

## NON-HAZARDOUS STERILE PREPARATION ASSESSMENT CRITERIA

The following chart outlines the community and hospital operations assessment criteria that are used by Operations Advisors (Community (COAs) and Hospital (HOAs)) when conducting an assessment of non-hazardous sterile preparations. This document is divided into sections which have been taken from relevant legislation, policies, guidelines or standards of practice. The guidance section illustrates specific insights or activities required to ensure adherence to the standard and is provided to assist practitioners in understanding expectations and preparing for the assessment.

*If you have received notice of an upcoming assessment, complete this document and have it ready to share with your COA or HOA when they visit. Ensure all staff members are aware of where the completed form is located should you not be present on the date of the visit. For each standard, check the guidance that your organization or pharmacy has in place and work on achieving the remaining criteria prior to the visit. Educational/ Informational resources are also listed in the Guidance Column to assist you in preparing for your upcoming assessment or to ensure that your organization or pharmacy is up to standard.*

NON-HAZARDOUS STERILE PREPARATIONS	
CORE REQUIREMENTS - PERSONNEL	
STANDARD	GUIDANCE
The pharmacy manager or pharmacy department head is responsible for developing, organizing, and supervising all activities related to pharmacy compounding of non-hazardous sterile preparations.	<input type="checkbox"/> The pharmacy manager or pharmacy department head must be responsible for developing, organizing and supervising all activities related to pharmacy compounding of non-hazardous sterile preparations.
	<input type="checkbox"/> The pharmacy manager or pharmacy department head must be familiar with the relevant NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.
	<input type="checkbox"/> Where compounding is undertaken for another pharmacy, the dispensing facility should include in its general procedures manual information about policies and procedures for acquiring compounded sterile preparations for patients.
	<input type="checkbox"/> The pharmacy must have a process in place to ensure when dispensing a prescriber's order for office use that a valid patient-healthcare professional relationship exists.
	<input type="checkbox"/> When dispensing a prescriber's order for office use, the pharmacy must have a process in place to ensure the preparation of a compounded product at an appropriate scale, time and frequency.
	<input type="checkbox"/> Pharmacy staff should review the Policy on Manufacturing and Compounding Drug Products in Canada (POL-0051) on the Health Canada website.
The sterile compounding supervisor develops, organizes and oversees all activities related to the compounding of non-hazardous sterile preparations.	<input type="checkbox"/> There must be a sterile compounding supervisor designated to supervise activities related to the compounding of nonhazardous sterile preparations. This person works with the pharmacy manager or pharmacy department head and with the compounding personnel.

	<p><input type="checkbox"/> The sterile compounding supervisor must have successfully completed training (i.e., courses) in the compounding of nonhazardous sterile preparations, maintained up-to-date knowledge and demonstrated the required competencies.</p> <p><input type="checkbox"/> The sterile compounding supervisor must be evaluated for knowledge and abilities, at the same frequency as compounding personnel, by a third party (an evaluator with expertise in the compounding of non-hazardous sterile preparations, at arm's length from the facility/pharmacy and free of any real or perceived conflict of interest with the individual being evaluated).</p> <p><input type="checkbox"/> The sterile compounding supervisor must ensure that all policies and procedures are in place and readily accessible to staff. Policies and procedures must be reviewed at least every 3 years or when there is a change in standards.</p> <p><input type="checkbox"/> The sterile compounding supervisor must be responsible for the training of and competency assessment program for all employees involved in the compounding of sterile preparations.</p> <p><input type="checkbox"/> The sterile compounding supervisor must ensure the cleaning and disinfecting personnel understand and follow the training and work procedures created in collaboration with the head of environmental services and the head of infection prevention and control. Only trained and qualified cleaning and disinfecting personnel may be allowed to clean controlled areas.</p> <p><input type="checkbox"/> The sterile compounding supervisor must ensure the competency of the certifier and the personnel chosen to conduct the sampling, and that the certification is performed in accordance with the most recent certification standards.</p> <p><input type="checkbox"/> The sterile compounding supervisor must analyze the data obtained via air sampling, surface sampling or GFS and the trends observed with respect to the microbial load. If necessary, the sterile compounding supervisor should consult a microbiologist or infectious diseases specialist.</p>
<p>The compounding pharmacist or pharmacy technician must be responsible for ensuring that all standards of practice associated with dispensing the preparation have been met before dispensing or releasing a preparation to the patient. A pharmacist must complete an assessment of therapeutic appropriateness, patient consultation and education, documentation and other patient care activities.</p>	<p><input type="checkbox"/> The compounding pharmacist or pharmacy technician must be responsible for ensuring that there is a compounding procedure/worksheet that is complete and has calculations and measurements for each preparation produced.</p> <p><input type="checkbox"/> The compounding pharmacist or pharmacy technician must be responsible for enforcing/ensuring compliance with required rules relating to asepsis, hygiene, cleanliness and safety.</p> <p><input type="checkbox"/> The compounding pharmacist or pharmacy technician must be responsible for ensuring application and compliance with existing compounding procedures and to follow the compounding process defined in the compounding protocol.</p> <p><input type="checkbox"/> The compounding pharmacist or pharmacy technician must be responsible for ensuring verification is performed during the various stages of compounding. All required verification and quality control measures must ensure the quality, sterility and verification of the final preparation.</p>
<p>All compounding personnel have received specific training and completed a competency assessment program in the workplace.</p>	<p><input type="checkbox"/> The initial training and assessment program for compounding personnel must have the following components: reading and understanding the policies and procedures related to compounded sterile preparations; theoretical training, with assessment covering various topics; individualized practical training and assessment in the workplace clean room; assessment of aseptic techniques, based on gloved fingertip sampling (GFS) and a media fill test, for the various types of sterile preparations to be compounded.</p>

	<input type="checkbox"/> A competency assessment program for all compounding personnel must be implemented in the workplace. This program must include the following: a theoretical test measuring required knowledge of policies and procedures, the aseptic compounding process, and accidental exposure and spills; a practical test in the workplace clean room (including GFS and a media fill test, with simulations involving a sterile product) to evaluate compliance with operating procedures and knowledge of aseptic compounding processes.
	<input type="checkbox"/> Personnel must pass GFS and a media fill test before working in the compounding area for sterile products.
	<input type="checkbox"/> Any other person who enters the sterile compounding area or who is involved in sterile compounding processes must be adequately trained and comply with specific policies and procedures.
	<input type="checkbox"/> All personnel assigned to the compounding of sterile preparations must undergo assessment at the following frequencies: at least once a year in the workplace for preparations with low or medium risk level; at least twice a year in the workplace for preparations with high risk level.
	<input type="checkbox"/> A pharmacist, whose activities are limited to supervising a pharmacy technician or pharmacy assistant during the compounding of sterile preparations, must possess a good understanding of the policies and procedures related to sterile compounding and demonstrate the ability to determine whether the compounding personnel are compliant with aseptic process. They must pass the practical section of the training program regarding assessment of the aseptic compounding process, the media fill test and GFS, if there is a possibility that this pharmacist will compound sterile preparations on an occasional basis.
All cleaning and disinfecting personnel have received initial training and completed a competency assessment program in the workplace.	<input type="checkbox"/> The initial training and assessment program for cleaning and disinfecting personnel must have the following components: theoretical training and assessment covering the issues and particularities of cleaning and disinfecting the premises and equipment used for compounding sterile preparations; practical training and assessment in the areas reserved for the compounding of sterile preparations.
	<input type="checkbox"/> A competency assessment program for cleaning and disinfecting personnel must be implemented in the workplace.

<b>PERSONNEL INVOLVED IN ASEPTIC COMPOUNDING</b>	
<b>STANDARD</b>	<b>GUIDANCE</b>
There is a quality assurance program in place that addresses the personnel involved in aseptic compounding.	<input type="checkbox"/> The quality assurance program for the aseptic compounding process for personnel must include GFS and a media fill test, must be performed under real compounding conditions and must represent the most complex preparation according to the microbiological risk.
There is a quality assurance program in place that addresses the content of the program itself, the results & actions taken, the product preparation process and documentation.	<input type="checkbox"/> The sterile compounding supervisor must establish a quality assurance program to ensure the clear definition, application and verification of all activities that will affect the quality of compounded sterile preparations and the protection of personnel. In addition, must also ensure that sterile preparations are compounded in compliance with established procedures.

	<p><input type="checkbox"/> The quality assurance program must have four components;</p> <ol style="list-style-type: none"> <li>1) verification of equipment, including the PEC,</li> <li>2) verification of controlled areas (clean room and anteroom),</li> <li>3) verification of aseptic compounding processes,</li> <li>4) verification of final preparations. Each component of the quality assurance program and its activities must be documented.</li> </ol> <p>For each of the specified components, the sterile compounding supervisor must establish a verification process, the results of which are assigned one of three levels;</p> <ol style="list-style-type: none"> <li>1) Compliance (no action required): mandatory specifications have been attained,</li> <li>2) Alert (tendency toward noncompliance): increased vigilance is required to prevent non-compliance,</li> <li>3) Action required (noncompliant): more in-depth investigation, immediate corrective action and/or preventive action are needed to avoid return to non-compliance.</li> </ol> <p><input type="checkbox"/> Written documentation related to the quality assurance program must be verified, analyzed and signed by the sterile compounding supervisor and retained for a period designated in federal/provincial/ regulations.</p>
<p>Conduct of personnel in controlled areas must meet NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.</p>	<p><input type="checkbox"/> The conduct of personnel in any controlled area must meet NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations including health, presentation, and behavior of the personnel.</p> <p><input type="checkbox"/> Compounding personnel must use meticulous aseptic technique when preparing compounded sterile preparations. Compounding must occur in the critical area of the PEC, such that critical sites are exposed to first air.</p> <p><input type="checkbox"/> Hand and forearm hygiene is required for sterile compounding, regardless of the type of PEC that is used. Hand and forearm hygiene is required for anyone entering the clean room. The Pharmacy must have a detailed policy and procedure that describes the garbing requirements, and hand/forearm hygiene. These policies and procedures must be updated as appropriate.</p> <p><input type="checkbox"/> Compounding personnel must verify the final sterile product including: perform a visual inspection of each unit for evidence of particulate to verify the clarity, colour and volume of the solution, to check the container for possible leaks and to verify the integrity of the container; verify the information on the label; place final compounded sterile preparations that require storage at 2°C to 8°C in the refrigerator pending verification and delivery to patients or the patient care unit.</p> <p><input type="checkbox"/> Each preparation must be inspected by a person other than the individual who performed the aseptic compounding.</p>

## COMPOUNDED STERILE PREPARATION PROTOCOLS, COMPOUNDED STERILE LOG PREPARATION & PATIENT FILE

STANDARD	GUIDANCE
Effective documentation and record keeping processes are in place according to standards of practice and NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.	<input type="checkbox"/> Protocols for the compounding of sterile preparations must include all of the information required to prepare the compound.
	<input type="checkbox"/> A compounded sterile preparation log must be completed during the compounding process. The pharmacy must keep such a log for each individual patient.
	<input type="checkbox"/> A compounded sterile preparation log must be completed during the compounding process. The pharmacy must keep such a log for sterile preparations made in batches.
The pharmacy has access to the current required references as listed in the NAPRA Model Standards For Pharmacy Compounding Of Non- Hazardous Sterile Preparations.	<input type="checkbox"/> The Organization/pharmacy must have access to NAPRA Model Standards for Pharmacy Compounding of Non Hazardous Sterile Preparations.
	<input type="checkbox"/> The Organization/pharmacy must have access to the relevant current chapters of USP.

## CORE REQUIREMENTS – FACILITIES AND EQUIPMENT

STANDARD	GUIDANCE
The clean room is designed, constructed and maintained to meet all NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.	<input type="checkbox"/> Facilities for the compounding of non-hazardous sterile preparations must be designed and built in accordance with NAPRA Model Standards for Pharmacy Compounding of Non Hazardous Sterile Preparations, with provincial and local regulations and, for health system facilities, with other applicable standards regulating the construction of buildings.
	<input type="checkbox"/> Compounding areas must have at least two separate controlled rooms, enclosed and physically separated by a wall: a clean room, where the PEC is located, and an anteroom, located next to the clean room.
	<input type="checkbox"/> The clean room must be physically separated from the contiguous areas by walls, doors and pass-throughs.
	<input type="checkbox"/> The clean room must be used only for the compounding of non-hazardous sterile preparations.
	<input type="checkbox"/> The clean room must be kept under positive pressure relative to the anteroom and adjacent areas
	<input type="checkbox"/> ISO Class 7 air quality must be maintained in the clean room under dynamic operating conditions.
	<input type="checkbox"/> The particle count must be performed by trained, qualified personnel at least every 6 months as part of an internal quality control program for facilities and PECs. The particle count may also be measured by a qualified certifier.

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Facilities that compound both hazardous and nonhazardous sterile preparations must have two clean rooms: one for the compounding of hazardous sterile preparations and the other for the compounding of non-hazardous sterile preparations.</li> <li><input type="checkbox"/> The air supplied to areas used for compounding non-hazardous sterile preparations must pass through a high efficiency particulate air (HEPA) filter to ensure a very high level of cleanliness. The intake air must come from the ceiling via diffusers, each fitted with a terminal HEPA filter.</li> <li><input type="checkbox"/> Return air intakes should be installed at the bottom of walls, forcing the particles to flow downward.</li> <li><input type="checkbox"/> The surfaces of ceilings, walls, floors, doors, door frames, shelves, counters and cabinets in controlled areas must be smooth, impervious, non-friable, free from cracks and crevices, nonporous and resistant to damage from cleaning and disinfecting products. Dust-collecting overhangs, such as door sills, utility pipes, windowsills, window curtains and window blinds, must be avoided.</li> <li><input type="checkbox"/> All joints must be sealed.</li> <li><input type="checkbox"/> If a recessed panel ceiling must be installed, the panels must be specifically designed for use in a clean room.</li> <li><input type="checkbox"/> Flooring must be flat, smooth, impervious, non-friable, non-porous, sealed and resistant to damage from cleaning and disinfecting products. Any breakage must be repaired and sealed immediately.</li> <li><input type="checkbox"/> In the clean room, the floor must be covered up the side wall, at least 10–15 cm.</li> <li><input type="checkbox"/> There must be no carpets, rugs, “sticky mats” or anti-fatigue mats.</li> <li><input type="checkbox"/> Pharmacy staff should review the NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings. (ie. Bacillus Calmette–Guérin [BCG])</li> </ul>
<p>An anteroom is designed, constructed and maintained to meet all NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Facilities for the compounding of non-hazardous sterile preparations must be designed and built in accordance with NAPRA Model Standards for Pharmacy Compounding of Non Hazardous Sterile Preparations, with provincial and local regulations and, for health system facilities, with other applicable standards regulating the construction of buildings.</li> <li><input type="checkbox"/> The anteroom must be separated into two spaces by a visible demarcation line: the first space or area, referred to as “dirty”, is located at the entrance to the anteroom, in the section adjacent to the non-controlled area; the second space or area, referred to as “clean”, is adjacent to the dirty area on one side and the clean room on the other.</li> <li><input type="checkbox"/> Activity in the anteroom, with higher generation of particulates, must be kept to a minimum and must be limited to those activities that are essential to or that directly support the work undertaken in the clean room. (e.g. Garbing, hand hygiene, labelling, staging).</li> <li><input type="checkbox"/> Access of supplies, equipment and personnel into the clean room must be through the anteroom. No supplies, equipment or personnel must enter into the clean room from a non-controlled area.</li> <li><input type="checkbox"/> ISO Class 8 air quality must be maintained in the anteroom under dynamic operating conditions, unless the anteroom is also supporting a hazardous drug clean room, in which case ISO class 7 air quality must be maintained.</li> </ul>

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Facilities that compound both hazardous and non-hazardous sterile preparations may share a single anteroom. (This layout is not recommended) If anteroom is shared it must meet the NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.</li> <li><input type="checkbox"/> The air supplied to areas used for compounding non-hazardous sterile preparations must pass through a high efficiency particulate air (HEPA) filter to ensure a very high level of cleanliness. The intake air must come from the ceiling via diffusers, each fitted with a terminal HEPA filter.</li> <li><input type="checkbox"/> Return air intakes should be installed at the bottom of walls, forcing the particles to flow downward.</li> <li><input type="checkbox"/> The particle count must be performed by trained, qualified personnel at least every 6 months as part of an internal quality control program for facilities and PECs.</li> <li><input type="checkbox"/> The surfaces of ceilings (with all joints sealed), walls, floors, doors, door frames, shelves, counters and cabinets in controlled areas must be smooth, impervious, non-friable, free from cracks and crevices, nonporous and resistant to damage from cleaning and disinfecting products. Dust-collecting overhangs, such as door sills, utility pipes, windowsills, window curtains and window blinds, must be avoided.</li> <li><input type="checkbox"/> Joints between the ceiling and walls should be free of sharp corners where foreign substances could accumulate. In all rooms reserved for the compounding of sterile preparations, any holes, cracks or breakage in ceilings must be repaired and sealed at the earliest opportunity.</li> <li><input type="checkbox"/> If a recessed panel ceiling must be installed, the panels must be specifically designed for use in a clean room.</li> <li><input type="checkbox"/> Flooring must be flat, smooth, impervious, non-friable, non-porous, sealed and resistant to damage from cleaning and disinfecting products. Any breakage must be repaired and sealed immediately.</li> <li><input type="checkbox"/> In the anteroom, the floor must be covered up the side wall, at least 10–15 cm.</li> <li><input type="checkbox"/> There must be no carpets, rugs, “sticky mats” or anti-fatigue mats.</li> </ul>
<p>The storage of non-hazardous drugs are in compliance with the NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Compounding personnel must put all final compounded sterile preparations in packaging that maintains each preparation’s stability, integrity and storage conditions.</li> <li><input type="checkbox"/> The pharmacy must have a storage procedure, and this procedure must be followed at all times.</li> <li><input type="checkbox"/> Alternative storage must be provided when conditions are beyond acceptable temperature variations and when refrigerators and freezers are being cleaned.</li> </ul>
<p>When a segregated compounding area (i.e. a LAFW is not placed in an environment meeting the standards for ISO Class 7 air quality, or a CAI that does not meet the requirements) is used, the specific conditions outlined in meets the NAPRA Model Standards for Pharmacy Compounding of Non Hazardous Sterile Preparations must be met.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Beyond-use times of 12 hours or less must be used for preparations compounded in segregated areas.</li> <li><input type="checkbox"/> The PEC must be certified every 6 months and maintains ISO Class 5 air quality or better under dynamic operating conditions.</li> <li><input type="checkbox"/> Only low-risk preparations may be compounded.</li> <li><input type="checkbox"/> Only one preparation may be compounded at a time.</li> </ul>

	<input type="checkbox"/> The preparations must be compounded in an area that is reserved for the compounding of sterile preparations and that minimizes contamination. <input type="checkbox"/> The sink must not be directly adjacent to the PEC and is separated from the immediate area of the PEC. <input type="checkbox"/> The preparation area must have no unsealed windows or doors leading to the exterior of the building. The preparation area must not be in a high-traffic area or adjacent to construction sites, warehouses or food preparation sites. <input type="checkbox"/> Personnel must be fully compliant with procedures for hand and forearm hygiene, asepsis, garbing, and cleaning and disinfecting.
Personal Protective Equipment (PPE) for the compounding of non-hazardous sterile preparations must meet the NAPRA Model Standards for Pharmacy Compounding of Non Hazardous Sterile Preparations.	<input type="checkbox"/> Compounding personnel must wear dedicated, low-shedding apparel suitable for the controlled area (e.g., scrubs). <input type="checkbox"/> One pair of shoe covers or dedicated shoes are required at all times in the clean area of the anteroom and in the clean room. <input type="checkbox"/> A disposable hair cover must be worn during the compounding of sterile preparations. <input type="checkbox"/> A face mask must be worn during the compounding of sterile preparations. <input type="checkbox"/> If the compounder has facial hair, a disposable beard cover must be worn while compounding sterile preparations. <input type="checkbox"/> Non-powdered sterile gloves which cover the cuffs of the non-shedding gown must be used in the clean room, in the clean area of the anteroom and during aseptic processes. <input type="checkbox"/> A non-shedding protective gown (enclosed at the neck and with sleeves that fit snugly around the wrists) must be worn.
Equipment for the compounding of non- hazardous sterile preparations is designed, built, and maintained in accordance with the NAPRA Model Standards for Pharmacy Compounding of Non Hazardous Sterile Preparations.	<input type="checkbox"/> For non-hazardous compounding, PEC options include LAFWs and CAIs. <input type="checkbox"/> The Primary Engineering Control (PEC) must ensure an ISO Class 5 air quality environment for the exposure of critical sites when sterile preparations are being compounded. <input type="checkbox"/> Certification of each PEC must be certified at least every 6 months, when relocated, after major repairs or when viable air sampling indicates that the PEC may not be in compliance with specifications. <input type="checkbox"/> The compounding aseptic isolator (CAI) must be positioned in an ISO Class 7 clean room adjacent to an ISO Class 8 anteroom. <input type="checkbox"/> The LAFW must be positioned in an ISO Class 7 clean room that is adjacent to an ISO Class 8 anteroom and must not be placed near doors or other sources of drafts that might adversely affect unidirectional airflow. If multiple LAFWs are used, they must be positioned to prevent interference with one another. <input type="checkbox"/> Sterile Isopropyl Alcohol (Sterile IPA) 70% must be available for use in the appropriate areas. <input type="checkbox"/> Refrigerator and freezer-when used to store medications must be commercial, biomedical-grade units and only used for this purpose.



	<input type="checkbox"/> Refrigerator and freezer designated for hazardous drugs must be used only for this purpose. They must not be used to store food or other medications/solutions, etc.
	<input type="checkbox"/> Preventive maintenance for PECs and other equipment must be performed when no compounding is in progress, before cleaning and disinfection operations.
	<input type="checkbox"/> The automated compounding device (ACD) must be positioned in the PEC such that compounding occurs while critical sites are exposed to first air.
	<input type="checkbox"/> Carts used to bring supplies into the anteroom from outside the controlled area must not cross the demarcation line. Likewise, carts taken into the anteroom from the clean room shall not be moved beyond the clean side of the demarcation line.
	<input type="checkbox"/> An incubator is used to maintain a constant temperature for the culture of microorganisms. The incubation temperature must be controlled (20°C to 25°C or 30°C to 35°C, depending on the culture medium and incubation period).
	<input type="checkbox"/> Equipment used for cleaning and disinfection and its storage must be specifically designated for cleaning areas used for the compounding of non- hazardous sterile preparations.
There is a cleaning and disinfecting procedure in place that addresses all sterile compounding areas.	<input type="checkbox"/> Personnel working in sterile compounding must comply with the requirements for cleaning and disinfecting as outlined in NAPRA.
	<input type="checkbox"/> Cleaning and disinfecting personnel must comply with the pharmacy's hand hygiene and garbing procedure before entering sterile compounding areas and performing housekeeping duties.
	<input type="checkbox"/> The pharmacy must have a policy in place to ensure the use of sterile 70% isopropyl alcohol (IPA) for the disinfection of gloved hands surfaces/equipment/supplies used in the compounding of sterile products.

<b>VERIFICATION OF EQUIPMENT AND FACILITIES</b>	
<b>STANDARD</b>	<b>GUIDANCE</b>
There is an environmental verification program in place that meets the NAPRA Model Standards for Pharmacy Compounding of Non Hazardous Sterile Preparations.	<input type="checkbox"/> An environmental program must be established to ensure that facilities that engage in non-hazardous compounding uphold the quality and safety standards set by the industry.
	<input type="checkbox"/> The differential pressure between controlled areas must be kept constant.
	<input type="checkbox"/> Pressure must be measured continuously, and an alarm system must be in place to immediately advise personnel of noncompliance with specifications and to direct that action be taken.
	<input type="checkbox"/> The indicators for proper operation of any device (LAFW, CAI, ACD, etc.) must be verified every day, and data must be recorded in the general maintenance log.
	<input type="checkbox"/> The temperature of controlled sterile compounding areas must be verified and documented at least once a day.
	<input type="checkbox"/> Sampling of viable, non-viable and surface particles in controlled areas and the PEC must be completed.
	<input type="checkbox"/> A written sampling plan for controlled areas and the PEC must be established.

	<input type="checkbox"/> If there is growth of any viable particles obtained via air sampling, surface sampling or GFS, the genus of the microorganism must be identified. Corrective and preventive actions (e.g., cleaning, disinfecting) must be completed.
There is a quality assurance program in place that addresses the verification of equipment and facilities.	<input type="checkbox"/> Equipment that supports compounding activities, especially refrigerators, freezers, incubators and air sampling devices, must be certified with respect to its installation and operation and must be calibrated before being put into service and thereafter as recommended by the manufacturer.
	<input type="checkbox"/> At least once a day, compounding personnel must check the temperature log of equipment (e.g., refrigerator, freezer, incubator), to review temperatures over the previous 24 hours, and must take corrective actions if needed.
	<input type="checkbox"/> An investigation must be undertaken when a contamination or a problem involving non-compliance in the aseptic compounding process is discovered.
	<input type="checkbox"/> The general maintenance logs must be complete, accurate and maintained as per standards of practice and NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations.

## BEYOND USE DATE (BUD) AND DATING METHODS

STANDARD	GUIDANCE
The pharmacy's operating procedures describe the risk assessment process used to establish the Beyond Use Date (BUD) and the storage conditions according to the NAPRA Model Standards for Pharmacy Compounding of Non- Hazardous Sterile Preparations.	<input type="checkbox"/> The BUD must not exceed the earliest of the dates established by the following two criteria: <ul style="list-style-type: none"> <li>1) expiration date based on chemical and physical stability according to reference texts;</li> <li>2) storage time related to risk of microbial contamination.</li> </ul>
	<input type="checkbox"/> Levels of risk for microbial contamination apply to preparations compounded in a compliant, certified PEC that maintains ISO Class 5 air quality or better and that is located in an ISO Class 7 clean room or a compliant certified CAI that meets the criteria specified when placed in environments with particle counts exceeding ISO Class 7.
	<input type="checkbox"/> Low Risk preparations are prepared and must meet the beyond use dates; <ul style="list-style-type: none"> <li>• final product compounded using up to 3 "sterile units",</li> <li>• no more than 2 septum punctures at the injection site for each sterile unit,</li> <li>• simple aseptic transfer technique; drug prepared for one patient (patient- specific dose) use the appropriate beyond use dates.</li> </ul> <input type="checkbox"/> Risk of contamination Low; <ul style="list-style-type: none"> <li>• At controlled room temperature BUD must be no more than 48 hours,</li> <li>• With storage in refrigerator BUD must be no more than 14 days,</li> <li>• With storage in freezer BUD must be nor more than 45 days.</li> </ul>

	<input type="checkbox"/> Medium Risk preparations are prepared and must meet beyond-use dates; <ul style="list-style-type: none"> <li>• final product compounded using 4 or more “sterile units”,</li> <li>• complex manipulations; prolonged preparation time,</li> <li>• batch preparations (preparing more than one unit of the same composition during one compounding session).</li> </ul> <input type="checkbox"/> Risk of contamination Medium; <ul style="list-style-type: none"> <li>• At controlled room temperature BUD must be no more than 30 hours,</li> <li>• With storage in refrigerator BUD must be no more than 9 days,</li> <li>• With storage in freezer BUD must be no more than 45 days.</li> </ul>
	<input type="checkbox"/> High Risk preparations are prepared and must meet beyond-use dates; <ul style="list-style-type: none"> <li>• non-sterile ingredients or equipment used before terminal sterilization,</li> <li>• non-sterile preparations, containing water, stored for more than 6 hours before terminal sterilization,</li> <li>• improper garbing or gloving by compounding personnel.</li> </ul> <input type="checkbox"/> Risk of contamination High; <ul style="list-style-type: none"> <li>• At controlled room temperature BUD must be no more than 24 hours,</li> <li>• With storage in refrigerator BUD must be no more than 3 days,</li> <li>• With storage in freezer BUD must be no more than 45 days.</li> </ul>
	<input type="checkbox"/> The pharmacy must have a policy in place to specify the beyond use dating of single-dose vials. No storage of an open ampoule is permitted; as such, no BUD applies.
	<input type="checkbox"/> The pharmacy must have a policy in place to specify the beyond use dating of multi-dose vials.
	<input type="checkbox"/> To establish a longer BUD, sterility tests must be performed for a given preparation or batch.
	<input type="checkbox"/> An organization choosing to extend the BUD of a sterile preparation should review the Extending the Beyond Use Date for Sterile Preparations guideline on the OCP website.

<b>LABELLING</b>	
<b>STANDARD</b>	<b>GUIDANCE</b>
Labelling of the final compounded sterile preparation meets NAPRA Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations and provincial requirements.	<input type="checkbox"/> Each container for a compounded sterile preparation must be labelled. <input type="checkbox"/> The label must contain the following information, at a minimum: pharmacy identification (name, address and telephone number of the compounder’s or dispenser’s pharmacy); drug identification (active ingredients, source, concentration, form, route of administration, volume, solute, amount prepared); overfill volume, when overfilling has occurred; special precautions, storage method; date when the sterile preparation was compounded; BUD; preparation batch number.

<b>RECALL OF STERILE PRODUCTS OR FINAL COMPOUNDED STERILE PREPARATIONS</b>	
<b>STANDARD</b>	<b>GUIDANCE</b>
There is a process in place when a product or preparation does not meet requirements due to issues of internal control and/or a complaint or a product recall.	<input type="checkbox"/> If as a result of internal control, a complaint or a product recall shows that the grade or quality of a product or preparation does not meet requirements, the pharmacist or pharmacy technician must be able to: identify patients who have received the compounded sterile preparation; notify patients or their caregivers that there is a problem with the preparation; perform the necessary follow-up if the preparation has been administered.

<b>RECEIPT, TRANSPORT AND DELIVERY</b>	
<b>STANDARD</b>	<b>GUIDANCE</b>
The pharmacy has policies and procedures in place to ensure safe receipt, transport and delivery of compounded non-hazardous sterile preparations.	<input type="checkbox"/> Space must be provided for unpacking supplies.
	<input type="checkbox"/> Products used for preparations must be unpacked outside of controlled areas (clean room and anteroom), to limit the introduction of dust and particles into the controlled areas.
	<input type="checkbox"/> Before any product is introduced into the anteroom, it must be removed from its cardboard shipping box. The product must then be wiped with a sporicidal agent.
	<input type="checkbox"/> Policies and procedures must be developed and implemented for the transport of compounded sterile preparations and their delivery to patient care units, pharmacists and patients.
	<input type="checkbox"/> Policies and procedures must be developed and implemented for the transport of compounded sterile preparations and their delivery to other hospitals.

<b>INCIDENT AND ACCIDENT MANAGEMENT</b>	
<b>STANDARD</b>	<b>GUIDANCE</b>
The pharmacy has policies and procedures in place to address incident and accident management with respect to non-hazardous sterile compounding.	<input type="checkbox"/> Each organization must have a process for incidents and accidents and must maintain a log. The information in the log is used to investigate deviations from protocol and to improve processes.
	<input type="checkbox"/> When an incident or accident involving a compounded sterile preparation occurs an event report and explanation form must be completed.

## WASTE MANAGEMENT

STANDARD	GUIDANCE
The pharmacy has a non-hazardous waste management process in place.	<input type="checkbox"/> The pharmacy must have a sufficient number of easy-to-clean waste containers of suitable size and made of materials resistant to damage from cleaning and disinfecting products must be available.
	<input type="checkbox"/> The pharmacist and pharmacy technician must ensure that medications and sharp or pointed instruments are disposed of safely, in compliance with environmental protection laws in force in the jurisdiction.
	<input type="checkbox"/> The pharmacist and pharmacy technician must ensure that medications to be destroyed are safely stored in a location separate from other medications in inventory.
	<input type="checkbox"/> There must be a procedure developed and implemented for the destruction of pharmaceutical waste.