

Text for XP Technology AEI Class I instruments

The above categories of instruments, whether designed, manufactured, and/or distributed by American Eagle Instruments Inc are intended solely for use by trained dental or medical professionals. Specific instrument usage and associated usage techniques should be inclusive within the training received.

Start with quality

Each AEI (American Eagle Instruments Inc.) instrument is subject to comprehensive quality controls during all phases of production, thus guaranteeing the high quality standard expected of AEI instruments.

Since AEI's inception, we have processed only certified high grade surgical stainless steels (which contain various percentages of carbon and chrome) and other applicable high grade metals. A specially designed hardening process gives AEI instruments their unique balance of flexibility and optimal durability.

The majority AEI instruments are hand-crafted; shaped, sharpened, and polished by hand. Tips are prepared individually by highly skilled precision crafts-persons. Each instrument is continually held a series of strict quality controls during each stage of fabrication.

With joint cooperation of various universities and major dental institutions world-wide, AEI is able to offer a range of instruments which include the most recent scientific innovations, fabricated using state-of-the-art technology. AEI is constantly expanding its manufacturing horizons - to meet your expectations.

Care longer life for your instruments

Each AEI instrument has been designed and manufactured with the greatest of care to fulfill specific functional criteria. Incorrect handling or misuse reduces the service life of these ultra-fine precision instruments. Resultant damage caused by incorrect use is not necessarily related to specific instrument characteristics or aspects of fabrication, however, instrument damage can be minimized with proper instrument care. As we all know, a pair of scissors should not be used as cutting pliers; a needle clamp is not a pair of tweezers; and scalers should not be used as root elevators. Designed use is therefore an integral part of proper instrument care. When handling, processing and storing AEI XP instruments care must be taken when grouping instruments - potentials for damaging sharpened edges, changing critical instrument angles, and scratching the micro surface are thus reduced and add to instrument longevity. Any XP instrument that has been dropped must be thoroughly inspected for potential damage such as cracks at the bends and chips on the cutting edges. Do not use any instrument found to have even minimal damage. Keep all instruments as dry as possible and keep all instrument surfaces as debris-free as possible. AEI instruments are professional tools and when cared in a professional manner will reflect that care during usage.

Cleaning

Sterilization cannot be a substitute for cleaning! An instrument exposed to high temperatures before being properly cleaned and rinsed, can cause the initiation of permanent stains into the instrument surface.

The physical characteristics of AEI XP instruments allow a wide range of cleaning option, including manual cleaning, ultra sonic cleaning. Some dental surgeries incorporate ultrasonic units or disinfectors/washers within their cleaning systems. Although these units can be compatible with AEI XP instruments, extreme care is also required to ensure that the cleaning agents and chemicals being used do not damage the instrument subsurface. Follow the unit recommendations precisely. AEI reminds its end users who use these cleaning methods that *they clean but do not sterilize!* When using an ultra sonic or disinfectant/washer cleaning unit, instruments should be cleaned only with a non-corrosive, neutral cleaning agent with minimal foaming characteristics. Follow manufacturer's use instructions precisely.

Prior to manual cleaning, AEI recommends that resin handled instruments be disinfected using solutions which are phenol-free. (Phenol solutions may be detrimental to the raw material composition, and induce potential for weakening or cracking within the handle material.)

Instruments should be cleaned in a non-corrosive, neutral cleaning agent with minimal foaming.

Stubborn impurities and debris should be removed with a soft brush (never with steel wool, drill brushes or abrasive items). The instrument should be thoroughly rinsed in only distilled water (not tap water) which may contain chlorines or other additives harmful to XP stainless steel). AEI recommends that when cleaning instruments, dissimilar metals be segregated: the potential galvanic reactions are therefore lessened.

Sterilization

AEI XP instruments are designed to be compatible with a variety of sterilization processes, including autoclaving, chemclaving, dry heat sterilization and cold sterilization (although to a lesser degree: see below). Regardless of sterilization process, temperatures should never exceed 300°F/148°C. As a part of sterilization protocol, temperature ranges of sterilization units should periodically be verified for accuracy. Processing must, at all time, be completed within the recommendations of the processing unit. Any solutions used within the sterilizing unit must be assessed by the processor to assure as neutral pH as possible and assurances must be made that after sterilization XP instruments are thoroughly dried and that the micro surfaces remain debris free. Although cold sterilization processes can be completed successfully, due to the potential from chemical damage (especially on AEI's resin handles) during processing, this process is not recommended by AEI.

No matter the venue of sterilization, processed instruments should always be inspected prior to use.

Dos and Don'ts

Regardless of sterilization method, always inspect your processing equipment for remaining debris and organic or mineral deposits. These can be transferred to the XP instruments and potentially cause corrosion.

Do not batch stainless steel, aluminum, brass or copper instruments together during the cleaning or sterilization processes. If batched together, a potential for electrolysis reactions between dissimilar metals will exist, which can produce etching and corrosion on the XP instrument surfaces.

Use only distilled or de-mineralized water when caring for dental instruments. High mineral levels in the water, or water that is too soft, can cause permanent stains on the XP instrument surface.

Whether you use autoclave, dry heat or germicidal solvents, always follow the manufacturer's instructions **precisely** regarding specific recommendations for temperatures and times.

Careful drying of instruments during cleaning and sterilizing processes is extremely important. Any remaining water or condensation can cause potential initiation of oxidation/corrosion on the instrument surface and into the substrate. This is particularly important when pouch-sterilized process is used or when the autoclave has been opened prematurely. It is advisable to remove any remaining moisture with a sterile cloth.

Identification or engraving added to the instrument surface by the end-user is discouraged and can void the instrument warrantee. When the polished surface is compromised, a potential inroad for oxidation and/or corrosion is created.

Like fine clothing, jewelry or high-speed handpieces - your instruments may also require special care. Although stainless steel instruments, including XP, have outstanding built-in corrosion resistance, contact with specific chemicals should still be avoided.

Instruments should not be in contact with the following chemicals for more than a couple hours (then **immediately and thoroughly rinsed**): aluminum chloride, barium chloride, mercury dichloride, calcium chloride, carbolic acid, citric acid, cresol, mercury chloride, mercury salts, phenol, permanganic acid potash, potassium thicyanate, ferrous chloride, stanniferous chloride, tartaric acid.

The following chemicals should be avoided completely: Aqua Regia, iron chloride, sulphuric & hydrochloric acid, and iodine.

Also see *XP Technology Care and Instructions* and *XP Technology DO and Don't* literature on the website,

With proper care, the longevity and performance of all your professional XP dental instruments can be extended. We hope that the above has been helpful to you in achieving this goal.