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# Preparation and maintenance of reusable surgical instruments

## Class 1

Stainless steels: DIN EN ISO 7153-1; Titanium alloys: DIN ISO 5832-3; Pure Titanium: DIN ISO 5832-2;  
 UMDNS-Nr.: 10829, 12845, 13180, 13287, 13373, 13707

<b>Basic information</b>	<ul style="list-style-type: none"> <li>We refer in all treatment processes on the AK documentation of instrument preparation.  <a href="http://www.a-k-i.org">http://www.a-k-i.org</a></li> </ul>
<b>Treatment of brand new instruments</b>	<ul style="list-style-type: none"> <li>Brand-new instruments must be cleaned mechanically before the first sterilization or use. Caps and protective films must be removed completely, for example, with chisels, rasps or microsurgical instruments.</li> <li>Accuratus recommend to clean 3x mechanical any new instruments, in order to get a stronger passive layer.</li> </ul>
<b>After each use</b>	<ul style="list-style-type: none"> <li>Prepare contaminated instrument as soon as possible.</li> <li>Machine cleaning: lay instruments in cleaning-friendly baskets</li> <li>Use active cleaning disinfectant</li> <li>Clean instrument with clean running water before machine cleaning</li> <li>If necessary, perform ultrasonic treatment as instructed by the equipment manufacturers           <ul style="list-style-type: none"> <li>- as effective mechanical support</li> <li>- for the pretreatment of instruments with dirt</li> <li>- Clean micro-instruments in suitable positioning aids</li> </ul> </li> </ul>
<b>Manual cleaning</b>	<ul style="list-style-type: none"> <li>Place instrument into a suitable active cleaning disinfectant and make sure that all surfaces, cavities, lumens and openings are covered. Follow the instructions of the disinfectant manufacturer.</li> <li>After chemical disinfection always take care to rinse adequately and intensively with clear and running water. Follow the instructions of the disinfectant manufacturer.</li> <li>Remove adhering dirt with a soft plastic brush. Do not use abrasive cleaners or metal brushes</li> <li>Clean lumens and conduits with soft round brush made of plastic.</li> <li>Final rinse with distilled or demineralized water.</li> <li>Dry instrument.</li> </ul>
<b>Automated cleaning</b>	<ul style="list-style-type: none"> <li>Mechanical cleaning is always preferable to a manual cleaning because the process can be standardized. Carefully read operating and loading instructions of the manufacturer.</li> <li>Use only recommended cleanser.</li> <li>Load instruments so that hinges are open.</li> <li>Final rinse with desalinated water.</li> <li>Arrange tools so that no blind spots of rinsing are able and no water residue remains in cavities.</li> <li>Take instruments as much as possible to pieces.</li> <li>Plan sufficient time for drying.</li> <li>Lightly oil moving parts (eg joints and ends) <u>with a sterilizable, vapor permeable oil.</u> (for.ex. STERILIT oilspray Aesculap JG600 or physiological oil JG598/ DAB 8 and § 31 LMBG)</li> </ul>

<b>Disinfection</b>	<ul style="list-style-type: none"> <li>Perform the automatic thermal disinfection, taking into account national requirements regarding the Ao-value (ISO 15883).</li> </ul>	
<b>Inspection and functional test</b>	<ul style="list-style-type: none"> <li>Cool down instruments to room temperature.</li> <li>Lightly oil moving parts (eg joints and ends) with a <u>sterilizable, vapor permeable oil</u>. (for.ex. STERILIT oilspray Aesculap JG600 or physiological oil JG598/ DAB 8 and § 31 LMBG)</li> <li>Check product after each cleaning and disinfection to their function, cleanliness and damage, isolation, lose, hidden, broken, cracked, worn, or fractured components.</li> <li>Check compatibility with associated products. Mark damaged products and sort them out.</li> </ul>	
<b>Packaging</b>	<ul style="list-style-type: none"> <li>Protect fine and sharp working ends.</li> <li>Standardized packaging for sterilized instruments ISO 11607-1: 2009 and EN 868-2: of 2009.</li> </ul>	
<b>Sterilization</b>	<ul style="list-style-type: none"> <li>The Accuratus AG recommends using a validated steam sterilization method for sterilizing reusable surgical instruments (in accordance with ISO 17664 or national standards).</li> <li>The Accuratus AG recommends the following parameters for sterile barrier system wrapped instruments and cases.</li> </ul>	
<b>Sterilization Procedures</b>		
<b>Sterilization Time</b>	<b>Sterilization Temperature</b>	<b>Drying Time</b>
Min. 4 Minutes	Min. 132°C Max 138°C	20 – 60 Minutes
<b>Recommended 18 Minutes</b>	134°C	Min. 20 Minutes

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