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What are the best recommended countertops for a sterilization area? Is stainless steel good?

As a matter of policy, Ask OSAP does not review, evaluate, certify, recommend or endorse products. Ask OSAP can provide you with some general information pertaining to instrument processing areas.

The 2003 CDC guidelines for infection control in dentistry states the following regarding the instrument processing area:

Instrument Processing Area

DHCP should process all instruments in a designated central processing area to more easily control quality and ensure safety (248). The central processing area should be divided into sections for 1) receiving, cleaning, and decontamination; 2) preparation and packaging; 3) sterilization; and 4) storage. Ideally, walls or partitions should separate the sections to control traffic flow and contain contaminants generated during processing. When physical separation of these sections cannot be achieved, adequate spatial separation might be satisfactory if the DHCP who process instruments are trained in work practices to prevent contamination of clean areas (248). Space should be adequate for the volume of work anticipated and the items to be stored (248).

Receiving, Cleaning, and Decontamination

Reusable instruments, supplies, and equipment should be received, sorted, cleaned, and decontaminated in one section of the processing area. Cleaning should precede all disinfection and sterilization processes; it should involve removal of debris as well as organic and inorganic contamination. Removal of debris and contamination is achieved either by scrubbing with a surfactant, detergent, and water, or by an automated process (e.g., ultrasonic cleaner or washer-disinfector) using chemical agents. If visible debris, whether inorganic or organic matter,

is not removed, it will interfere with microbial inactivation and can compromise the disinfection or sterilization process (244,249–252). After cleaning, instruments should be rinsed with water to remove chemical or detergent residue. Splashing should be minimized during cleaning and rinsing (13). Before final disinfection or sterilization, instruments should be handled as though contaminated. Considerations in selecting cleaning methods and equipment include 1) efficacy of the method, process, and equipment; 2) compatibility with items to be cleaned; and 3) occupational health and exposure risks. Use of automated cleaning equipment (e.g., ultrasonic cleaner or washer-disinfector) does not require presoaking or scrubbing of instruments and can increase productivity, improve cleaning effectiveness, and decrease worker exposure to blood and body fluids. Thus, using automated equipment can be safer and more efficient than manually cleaning contaminated instruments (253).

If manual cleaning is not performed immediately, placing instruments in a puncture-resistant container and soaking them with detergent, a disinfectant/detergent, or an enzymatic cleaner will prevent drying of patient material and make cleaning easier and less time-consuming. Use of a liquid chemical sterilant/high-level disinfectant (e.g., glutaraldehyde) as a holding solution is not recommended (244). Using work-practice controls (e.g., long-handled brush) to keep the scrubbing hand away from sharp instruments is recommended (14). To avoid injury from sharp instruments, DHCP should wear puncture resistant, heavy-duty utility gloves when handling or manually cleaning contaminated instruments and devices (6). Employees should not reach into trays or containers holding sharp instruments that cannot be seen (e.g., sinks filled with soapy water in which sharp instruments have been placed). Work-practice controls should include use of a strainer-type basket to hold instruments and forceps to remove the items. Because splashing is likely to occur, a mask, protective eyewear or face shield, and gown or jacket should be worn (13).¹

The full document can be accessed at:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm>¹

Regarding design of the instrument processing area, *Infection Control and Management of Hazardous Materials for the Dental Team*¹ states in part:

The cabinetry should include chemical- and heat resistant countertops wide enough for sterilizers and other equipment....²

Section 3.3.6.1.2 Space Considerations of *ANSI/AAMI ST79:2017 (Comprehensive guide to steam sterilization and sterility assurance in health care facilities)* states:

The decontamination room/area should include designated space for:

k) work tables made of nonporous materials (e.g., stainless steel),³

No direct reference was found for cabinetry.

Resources

1) Kohn WG, Collins AS, Cleveland JL, Harte JA, Eklund KJ, Malvitz DM, Centers for Disease Control and Prevention (CDC). Guidelines for infection control in dental health-care settings—2003. *MMWR Recomm Rep* 2003;52(RR-17):1-61. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm>
Accessed on March 6, 2020.

2) Miller CH. *Infection Control and Management of Hazardous Materials for the Dental Team*, 6th edition. Elsevier/Mosby Publishers. Pages 133-135.

3) Association for the Advancement of Medical Instrumentation. *ANSI/AAMI ST79:2017: Comprehensive guide to steam sterilization and sterility assurance in health care facilities*. Page 22.

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