (A) of this paragraph, when high-risk preparations are compounded, the primary engineering control shall be located in a buffer area that provides a physical separation, through the use of walls, doors and pass-throughs and has a minimum differential positive pressure of 0.02 to 0.05 inches water column.

(ii) Presterilization procedures for high-risk level compounded sterile preparations, such as weighing and mixing, shall be completed in no worse than an ISO Class 8 environment.

(C) Automated compounding device. If automated compounding devices are used, the pharmacy shall have a method to calibrate and verify the accuracy of automated compounding devices used in aseptic processing and document the calibration and verification on a daily basis, based on the manufacturer's recommendations, and review the results at least weekly.

(i) General. If automated compounding devices are used, the pharmacy shall have a method to calibrate and verify the accuracy of automated compounding devices used in aseptic processing and document the calibration and verification on a daily basis, based on the manufacturer's recommendations, and review the results at least weekly.

(ii) Loading bulk drugs into automated compounding devices.

(I) Automated compounding device may be loaded with bulk drugs only by a pharmacist or by pharmacy technicians or pharmacy technician trainees under the direction and direct supervision of a pharmacist.

(II) The label of an automated compounding device container shall indicate the brand name and strength of the drug; or if no brand name, then the generic name, strength, and name of the manufacturer or distributor.
(III) Records of loading bulk drugs into an automated compounding device shall be maintained to show:

(-a-) name of the drug, strength, and dosage form;

(-b-) manufacturer or distributor;

(-c-) manufacturer's lot number;

(-d-) manufacturer's expiration date;

(-e-) quantity added to the automated compounding device;

(-f-) date of loading;

(-g-) name, initials, or electronic signature of the person loading the automated compounding device; and

(-h-) name, initials, or electronic signature of the responsible pharmacist.

(IV) The automated compounding device shall not be used until a pharmacist verifies that the system is properly loaded and affixes his or her signature or electronic signature to the record specified in clause (III) of this subparagraph.

(D) Hazardous drugs. If the preparation is hazardous, the following is also applicable.

(i) General.

(I) Hazardous drugs shall be prepared only under conditions that protect personnel during preparation and storage.

(II) Hazardous drugs shall be stored separately from other inventory in a manner to prevent contamination and personnel exposure.

(III) All personnel involved in the compounding of hazardous drugs shall wear appropriate protective apparel, such as gowns, face masks, eye protection, hair covers, shoe covers or dedicated shoes, and appropriate gloving at all times when handling hazardous drugs, including receiving, distribution, stocking, inventorying, preparation, for administration and disposal.

(IV) Appropriate safety and containment techniques for compounding hazardous drugs shall be used in conjunction with aseptic techniques required for preparing sterile preparations.

(V) Disposal of hazardous waste shall comply with all applicable local, state, and federal requirements.

(VI) Prepared doses of hazardous drugs must be dispensed, labeled with proper precautions inside and outside, and distributed in a manner to minimize patient contact with hazardous agents.

(ii) Primary engineering control device. Hazardous drugs shall be prepared in a Class II or III vertical flow biological safety cabinet or compounding aseptic containment isolator located in an
ISO Class 7 area that is physically separated from other preparation areas. The area for preparation of sterile chemotherapeutic preparations shall:

(I) have not less than 0.01 inches water column negative pressure to the adjacent positive pressure ISO Class 7 or better ante-area; and

(II) have a pressure indicator that can be readily monitored for correct room pressurization.

(iii) Facilities that prepare a low volume of hazardous drugs. Pharmacies that prepare a low volume of hazardous drugs, are not required to comply with the provisions of clause (ii) of this subparagraph if the pharmacy uses a device that provides two tiers of containment (e.g., closed-system vial transfer device within a BSC or CACI that is located in a non-negative pressure room).

(E) Blood-labeling procedures. When compounding activities require the manipulation of a patient’s blood-derived material (e.g., radiolabeling a patient’s or donor’s white blood cells), the manipulations shall be clearly separated from routine material-handling procedures and equipment used in preparation activities to avoid any cross-contamination. The preparations shall not require sterilization.

(F) Cleaning and disinfecting the sterile compounding areas. The following cleaning and disinfecting practices and frequencies apply to direct and contiguous compounding areas, which include ISO Class 5 compounding areas for exposure of critical sites as well as buffer areas, ante-areas, and segregated compounding areas.

(i) The pharmacist-in-charge is responsible for developing written procedures for cleaning and disinfecting the direct and contiguous compounding areas and assuring the procedures are followed.

(ii) These procedures shall be conducted at the beginning of each work shift, before each batch preparation is started, every 30 minutes during continuous compounding of individual compounded sterile preparations, when there are spills, and when surface contamination is known or suspected from procedural breaches.

(iii) Before compounding is performed, all items shall be removed from the direct and contiguous compounding areas and all surfaces are cleaned by removing loose material and residue from spills, followed by an application of a residue-free disinfecting agent (e.g., IPA), which is allowed to dry before compounding begins. In a Class B pharmacy, objects used in preparing sterile radiopharmaceuticals (e.g., dose calibrator) which cannot be reasonably removed from the compounding area shall be sterilized with an application of a residue-free disinfection agent.

(iv) Work surfaces in the ISO Class 7 buffer areas and ISO Class 8 ante-areas, as well as segregated compounding areas, shall be cleaned and disinfected at least daily. Dust and debris shall be removed when necessary from storage sites for compounding ingredients and supplies using a method that does not degrade the ISO Class 7 or 8 air quality.

(v) Floors in the buffer area, ante-area, and segregated compounding area are cleaned by mopping with a cleaning and disinfecting agent at least once daily when no aseptic operations are in progress. Mopping shall be performed by trained personnel using approved agents and
procedures described in the written SOPs. It is incumbent on compounding personnel to ensure that such cleaning is performed properly.

(vi) In the buffer area, ante-area, and segregated compounding area, walls, ceilings, and shelving shall be cleaned and disinfected monthly. Cleaning and disinfecting agents shall be used with careful consideration of compatibilities, effectiveness, and inappropriate or toxic residues.

(vii) All cleaning materials, such as wipers, sponges, and mops, shall be non-shedding, and dedicated to use in the buffer area, ante-area, and segregated compounding areas and shall not be removed from these areas except for disposal. Floor mops may be used in both the buffer area and ante-area, but only in that order. If cleaning materials are reused, procedures shall be developed that ensure that the effectiveness of the cleaning device is maintained and that repeated use does not add to the bio-burden of the area being cleaned.

(viii) Supplies and equipment removed from shipping cartons must be wiped with a disinfecting agent, such as sterile IPA. After the disinfectant is sprayed or wiped on a surface to be disinfected, the disinfectant shall be allowed to dry, during which time the item shall not be used for compounding purposes. However, if sterile supplies are received in sealed pouches, the pouches may be removed as the supplies are introduced into the ISO Class 5 area without the need to disinfect the individual sterile supply items. No shipping or other external cartons may be taken into the buffer area or segregated compounding area.

(ix) Storage shelving emptied of all supplies, walls, and ceilings are cleaned and disinfected at planned intervals, monthly, if not more frequently.

(x) Cleaning must be done by personnel trained in appropriate cleaning techniques.

(xi) Proper documentation and frequency of cleaning must be maintained and shall contain the following:

(I) date and time of cleaning;

(II) type of cleaning performed; and

(III) name of individual who performed the cleaning.

(F) Security requirements. The pharmacist-in-charge may authorize personnel to gain access to that area of the pharmacy containing dispensed sterile preparations, in the absence of the pharmacist, for the purpose of retrieving dispensed prescriptions to deliver to patients. If the pharmacy allows such after-hours access, the area containing the dispensed sterile preparations shall be an enclosed and lockable area separate from the area containing undispensed prescription drugs. A list of the authorized personnel having such access shall be in the pharmacy's policy and procedure manual.

(G) Storage requirements and beyond-use dating.

(i) Storage requirements. All drugs shall be stored at the proper temperature and conditions, as defined in the USP/NF and in §291.15 of this title (relating to Storage of Drugs).

(ii) Beyond-use dating.
(I) Beyond-use dates for compounded sterile preparations shall be assigned based on professional experience, which shall include careful interpretation of appropriate information sources for the same or similar formulations.

(II) Beyond-use dates for compounded sterile preparations that are prepared strictly in accordance with manufacturers' product labeling must be those specified in that labeling, or from appropriate literature sources or direct testing.

(III) Beyond-use dates for compounded sterile preparations that lack justification from either appropriate literature sources or by direct testing evidence shall be assigned as described in Chapter 795, in Stability Criteria and Beyond-Use Dating under Pharmaceutical Compounding-Nonsterile Preparations of the USP/NF.

(IV) When assigning a beyond-use date, compounding personnel shall consult and apply drug-specific and general stability documentation and literature where available, and they should consider the nature of the drug and its degradation mechanism, the container in which it is packaged, the expected storage conditions, and the intended duration of therapy.

(V) The sterility and storage and stability beyond-use date for attached and activated container pairs of drug products for intravascular administration shall be applied as indicated by the manufacturer.

(7) Equipment and supplies. Pharmacies compounding sterile preparations shall have the following equipment and supplies:

(A) a calibrated system or device (i.e., thermometer) to monitor the temperature to ensure that proper storage requirements are met, if sterile preparations are stored in the refrigerator;

(B) a calibrated system or device to monitor the temperature where bulk chemicals are stored;

(C) a temperature-sensing mechanism suitably placed in the controlled temperature storage space to reflect accurately the true temperature;

(D) if applicable, a Class A prescription balance, or analytical balance and weights. Such balance shall be properly maintained and subject to periodic inspection by the Texas State Board of Pharmacy;

(E) equipment and utensils necessary for the proper compounding of sterile preparations. Such equipment and utensils used in the compounding process shall be:

(i) of appropriate design, appropriate capacity, and be operated within designed operational limits;

(ii) of suitable composition so that surfaces that contact components, in-process material, or drug products shall not be reactive, additive, or absorptive so as to alter the safety, identity, strength, quality, or purity of the drug preparation beyond the desired result;

(iii) cleaned and sanitized immediately prior to and after each use; and
(iv) routinely inspected, calibrated (if necessary), or checked to ensure proper performance;

(F) appropriate disposal containers for used needles, syringes, etc., and if applicable, hazardous waste from the preparation of hazardous drugs and/or biohazardous waste;

(G) appropriate packaging or delivery containers to maintain proper storage conditions for sterile preparations;

(H) infusion devices, if applicable; and

(I) all necessary supplies, including:

(i) disposable needles, syringes, and other supplies for aseptic mixing;

(ii) disinfectant cleaning solutions;

(iii) hand washing agents with bactericidal action;

(iv) disposable, lint free towels or wipes;

(v) appropriate filters and filtration equipment;

(vi) hazardous spill kits, if applicable; and

(vii) masks, caps, coveralls or gowns with tight cuffs, shoe covers, and gloves, as applicable.

(8) Labeling.

(A) Prescription drug or medication orders. In addition to the labeling requirements for the pharmacy’s specific license classification, the label dispensed or distributed pursuant to a prescription drug or medication order shall contain the following:

(i) the generic name(s) or the official name(s) of the principal active ingredient(s) of the compounded sterile preparation;

(ii) for outpatient prescription orders other than sterile radiopharmaceuticals [only], a statement that the compounded sterile preparation has been compounded by the pharmacy. (An auxiliary label may be used on the container to meet this requirement);

(iii) a beyond-use date. The beyond-use date shall be determined as outlined in Chapter 797, Pharmacy Compounding--Sterile Preparations of the USP/NF, and paragraph (7)(G) of this subsection;

(B) Batch. If the sterile preparation is compounded in a batch, the following shall also be included on the batch label:

(i) unique lot number assigned to the batch;

(ii) quantity;
(iii) appropriate ancillary instructions, such as storage instructions or cautionary statements, including hazardous drug warning labels where appropriate; and

(iv) device-specific instructions, where appropriate.

(C) Pharmacy bulk package. The label of a pharmacy bulk package shall:

(i) state prominently "Pharmacy Bulk Package--Not for Direct Infusion;"

(ii) contain or refer to information on proper techniques to help ensure safe use of the preparation; and

(iii) bear a statement limiting the time frame in which the container may be used once it has been entered, provided it is held under the labeled storage conditions.

(9) Written drug information for prescription drug orders only. Written information about the compounded preparation or its major active ingredient(s) shall be given to the patient at the time of dispensing a prescription drug order. A statement which indicates that the preparation was compounded by the pharmacy must be included in this written information. If there is no written information available, the patient shall be advised that the drug has been compounded and how to contact a pharmacist, and if appropriate, the prescriber, concerning the drug. This paragraph does not apply to the preparation of radiopharmaceuticals.

(10) Pharmaceutical Care Services. In addition to the pharmaceutical care requirements for the pharmacy's specific license classification, the following requirements for sterile preparations compounded pursuant to prescription drug orders must be met. This paragraph does not apply to the preparation of radiopharmaceuticals.

(A) Primary provider. There shall be a designated physician primarily responsible for the patient's medical care. There shall be a clear understanding between the physician, the patient, and the pharmacy of the responsibilities of each in the areas of the delivery of care, and the monitoring of the patient. This shall be documented in the patient medication record (PMR).

(B) Patient training. The pharmacist-in-charge shall develop policies to ensure that the patient and/or patient's caregiver receives information regarding drugs and their safe and appropriate use, including instruction when applicable, regarding:

(i) appropriate disposition of hazardous solutions and ancillary supplies;

(ii) proper disposition of controlled substances in the home;

(iii) self-administration of drugs, where appropriate;

(iv) emergency procedures, including how to contact an appropriate individual in the event of problems or emergencies related to drug therapy; and

(v) if the patient or patient's caregiver prepares sterile preparations in the home, the following additional information shall be provided:
(I) safeguards against microbial contamination, including aseptic techniques for compounding intravenous admixtures and aseptic techniques for injecting additives to premixed intravenous solutions;

(II) appropriate storage methods, including storage durations for sterile pharmaceuticals and expirations of self-mixed solutions;

(III) handling and disposition of premixed and self-mixed intravenous admixtures; and

(IV) proper disposition of intravenous admixture compounding supplies such as syringes, vials, ampules, and intravenous solution containers.

(C) Pharmacist-patient relationship. It is imperative that a pharmacist-patient relationship be established and maintained throughout the patient's course of therapy. This shall be documented in the patient's medication record (PMR).

(D) Patient monitoring. The pharmacist-in-charge shall develop policies to ensure that:

(i) the patient's response to drug therapy is monitored and conveyed to the appropriate health care provider;

(ii) the first dose of any new drug therapy is administered in the presence of an individual qualified to monitor for and respond to adverse drug reactions; and

(iii) reports of adverse events with a compounded sterile preparation are reviewed promptly and thoroughly to correct and prevent future occurrences.

(11) Drugs, components, and materials used in sterile compounding.

(A) Drugs used in sterile compounding shall be a USP/NF grade substances manufactured in an FDA-registered facility.

(B) If USP/NF grade substances are not available shall be of a chemical grade in one of the following categories:

(i) Chemically Pure (CP);

(ii) Analytical Reagent (AR);

(iii) American Chemical Society (ACS); or

(iv) Food Chemical Codex.

(C) If a drug, component or material is not purchased from a FDA-registered facility, the pharmacist shall establish purity and stability by obtaining a Certificate of Analysis from the supplier and the pharmacist shall compare the monograph of drugs in a similar class to the Certificate of Analysis.

(D) All components shall:

(i) be manufactured in an FDA-registered facility; or
(ii) in the professional judgment of the pharmacist, be of high quality and obtained from acceptable and reliable alternative sources; and

(iii) stored in properly labeled containers in a clean, dry area, under proper temperatures.

(E) Drug preparation containers and closures shall not be reactive, additive, or absorptive so as to alter the safety, identity, strength, quality, or purity of the compounded drug preparation beyond the desired result.

(F) Components, drug preparation containers, and closures shall be rotated so that the oldest stock is used first.

(G) Container closure systems shall provide adequate protection against foreseeable external factors in storage and use that can cause deterioration or contamination of the compounded drug preparation.

(H) A pharmacy may not compound a preparation that contains ingredients appearing on a federal Food and Drug Administration list of drug products withdrawn or removed from the market for safety reasons.

(12) Compounding process.

(A) Standard operating procedures (SOPs). All significant procedures performed in the compounding area shall be covered by written SOPs designed to ensure accountability, accuracy, quality, safety, and uniformity in the compounding process. At a minimum, SOPs shall be developed and implemented for:

(i) the facility;

(ii) equipment;

(iii) personnel;

(iv) preparation evaluation;

(v) quality assurance;

(vi) preparation recall;

(vii) packaging; and

(viii) storage of compounded sterile preparations.

(B) USP/NF. Any compounded formulation with an official monograph in the USP/NF shall be compounded, labeled, and packaged in conformity with the USP/NF monograph for the drug.

(C) Personnel Cleansing and Garbing.

(i) Any person with an apparent illness or open lesion, including rashes, sunburn, weeping sores, conjunctivitis, and active respiratory infection, that may adversely affect the safety or
quality of a drug preparation being compounded shall be excluded from working in ISO Class 5, [and] ISO Class 7, and ISO Class 8 compounding areas until the condition is remedied.

(ii) Before entering the buffer area, compounding personnel must remove the following:

(I) personal outer garments (e.g., bandanas, coats, hats, jackets, scarves, sweaters, vests);

(II) all cosmetics, because they shed flakes and particles; and

(III) all hand, wrist, and other body jewelry or piercings (e.g., earrings, lip or eyebrow piercings) that can interfere with the effectiveness of personal protective equipment (e.g., fit of gloves and cuffs of sleeves).

(iii) The wearing of artificial nails or extenders is prohibited while working in the sterile compounding environment. Natural nails shall be kept neat and trimmed.

(iv) Personnel shall don personal protective equipment and perform hand hygiene in an order that proceeds from the dirtiest to the cleanest activities as follows:

(I) Activities considered the dirtiest include donning of dedicated shoes or shoe covers, head and facial hair covers (e.g., beard covers in addition to face masks), and face mask/eye shield. Eye shields are optional unless working with irritants like germicidal disinfecting agents or when preparing hazardous drugs.

(II) After donning dedicated shoes or shoe covers, head and facial hair covers, and face masks, personnel shall perform a hand hygiene procedure by removing debris from underneath fingernails using a nail cleaner under running warm water followed by vigorous hand washing. Personnel shall begin washing arms at the hands and continue washing to elbows for at least 30 seconds with either a plain (non-antimicrobial) soap, or antimicrobial soap, and water while in the ante-area. Hands and forearms to the elbows shall be completely dried using lint-free disposable towels, an electronic hands-free hand dryer, or a HEPA filtered hands dryer.

(III) After completion of hand washing, personnel shall don clean non-shedding gowns with sleeves that fit snugly around the wrists and enclosed at the neck.

(IV) Once inside the buffer area or segregated compounding area, and prior to donning sterile powder-free gloves, antiseptic hand cleansing shall be performed using a waterless alcohol-based surgical hand scrub with persistent activity following manufacturers' recommendations. Hands shall be allowed to dry thoroughly before donning sterile gloves.

(V) Sterile gloves that form a continuous barrier with the gown shall be the last item donned before compounding begins. Routine application of sterile 70% IPA shall occur throughout the compounding day and whenever nonsterile surfaces are touched.

(v) When compounding personnel shall temporarily exit the buffer area [ISO Class 7 environment] during a work shift, the exterior gown, if not visibly soiled, may be removed and retained in the [ISO Class 8] ante-area, to be re-donned during that same work shift only. However, shoe covers, hair and facial hair covers, face mask/eye shield, and gloves shall be replaced with new ones before re-entering the buffer area [ISO Class 7 clean environment] along with performing proper hand hygiene.
(vi) During high-risk compounding activities that precede terminal sterilization, such as weighing and mixing of non-sterile ingredients, compounding personnel shall be garbed and gloved the same as when performing compounding in an ISO Class 5 environment. Properly garbed and gloved compounding personnel who are exposed to air quality that is either known or suspected to be worse than ISO Class 7 shall re-garb personal protective equipment along with washing their hands properly, performing antiseptic hand cleansing with a waterless alcohol-based surgical hand scrub, and donning sterile gloves upon re-entering the ISO Class 7 buffer area.

(vii) When compounding aseptic isolators or compounding aseptic containment isolators are the source of the ISO Class 5 environment, the compounding personnel should follow the requirements as specified in this subparagraph, unless the isolator manufacturer can provide written documentation based on validated environmental testing that any components of personal protective equipment or cleansing are not required.

(13) Quality Assurance.

(A) Initial Formula Validation. Prior to routine compounding of a sterile preparation, a pharmacy shall conduct an evaluation that shows that the pharmacy is capable of compounding a preparation that is sterile and that contains the stated amount of active ingredient(s).

(i) Low risk preparations.

(I) Quality assurance practices include, but are not limited to the following:

(-a-) Routine disinfection and air quality testing of the direct compounding environment to minimize microbial surface contamination and maintain ISO Class 5 air quality.

(-b-) Visual confirmation that compounding personnel are properly donning and wearing appropriate items and types of protective garments and goggles.

(-c-) Review of all orders and packages of ingredients to ensure that the correct identity and amounts of ingredients were compounded.

(-d-) Visual inspection of compounded sterile preparations, except for sterile radiopharmaceuticals, to ensure the absence of particulate matter in solutions, the absence of leakage from vials and bags, and the accuracy and thoroughness of labeling.

(II) Example of a Media-Fill Test Procedure. This, or an equivalent test, is performed at least annually by each person authorized to compound in a low-risk level under conditions that closely simulate the most challenging or stressful conditions encountered during compounding of low-risk level sterile preparations. Once begun, this test is completed without interruption within an ISO Class 5 air quality environment. Three sets of four 5-milliliter aliquots of sterile Soybean-Casein Digest Medium are transferred with the same sterile 10-milliliter syringe and vented needle combination into separate sealed, empty, sterile 30-milliliter clear vials (i.e., four 5-milliliter aliquots into each of three 30-milliliter vials). Sterile adhesive seals are aseptically affixed to the rubber closures on the three filled vials. The vials are incubated within a range of 20 - 35 degrees Celsius for a minimum of 14 days. Failure is indicated by visible turbidity in the medium on or before 14 days. The media-fill test must include a positive-control sample.
(ii) Medium risk preparations.

(I) Quality assurance procedures for medium-risk level compounded sterile preparations include all those for low-risk level compounded sterile preparations, as well as a more challenging media-fill test passed annually, or more frequently.

(II) Example of a Media-Fill Test Procedure. This, or an equivalent test, is performed at least annually under conditions that closely simulate the most challenging or stressful conditions encountered during compounding. This test is completed without interruption within an ISO Class 5 air quality environment. Six 100-milliliter aliquots of sterile Soybean-Casein Digest Medium are aseptically transferred by gravity through separate tubing sets into separate evacuated sterile containers. The six containers are then arranged as three pairs, and a sterile 10-milliliter syringe and 18-gauge needle combination is used to exchange two 5-milliliter aliquots of medium from one container to the other container in the pair. For example, after a 5-milliliter aliquot from the first container is added to the second container in the pair, the second container is agitated for 10 seconds, then a 5-milliliter aliquot is removed and returned to the first container in the pair. The first container is then agitated for 10 seconds, and the next 5-milliliter aliquot is transferred from it back to the second container in the pair. Following the two 5-milliliter aliquot exchanges in each pair of containers, a 5-milliliter aliquot of medium from each container is aseptically injected into a sealed, empty, sterile 10-milliliter clear vial, using a sterile 10-milliliter syringe and vented needle. Sterile adhesive seals are aseptically affixed to the rubber closures on the three filled vials. The vials are incubated within a range of 20 - 35 degrees Celsius for a minimum of 14 days. Failure is indicated by visible turbidity in the medium on or before 14 days. The media-fill test must include a positive-control sample.

(iii) High risk preparations.

(I) Procedures for high-risk level compounded sterile preparations include all those for low-risk level compounded sterile preparations. In addition, a media-fill test that represents high-risk level compounding is performed twice a year by each person authorized to compound high-risk level compounded sterile preparations.

(II) Example of a Media-Fill Test Procedure Compounded Sterile Preparations Sterilized by Filtration. This test, or an equivalent test, is performed under conditions that closely simulate the most challenging or stressful conditions encountered when compounding high-risk level compounded sterile preparations. Note: Sterility tests for autoclaved compounded sterile preparations are not required unless they are prepared in batches of more than 25 units. This test is completed without interruption in the following sequence:

(-a-) Dissolve 3 grams of nonsterile commercially available Soybean-Casein Digest Medium in 100 milliliters of non-bacteriostatic water to make a 3% nonsterile solution.

(-b-) Draw 25 milliliters of the medium into each of three 30-milliliter sterile syringes. Transfer 5 milliliters from each syringe into separate sterile 10-milliliter vials. These vials are the positive controls to generate exponential microbial growth, which is indicated by visible turbidity upon incubation.

(-c-) Under aseptic conditions and using aseptic techniques, affix a sterile 0.2-micron porosity filter unit and a 20-gauge needle to each syringe. Inject the next 10 milliliters from each syringe into three separate 10-milliliter sterile vials. Repeat the process for three more vials. Label all vials, affix sterile adhesive seals to the closure of the nine vials, and incubate them at...
20 to 35 degrees Celsius for a minimum of 14 days. Inspect for microbial growth over 14 days as described in Chapter 797 Pharmaceutical Compounding--Sterile Preparations, of the USP/NF.

(B) Finished preparation release checks and tests.

(i) All high-risk level compounded sterile preparations that are prepared in groups of more than 25 identical individual single-dose packages (such as ampuls, bags, syringes, and vials), or in multiple dose vials for administration to multiple patients, or are exposed longer than 12 hours at 2 - 8 degrees Celsius and longer than six hours at warmer than 8 degrees Celsius before they are sterilized shall be tested to ensure they are sterile and do not contain excessive bacterial endotoxins as specified in Chapter 71, Sterility Tests of the USP/NF before being dispensed or administered.

(ii) All compounded sterile preparations, except for sterile radiopharmaceuticals, that are intended to be solutions must be visually examined for the presence of particulate matter and not administered or dispensed when such matter is observed.

(iii) The prescription drug and medication orders, written compounding procedure, preparation records, and expended materials used to make compounded sterile preparations at all contamination risk levels shall be inspected for accuracy of correct identities and amounts of ingredients, aseptic mixing and sterilization, packaging, labeling, and expected physical appearance before they are dispensed or administered.

(C) Viable and nonviable environmental sampling testing. Environmental sampling shall occur, at a minimum, every six months as part of a comprehensive quality management program and under any of the following conditions:

(i) as part of the commissioning and certification of new facilities and equipment;

(ii) following any servicing of facilities and equipment;

(iii) as part of the re-certification of facilities and equipment;

(iv) in response to identified problems with end products or staff technique; or

(v) in response to issues with compounded sterile preparations, observed compounding personnel work practices, or patient-related infections (where the compounded sterile preparation is being considered as a potential source of the infection).

(D) Total particle counts. Certification that each ISO classified area (e.g., ISO Class 5, 7, and 8), is within established guidelines shall be performed no less than every six months and whenever the equipment is relocated or the physical structure of the buffer area or ante-area has been altered. All certification records shall be maintained and reviewed to ensure that the controlled environments comply with the proper air cleanliness, room pressures, and air changes per hour. Testing shall be performed by qualified operators using current, state-of-the-art equipment, with results of the following:

(i) ISO Class 5 - not more than 3520 particles 0.5 μm and larger size per cubic meter of air;
(ii) ISO Class 7 - not more than 352,000 particles of 0.5 μm and larger size per cubic meter of air for any buffer area; and

(iii) ISO Class 8 - not more than 3,520,000 particles of 0.5 μm and larger size per cubic meter of air for any ante-area.

(E) Pressure differential monitoring. A pressure gauge or velocity meter shall be installed to monitor the pressure differential or airflow between the buffer area and the ante-area and between the ante-area and the general environment outside the compounding area. The results shall be reviewed and documented on a log at least every work shift (minimum frequency shall be at least daily) or by a continuous recording device. The pressure between the ISO Class 7 or ISO Class 8 and the general pharmacy area shall not be less than 0.02 inch water column.

(F) Sampling plan. An appropriate environmental sampling plan shall be developed for airborne viable particles based on a risk assessment of compounding activities performed. Selected sampling sites shall include locations within each ISO Class 5 environment and in the ISO Class 7 and 8 areas and in the segregated compounding areas at greatest risk of contamination. The plan shall include sample location, method of collection, frequency of sampling, volume of air sampled, and time of day as related to activity in the compounding area and action levels.

(G) Viable air sampling. Evaluation of airborne microorganisms using volumetric collection methods in the controlled air environments shall be performed by properly trained individuals for all compounding risk levels. For low-, medium-, and high-risk level compounding, air sampling shall be performed at locations that are prone to contamination during compounding activities and during other activities such as staging, labeling, gowning, and cleaning. Locations shall include zones of air backwash turbulence within the laminar airflow workbench and other areas where air backwash turbulence may enter the compounding area. For low-risk level compounded sterile preparations within 12-hour or less beyond-use-date prepared in a primary engineering control that maintains an ISO Class 5, air sampling shall be performed at locations inside the ISO Class 5 environment and other areas that are in close proximity to the ISO Class 5 environment during the certification of the primary engineering control.

(H) Air sampling frequency and process. Air sampling shall be performed at least every 6 months as a part of the re-certification of facilities and equipment. A sufficient volume of air shall be sampled and the manufacturer's guidelines for use of the electronic air sampling equipment followed. At the end of the designated sampling or exposure period for air sampling activities, the microbial growth media plates are recovered and their covers secured and they are inverted and incubated at a temperature and for a time period conducive to multiplication of microorganisms. Sampling data shall be collected and reviewed on a periodic basis as a means of evaluating the overall control of the compounding environment. If an activity consistently shows elevated levels of microbial growth, competent microbiology personnel shall be consulted.

(I) Compounding accuracy checks. Written procedures for double-checking compounding accuracy shall be followed for every compounded sterile preparation during preparation and immediately prior to release, including label accuracy and the accuracy of the addition of all drug products or ingredients used to prepare the finished preparation and their volumes or quantities. At each step of the compounding process, the pharmacist shall ensure that components used in compounding are accurately weighed, measured, or subdivided as appropriate to conform to the formula being prepared.
(14) Quality control.

(A) Quality control procedures. The pharmacy shall follow established quality control procedures to monitor the compounding environment and quality of compounded drug preparations for conformity with the quality indicators established for the preparation. When developing these procedures, pharmacy personnel shall consider the provisions of USP Chapter 71, Sterility Tests, USP Chapter 85, Bacterial Endotoxins Test, Pharmaceutical Compounding-Nonsterile Preparations, USP Chapter 795, USP Chapter 797, Pharmaceutical Compounding--Sterile Preparations, Chapter 800, Hazardous Drugs—Handling in Healthcare Settings, Chapter 823, Positron Emission Tomography Drugs for Compounding, Investigational, and Research Uses, Chapter 1075, Good Compounding Practices, and Chapter 1160, Pharmaceutical Calculations in Prescription Compounding, and USP Chapter 1163, Quality Assurance in Pharmaceutical Compounding of the current USP/NF. Such procedures shall be documented and be available for inspection.

(B) Verification of compounding accuracy and sterility.

(i) The accuracy of identities, concentrations, amounts, and purities of ingredients in compounded sterile preparations shall be confirmed by reviewing labels on packages, observing and documenting correct measurements with approved and correctly standardized devices, and reviewing information in labeling and certificates of analysis provided by suppliers.

(ii) If the correct identity, purity, strength, and sterility of ingredients and components of compounded sterile preparations cannot be confirmed such ingredients and components shall be discarded immediately.

(iii) If individual ingredients, such as bulk drug substances, are not labeled with expiration dates, when the drug substances are stable indefinitely in their commercial packages under labeled storage conditions, such ingredients may gain or lose moisture during storage and use and shall require testing to determine the correct amount to weigh for accurate content of active chemical moieties in compounded sterile preparations.

(e) Records. Any testing, cleaning, procedures, or other activities required in this subsection shall be documented and such documentation shall be maintained by the pharmacy.

(1) Maintenance of records. Every record required under this section must be:

(A) kept by the pharmacy and be available, for at least two years for inspecting and copying by the board or its representative and to other authorized local, state, or federal law enforcement agencies; and

(B) supplied by the pharmacy within 72 hours, if requested by an authorized agent of the Texas State Board of Pharmacy. If the pharmacy maintains the records in an electronic format, the requested records must be provided in an electronic format. Failure to provide the records set out in this section, either on site or within 72 hours, constitutes prima facie evidence of failure to keep and maintain records in violation of the Act.

(2) Compounding records.
(A) Compounding pursuant to patient specific prescription drug orders. Compounding records for all compounded preparations shall be maintained by the pharmacy electronically or manually as part of the prescription drug or medication order, formula record, formula book, or compounding log and shall include:

(i) the date of preparation;

(ii) a complete formula, including methodology and necessary equipment which includes the brand name(s) of the raw materials, or if no brand name, the generic name(s) or official name and name(s) of the manufacturer(s) or distributor of the raw materials and the quantities of each;

(iii) signature or initials of the pharmacist or pharmacy technician or pharmacy technician trainee performing the compounding;

(iv) signature or initials of the pharmacist responsible for supervising pharmacy technicians or pharmacy technician trainees and conducting in-process and finals checks of compounded pharmaceuticals if pharmacy technicians or pharmacy technician trainees perform the compounding function;

(v) the quantity in units of finished preparation or amount of raw materials;

(vi) the container used and the number of units prepared; and

(vii) a reference to the location of the following documentation which may be maintained with other records, such as quality control records:

(I) the criteria used to determine the beyond-use date; and

(II) documentation of performance of quality control procedures.

(B) Compounding records when batch compounding or compounding in anticipation of future prescription drug or medication orders.

(i) Master work sheet. A master work sheet shall be developed and approved by a pharmacist for preparations prepared in batch. Once approved, a duplicate of the master work sheet shall be used as the preparation work sheet from which each batch is prepared and on which all documentation for that batch occurs. The master work sheet shall contain at a minimum:

(I) the formula;

(II) the components;

(III) the compounding directions;

(IV) a sample label;

(V) evaluation and testing requirements;

(VI) specific equipment used during preparation; and
(VII) storage requirements.

(ii) Preparation work sheet. The preparation work sheet for each batch of preparations shall document the following:

(I) identity of all solutions and ingredients and their corresponding amounts, concentrations, or volumes;

(II) lot number for each component;

(III) component manufacturer/distributor or suitable identifying number;

(IV) container specifications (e.g., syringe, pump cassette);

(V) unique lot or control number assigned to batch;

(VI) expiration date of batch-prepared preparations;

(VII) date of preparation;

(VIII) name, initials, or electronic signature of the person(s) involved in the preparation;

(IX) name, initials, or electronic signature of the responsible pharmacist;

(X) finished preparation evaluation and testing specifications, if applicable; and

(XI) comparison of actual yield to anticipated or theoretical yield, when appropriate.

(f) Office Use Compounding and Distribution of Sterile Compounded Preparations

(1) General.

(A) A pharmacy may compound, dispense, deliver, and distribute a compounded sterile preparation as specified in Subchapter D, Texas Pharmacy Act Chapter 562.

(B) A Class A-S pharmacy is not required to register or be licensed under Chapter 431, Health and Safety Code, to distribute sterile compounded preparations to a Class C or Class C-S pharmacy.

(C) A Class C-S pharmacy is not required to register or be licensed under Chapter 431, Health and Safety Code, to distribute sterile compounded preparations that the Class C-S pharmacy has compounded for other Class C or Class C-S pharmacies under common ownership.

(D) To compound and deliver a compounded preparation under this subsection, a pharmacy must:

(i) verify the source of the raw materials to be used in a compounded drug;
(ii) comply with applicable United States Pharmacopoeia guidelines, including the testing requirements, and the Health Insurance Portability and Accountability Act of 1996 (Pub. L. No. 104-191);

(iii) enter into a written agreement with a practitioner for the practitioner’s office use of a compounded preparation;

(iv) comply with all applicable competency and accrediting standards as determined by the board; and

(v) comply with the provisions of this subsection.

(E) This subsection does not apply to Class B pharmacies compounding sterile radiopharmaceuticals that are furnished for departmental or physicians’ use if such authorized users maintain a Texas radioactive materials license.

(2) Written Agreement. A pharmacy that provides sterile compounded preparations to practitioners for office use or to another pharmacy shall enter into a written agreement with the practitioner or pharmacy. The written agreement shall:

(A) address acceptable standards of practice for a compounding pharmacy and a practitioner and receiving pharmacy that enter into the agreement including a statement that the compounded drugs may only be administered to the patient and may not be dispensed to the patient or sold to any other person or entity except to a veterinarian as authorized by §563.054 of the Act;

(B) require the practitioner or receiving pharmacy to include on a patient’s chart, medication order or medication administration record the lot number and beyond-use date of a compounded preparation administered to a patient;

(C) describe the scope of services to be performed by the pharmacy and practitioner or receiving pharmacy, including a statement of the process for:

(i) a patient to report an adverse reaction or submit a complaint; and

(ii) the pharmacy to recall batches of compounded preparations.

(3) Recordkeeping.

(A) Maintenance of Records.

(i) Records of orders and distribution of sterile compounded preparations to a practitioner for office use or to an institutional pharmacy for administration to a patient shall:

(I) be kept by the pharmacy and be available, for at least two years from the date of the record, for inspecting and copying by the board or its representative and to other authorized local, state, or federal law enforcement agencies;

(II) maintained separately from the records of preparations dispensed pursuant to a prescription or medication order; and
(III) supplied by the pharmacy within 72 hours, if requested by an authorized agent of the Texas State Board of Pharmacy or its representative. If the pharmacy maintains the records in an electronic format, the requested records must be provided in an electronic format. Failure to provide the records set out in this subsection, either on site or within 72 hours for whatever reason, constitutes prima facie evidence of failure to keep and maintain records.

(ii) Records may be maintained in an alternative data retention system, such as a data processing system or direct imaging system provided the data processing system is capable of producing a hard copy of the record upon the request of the board, its representative, or other authorized local, state, or federal law enforcement or regulatory agencies.

(B) Orders. The pharmacy shall maintain a record of all sterile compounded preparations ordered by a practitioner for office use or by an institutional pharmacy for administration to a patient. The record shall include the following information:

(i) date of the order;

(ii) name, address, and phone number of the practitioner who ordered the preparation and if applicable, the name, address and phone number of the institutional pharmacy ordering the preparation; and

(iii) name, strength, and quantity of the preparation ordered.

(C) Distributions. The pharmacy shall maintain a record of all sterile compounded preparations distributed pursuant to an order to a practitioner for office use or by an institutional pharmacy for administration to a patient. The record shall include the following information:

(i) date the preparation was compounded;

(ii) date the preparation was distributed;

(iii) name, strength and quantity in each container of the preparation;

(iv) pharmacy’s lot number;

(v) quantity of containers shipped; and

(vi) name, address, and phone number of the practitioner or institutional pharmacy to whom the preparation is distributed.

(D) Audit Trail.

(i) The pharmacy shall store the order and distribution records of preparations for all sterile compounded preparations ordered by and or distributed to a practitioner for office use or by a pharmacy licensed to compound sterile preparations for administration to a patient in such a manner as to be able to provide an audit trail for all orders and distributions of any of the following during a specified time period:

(I) any strength and dosage form of a preparation (by either brand or generic name or both);
(II) any ingredient;

(III) any lot number;

(IV) any practitioner;

(V) any facility; and

(VI) any pharmacy, if applicable.

(ii) The audit trail shall contain the following information:

(I) date of order and date of the distribution;

(II) practitioner's name, address, and name of the institutional pharmacy, if applicable;

(III) name, strength and quantity of the preparation in each container of the preparation;

(IV) name and quantity of each active ingredient;

(V) quantity of containers distributed; and

(VI) pharmacy's lot number.

(4) Labeling. The pharmacy shall affix a label to the preparation containing the following information:

(A) name, address, and phone number of the compounding pharmacy;

(B) the statement: "For Institutional or Office Use Only--Not for Resale"; or if the preparation is distributed to a veterinarian the statement: "Compounded Preparation";

(C) name and strength of the preparation or list of the active ingredients and strengths;

(D) pharmacy's lot number;

(E) beyond-use date as determined by the pharmacist using appropriate documented criteria;

(F) quantity or amount in the container;

(G) appropriate ancillary instructions, such as storage instructions or cautionary statements, including hazardous drug warning labels where appropriate; and

(H) device-specific instructions, where appropriate.

(g) Recall Procedures.

(1) The pharmacy shall have written procedures for the recall of any compounded sterile preparation provided to a patient, to a practitioner for office use, or a pharmacy for administration. Written procedures shall include, but not be limited to the requirements as specified in paragraph (3) of this subsection.
(2) The pharmacy shall immediately initiate a recall of any sterile preparation compounded by the pharmacy upon identification of a potential or confirmed harm to a patient.

(3) In the event of a recall, the pharmacist-in-charge shall ensure that:

(A) each practitioner, facility, and/or pharmacy to which the preparation was distributed is notified, in writing, of the recall;

(B) each patient to whom the preparation was dispensed is notified, in writing, of the recall;

(C) the board is notified of the recall, in writing, not later than 24 hours after the recall is issued;

(D) if the preparation is distributed for office use, the Texas Department of State Health Services, Drugs and Medical Devices Group, is notified of the recall, in writing;

(E) the preparation is quarantined; and

(F) the pharmacy keeps a written record of the recall including all actions taken to notify all parties and steps taken to ensure corrective measures.

(4) If a pharmacy fails to initiate a recall, the board may require a pharmacy to initiate a recall if there is potential for or confirmed harm to a patient.

(5) A pharmacy that compounds sterile preparations shall notify the board immediately of any adverse effects reported to the pharmacy or that are known by the pharmacy to be potentially attributable to a sterile preparation compounded by the pharmacy. The agency certifies that legal counsel has reviewed the proposal and found it to be within the state agency's legal authority to adopt.