UNIVERSAL PRECAUTIONS

Universal Precautions should be followed on all specimen samples, regardless of whether a sample is known to contain an infectious agent. Laboratories handling specimen samples are advised to comply with applicable parts of the following governmental and clinical standards, or their equivalent in the country of use:

- Centers for Disease Control (CDC), Universal Precautions for Prevention of Transmission of HIV and Other Bloodborne Infections, published 1987, updated 1996
- Clinical and Laboratory Standards Institute (CLSI), GP17-A3 Clinical Laboratory Safety; Approved Guideline - Third Edition, published 2012, ISBN 1-56238-797-9
- Clinical and Laboratory Standards Institute (CLSI), M29-A4 Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline, Fourth Edition, published 2014, ISBN 1-56238-961-0
- Occupational Safety and Health Administration (OSHA), 29 CFR 1910.1030 Bloodborne Pathogens
- International Standards Organization (ISO) 15190:2003, Medical Laboratories – Requirements for Safety

Trademarks

Information subject to change without notice
For Research Use Only
Not for use in diagnostic procedures
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Covaris, Inc.
14 Gill St, Unit H
Woburn, Massachusetts
01801-1721 USA

Printed in U.S.A.

Warnings

For safety of operating personnel:

Make sure that the equipment is properly grounded. DO NOT operate if it is not properly grounded.

The unit is equipped with a power plug appropriate for the destination country. DO NOT, under any circumstances, remove the grounding prong from the power cord.

DO NOT attempt to operate the equipment with the safety cover in the OPEN position or without water in the acoustic assembly; the acoustic system will not work. If there is any indication that the Safety System is not functioning properly, DO NOT operate the equipment and contact Covaris immediately.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

To prevent damage to the equipment:

The instruments are designed to operate in ambient laboratory conditions e.g., 19ºC to 25ºC (66ºF to 77ºF). DO NOT operate the instrument in a cold room environment; the system is designed to operate with a water bath and includes a solid state heater/chiller apparatus to control sample temperature.

NEVER run a method without water in the acoustic assembly; this could damage the transducer. The instrument is equipped with a water level sensor to protect the transducer. The system will not allow the acoustic wave treatment to start unless an adequate volume of water is detected.

AFA-grade water should be used to fill the supply water bottle.

Empty the water bath daily. DO NOT leave water in the water bath for an extended time as there is no water filtration or water cleaning system with the apparatus.

Do not employ isopropyl alcohol, ammonia-based or abrasive cleaners on the acoustic assembly.

The Tube Holder Insert should be stored in a dry place when not in use.

Establish a standard of operation and periodically test equipment, as described in Appendix A of this manual.

DO NOT load third party hardware, software, or parts onto the system without consulting with Covaris.

7.0 SYSTEM SPECIFICATIONS

Model	ME220
Treatment System:	Bench-top; high intensity acoustic transducer, 1 to 8 sample batch process, temperature monitoring and controlling device, water bath with sample holder and safety enclosure
Treatment Power:	75 Watts Peak Incident Power 20 Watts Average Incident Power
Dimensions:	18.75" W x 18.75" D x 14.75" H (47.75cm x 47.75cm x 37.5cm)
Weight:	approximately 55 lbs. (25 Kg) (without computer)
Power Requirements:	100-240 VAC 500 VA, 50-60Hz, 5 Amp Slo-Blo Fuse
Ambient Temp Range	19ºC to 25ºC (66ºF to 77ºF)
Ambient Humidity	30% to 70%
Regulatory Labeling:	CE, ETL Mark (for Product Safety), WEEE
Safety:	Certified to IEC/EN/ANSI/UL61010-1 and CAN/CSA C22.2 No. 61010-1 "Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements"
EMC:	Certified to EN 61326-1 "Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements". Also certified to FCC 47CFR Part 15 – Radio Frequency Devices and Part 18 – Industrial, Scientific and Medical Equipment, and ICES-003 Class A for Industry Canada
Water Bath:	AFA-grade Water or Highly Purified Water, at least ASTM Type III or ISO grade 3
Method Temperature Set Point:	Programmable +6.0 °C to +40.0 °C
Computer:	Notebook computer supplied by Covaris.
Operating System:	Microsoft Windows 7 or Higher
Application Software:	Covaris SonoLab
Data Input:	Keyboard, mouse
Chiller: **Power:**	Solid state chiller for heating and cooling (built in) 0 - 160 Watts, 24 volts