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NOTICE TO USERS Inhalation exposure systems from CH Technologies are fabricated from electrically conducting metals such as nickel plated aluminum; some versions were also plated with an additional layer of gold above the nickel. An alternate system material is stainless steel (316 or 304). Finally, some systems are a mixture of the two. Systems are interchangeable within limits. Design changes are ongoing and therefore, consult with Dr. Jaeger before mixing early and late production runs.

CLEANING

Assembly instructions are available at <http://www.toxics.com/expose/instruct/12portin.html> or on a VHS or DVD instructional document that can be obtained from CH Technologies (<mailto:sales@toxics.com>). If you require a printed copy of this document for your own SOP, please feel free to print this document for your own files. We ask that you respect our copyright and that you provide us with notice and include the credit to where you obtained the document. No payment is required for instructional use. All other uses must be licensed..

You must prepare your own in house standard operating procedure (SOP) for this activity. Your own laboratory and test requirements should your guide. Consult with others knowledgeable in the field. Above all, do NOT try to be more expert than your skills allow. Ask an expert when you are in doubt. Materials tested by contract labs and research firms differ; pharmaceuticals have different standards or requirements from pathogens. We are unable to predict your use and make no warranty, expressed or implied, as to the fitness of these systems for a particular purpose. When choices need to be made, consult Dr. Jaeger and document the reasons for your selections.

All units should be rinsed whenever used. THAT MEANS DAILY. Distilled water is a good choice for the final rinse; warm tap water may work also. Cleaning with a mild soap solution in warm water may be adequate. You must judge the success of your cleaning/rinsing with your own QA/QC wipe tests or similar assessments. Whether you do this daily, weekly or monthly must remain your choice and the choice of the study director.

While it is not recommended that systems be cleaned in a dishwasher or cage washer, that does not mean it can not be done! If you desire to use such a procedure, contact Dr. Jaeger about systems that will tolerate the abuse of high pressure, hot water at alkaline pH. The concern is for damage to sealing surfaces. Mechanical damage to aluminum systems will breach the plating and allow corrosion to occur. The presence of corrosion will require that systems be returned for re-plating. This can be done at modest cost.

O-rings should be inspected, lubricated as required and replaced at frequent intervals. O-rings of BUNA, Silicone and Viton are available from CH Technologies (USA) Inc.

Threads should be cleaned, inspected for wear or corrosion and taped with Teflon or lubricated with a suitable materials, e.g. vacuum grease, Teflon emulsion, etc. Be aware of the possibility of cross threading when assembling parts with threads. Check all threads for hidden debris.

The now cleaned system should be allowed to dried or they may be dried with warm air. They should be lubricated as required and reassembled with careful attention to sealing surfaces. Pressure tests (leak checks) and system integrity should be verified. A system of named sign off within the laboratory for each individual who performs a step may be required to meet Good Laboratory Practices (GLP) standards. We have no way to predict this.

The SOP for various other inhalation systems may be cross compared and changes made consistent with the system that you have. Please feel free to contact Dr. Jaeger if you have questions - SEND YOUR QUESTIONS TO: <mailto:jaegerr@toxics.com>.

Dr. Jaeger has instruction manuals and reprints that will help you learn the techniques that are required. To paraphrase Dr. Arnold Lehman, you too can become an inhalation toxicologist in two easy lessons, each one taking ten years. Perhaps you can shorten the time but not likely the required number of steps.

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