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CellInsight™ CX7 Pro High Content Screening (HCS) Platform

USER GUIDE

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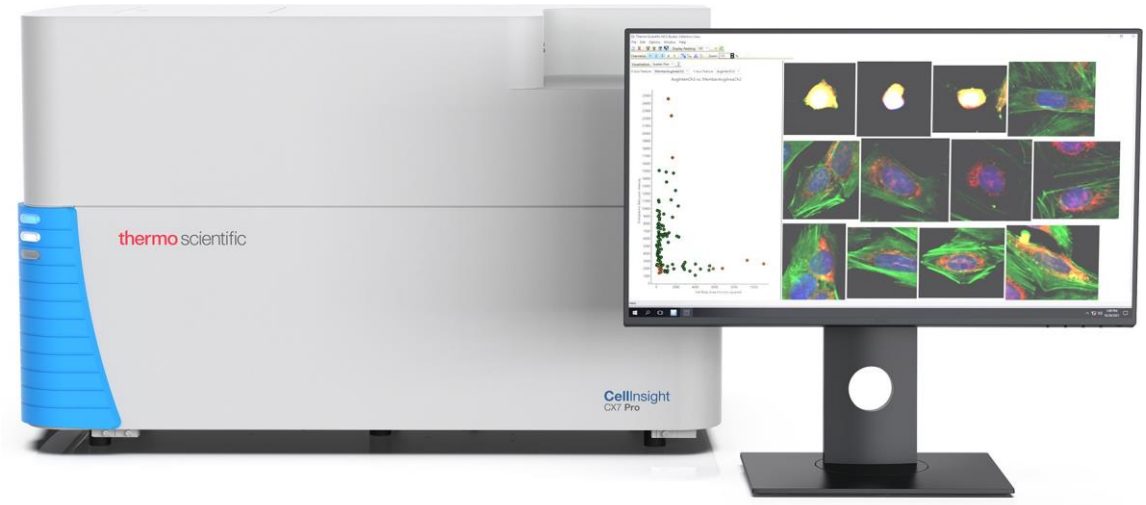

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Conformity symbols

Conformity mark	Description
	Indicates conformity with safety requirements for Canada and U.S.A.
	Indicates conformity with European Union requirements.
	Indicates conformity with Australian standards for electromagnetic compatibility.
	Indicates conformity with China RoHS requirements.
	Indicates conformity with the WEEE Directive 2012/19/EU. ⚠ CAUTION! To minimize negative environmental impact from disposal of electronic waste, do not dispose of electronic waste in unsorted municipal waste. Follow local municipal waste ordinances for proper disposal provision and contact customer service for information about responsible disposal options. European Union Customers: Call your Customer Service representative for equipment pick-up and recycling. See **thermofisher.com** for a list of customer service offices in the European Union.

Safety information for instruments not manufactured by Thermo Fisher Scientific

Some of the accessories provided as part of the instrument system are not designed or built by Thermo Fisher Scientific. Consult the manufacturer's documentation for the information needed for the safe use of these products.

Instrument safety

General precautions

WARNING! This instrument is only to be operated by trained laboratory personnel only. Use this product only in the manner described in this guide. When used other than as specified, the safety protections can be impaired. Refer to this "Safety" appendix ensuring safe operation and maintenance of the system. Read these precautions carefully before performing the procedures outlined in this document. In addition, read the instructions, warnings, and precautionary measures supplied in this guide and with accessories. Failure to adhere to safety precautions and/or procedures outlined in this document can result in system failure, personal injury, or death. Thermo Fisher Scientific Inc. shall not be held liable under any circumstances. Thermo Fisher Scientific Inc. does not assume any liability for damages or malfunctions caused by faulty operation, negligence, unauthorized modifications or repairs, or use of unauthorized accessories. The manufacturer cannot assume any liability for any other applications, possibly also involving individual modules or single parts. This also applies to all service or repair work which is not carried out by authorized service personnel. All claims against warranty will be forfeited in these cases.

WARNING! **RISK OF ELECTRIC SHOCK!**

- The CellInsight™ CX7 Pro HCS Reader contains voltages that are potentially hazardous. To reduce the risk of electric shock or burn, DO NOT REMOVE COVERS. NO USER SERVICEABLE PARTS ARE INSIDE. Periodically inspect power cords and plugs for proper condition and replace as necessary only with Thermo Fisher Scientific provided cords. ONLY THERMO FISHER SCIENTIFIC SERVICE PERSONNEL may perform testing or repairs.
- Do not replace detachable MAINS supply cords by inadequately RATED cords. Only use Thermo Fisher Scientific supplied cords.
- The CellInsight™ CX7 Pro HCS Reader contains voltages that are potentially hazardous. The CellInsight™ CX7 Pro HCS Reader should only be connected to power outlets that are properly grounded and free from electrical or mechanical defects. The grounding effect must not be nullified by an extension cable that does not have a protective ground wire. Ensure that the power voltage in use complies with specification. Using the equipment at any other voltage can cause a fire, electrical shock, and other problems.
- If the protection measures are no longer being met, the instrument must be switched OFF and safeguarded against inadvertent operation.
- Disconnect the mains power cord before changing the fuses. To reduce the risk of fire or shock, replace fuses only with fuses of the same type and rating. The use of makeshift fuses and the short-circuiting of fuse holders are not permitted.

WARNING! **CLASS 4 and 3R LASERS – INVISIBLE LASER RADIATION – AVOID EXPOSURE TO BEAM! WEAR THE REQUIRED LASER PROTECTIVE EYEWEAR!**

- The CellInsight™ CX7 Pro HCS Reader contains a Class 4 laser device, conformant to IEC\EN 60825-1:2014. The wavelength of the laser is 742–754 nm CW and the output power is 4 W Max. Avoid direct eye exposure!
- The CellInsight™ CX7 Pro HCS Reader also contains a Class 3R laser device, conformant to IEC\EN 60825-1:2014. The wavelength of the laser is 720–740 nm. The output power is 2.0 mW Max. Avoid direct eye exposure!
- **Wear laser protective glasses with an optical density greater than 6 (OD > 6) for wavelengths less than 400 nm, and an optical density greater than 7 (OD > 7) for wavelengths at 720–810 nm.**

WARNING! **OVERCURRENT PROTECTIVE DEVICES**

The CellInsight™ CX7 Pro HCS Reader and components must be connected to an installation providing an overcurrent protection equal to the fault current at the point of installation (250 VAC, 20 Amps Certified Circuit Breaker or fuse). Installation must be performed according to local codes.

Note: Ensure that the local line voltage and the operating voltage of the CellInsight™ CX7 Pro HCS Reader and all the other electrical components are identical. Incorrect voltage settings that do not meet the specifications can damage the instrument or impair its functions.

Note: The instrument is not intended for outdoor use and can only be used in closed rooms. It can only be used in a laboratory environment that meets the relevant safety standards. The direct ambient temperature and humidity of the system must not exceed the specifications given in the Specifications appendix of this guide.

WARNING! If smoke, abnormal noise, or strange odor is present, immediately shutdown the system and notify Technical Support. It is dangerous to continue using the system.

Note: All maintenance procedures described in this guide can be safely performed by QUALIFIED SERVICE PERSONNEL. Maintenance not covered in this guide must be performed only by Thermo Fisher Scientific service personnel.

CellInsight™ CX7 Pro HCS Reader operation and maintenance precautions

CellInsight™ CX7 Pro HCS Reader

WARNING! **RISK OF EYE INJURY!**

Wear safety glasses designed to filter ultraviolet wavelengths and high intensity light. **Wearing laser protective glasses with an optical density greater than 6 (OD > 6) for wavelengths less than 400 nm, and an optical density greater than 7 (OD > 7) for wavelengths at 720–810 nm** is required anytime the instrument is opened for servicing and there is risk of exposure. These glasses filter ultraviolet wavelengths and high intensity light.

- Eye damage can result from directly viewing the light produced by the light source. The high intensity light and level of UV energy supplied by the light source used in this product can be sufficient to cause damage.
- Never look directly into an illuminated objective, microplate well, or laser beam. The light can damage the cornea and retina of the eye if the light is observed directly.
- Do not remove safety labels, instrument protective panels, or defeat safety interlocks.
- The system must be installed and maintained by a Thermo Fisher Scientific Technical Representative.
- Remove jewelry and other items that can reflect a laser beam into your eyes or those of others.
- Post a laser warning sign at the entrance to the laboratory if the laser protection is defeated for servicing.

Thermo Fisher Scientific Technical Representatives: DO NOT operate the laser when it cannot be cooled by its cooling fan; an overheated laser can cause severe burns on contact.

WARNING! **CLASS 4 and 3R LASERS – INVISIBLE LASER RADIATION – AVOID EXPOSURE TO BEAM! WEAR THE REQUIRED LASER PROTECTIVE EYEWEAR!**

- The CellInsight™ CX7 Pro HCS Reader contains a Class 4 laser device, conformant to IEC\EN 60825-1:2014. The wavelength of the laser is 742–754 nm CW and the output power is 4 W Max. Avoid direct eye exposure!
- The CellInsight™ CX7 Pro HCS Reader also contains a Class 3R laser device, conformant to IEC\EN 60825-1:2014. The wavelength of the laser is 720–740 nm. The output power is 2.0 mW Max. Avoid direct eye exposure!
- **Wear laser protective glasses with an optical density greater than 6 (OD > 6) for wavelengths less than 400 nm, and an optical density greater than 7 (OD > 7) for wavelengths at 720–810 nm.**

CAUTION! **MOVING MECHANICAL PARTS!**

The CellInsight™ CX7 Pro HCS Reader incorporates moving parts. Note the pinch hazard signs applied to potentially dangerous parts. DO NOT MANUALLY OPEN THE STAGE DOOR WHEN THE READER IS PERFORMING A SCAN!

WARNING! **BIOHAZARD!**

- Use proper laboratory practices when handling hazardous materials.

- Ensure that biohazards do not contaminate CellInsight™ CX7 Pro HCS Reader components.
- In the event that system contamination occurs, contact Technical Support for applicable cleanup procedures.
- The CellInsight™ CX7 Pro HCS Reader is not equipped with any special devices for protection from substances which are corrosive, toxic, radioactive, or otherwise hazardous to health. All legal regulations for accident prevention, particularly those in the respective countries, must be observed when handling such substances.

WARNING! The CellInsight™ CX7 Pro HCS Reader is intended for installation in a temperature controlled, low humidity, indoor area free of conductive contaminants.

- Choose a well ventilated area to position the system and provide the specified clearances as shown in the figure on “Dimensions and clearances” on page 95. Do not obstruct the air vents of the CellInsight™ CX7 Pro HCS Reader or components.
- Do not place anything on the equipment that prevents adequate dissipation of heat.
- Avoid exposing the system to direct sunlight or another heat source.
- Ensure that the area around the equipment is clean and free of moisture. Protect equipment from dust and dirt to avoid impairing system performance. Keep the stage door and all covers closed as much as possible. Use a dust cover if the system will not be used for more than a five day period.
- Position the instrument so that you can reach the AC inlet, and be careful to avoid a trip hazard created by any of the cords, such as the AC cord.
- Do not allow liquid or foreign objects on or inside the equipment.
- Do not operate the equipment in an environment where flammable, corrosive, or other damaging liquids or gases are present.
- The minimum bench size for the CellInsight™ CX7 Pro HCS Reader without a robotic microplate handler is 60 in. wide by 25 in. deep if the computer can be placed under the bench, or 72 in. wide by 25 in. deep if the computer can be placed on the same bench top. The supporting surface must be level and must be capable of safely supporting a minimum of 200 lbs. (68 kg). If using a robotic plate handler, increase the bench size and capacity accordingly. Non-level mounting may result in misalignment and equipment malfunction.

CAUTION! **Electrostatic Discharge**

CellInsight™ CX7 Pro HCS Reader electronics are sensitive to electrostatic discharge (ESD) and transient voltage spikes.
To avoid permanently damaging the system, observe the following precautions:

- Use caution when triggering high-current devices near the system. Electrically noisy devices should be powered from an isolated, conditioned power line or dedicated isolation transformer.
- Never connect or disconnect any power cord or data cable while the system is powered on.

CellInsight™ computer and software

Note: Loading unrelated software on the CellInsight™ computer may cause system damage including but not limited to data corruption and/or software incompatibility. Do not load any software application that has not been provided or approved by Thermo Fisher Scientific. If problems occur as a result of such activity, Thermo Fisher Scientific has no liability and will not be held responsible for damages and repair fees. The customer is responsible for issues that arise from the installation of third party software, including anti-virus software.

Note: It is the responsibility of the customer to ensure that the instrument computer is on a supported operating system. Any negative consequences of running on an unsupported operating system is not covered under any maintenance agreement or plan.

Note: If magnetic field disturbance of the computer components is suspected, move the equipment away from the field source or provide a suitable shielded enclosure. For additional information, contact Technical Support.

Physical injury hazards

WARNING! **PHYSICAL INJURY HAZARD!**

Use this product only as specified in this document. Using this instrument in a manner not specified by Thermo Fisher Scientific can result in personal injury or damage to the instrument

Moving and lifting the instrument

CAUTION! **PHYSICAL INJURY HAZARD!**

The instrument is to be moved and positioned only by the personnel or vendor specified in the applicable site preparation guide. If you decide to lift or move the instrument after it has been installed, do not attempt to lift or move the instrument without the assistance of others, the use of appropriate moving equipment, and proper lifting techniques. Improper lifting can cause painful and permanent back injury. Depending on weight, moving or lifting an instrument may require two or more persons.

WARNING! Always handle the equipment with care when moving. The CellInsight™ CX7 Pro HCS Reader weighs approximately 180 lbs. At least two people are required for transport. Take the proper lifting precautions to avoid injury and always lift the CellInsight™ CX7 Pro HCS Reader by grasping the underside of the instrument frame. Do not attempt to lift the CellInsight™ CX7 Pro HCS Reader by grasping the enclosure panels.

Moving and lifting stand-alone computers and monitors

WARNING! **PHYSICAL INJURY HAZARD!**

Do not attempt to lift or move the computer or the monitor without the assistance of others. Depending on the weight of the computer and/or the monitor, moving them may require two or more people.

Things to consider before lifting the computer and/or the monitor:

- Make sure that you have a secure, comfortable grip on the computer or the monitor when lifting.
- Make sure that the path from where the object is to where it is being moved is clear of obstructions.
- Do not lift an object and twist your torso at the same time.
- Keep your spine in a good neutral position while lifting with your legs.
- Participants should coordinate lift and move intentions with each other before lifting and carrying.
- Instead of lifting the object from the packing box, carefully tilt the box on its side and hold it stationary while someone slides the contents out of the box.

Operating the instrument

Ensure that anyone who operates the instrument has:

- Received instructions in both general safety practices for laboratories and specific safety practices for the instrument.
- Read and understood all applicable Safety Data Sheets (SDSs). See “Documentation and support” on page 143.

Removing covers or parts of the instrument

CAUTION! **PHYSICAL INJURY HAZARD!**

The instrument is to be serviced only by trained personnel or vendor specified in the user guide. Do not remove any covers or parts that require the use of a tool to obtain access to moving parts. Operators must be trained before being allowed to perform the hazardous operation.

Robotic plate handler

Refer to your robotic plate handler user documentation for additional warnings to ensure safe operation, maintenance, and service of the robotic plate handler.

If you are using an Orbitor™ RS Microplate Mover, refer to the *Thermo Scientific™ Orbitor™ RS User Guide* (Pub. Part. No. LC07500100).

Light source

DANGER! **RISK OF EYE INJURY!**

Wear safety glasses designed to filter infrared wavelengths and high intensity visible light. **Wearing laser protective glasses with an optical density greater than 7 (OD > 7) for wavelengths at 720–810 nm** is required anytime the instrument is opened for servicing and there is risk of exposure. These glasses will filter infrared wavelengths.

- Eye damage can result from directly viewing the light produced by the light source. The high intensity visible light and level of IR energy supplied by the light source used in this product can be sufficient to cause damage.
- Never look directly into an illuminated objective, microplate well, or laser beam. The light could damage the cornea and retina of the eye if the light is observed directly.
- Do not remove safety labels, instrument protective panels, or defeat safety interlocks.
- The system must be installed and maintained by a Thermo Fisher Scientific Technical Representative.
- Remove jewelry and other items that can reflect a laser beam into your eyes or those of others.
- Post a laser warning sign at the entrance to the laboratory if the laser protection is defeated for servicing.

Thermo Fisher Scientific Technical Representatives: DO NOT operate the laser when it cannot be cooled by its cooling fan; an overheated laser can cause severe burns on contact.

System components

Additional safety precaution statements can be found in the supplied documentation for the following system components:

- Computer
- Monitor

Electrical safety

WARNING! **Fuse Installation.** Before installing the instrument, verify that the fuses are properly installed and the fuse voltage matches the supply voltage. Replace fuses only with the type and rating specified for the unit. Improper fuses can damage the instrument wiring system and cause a fire.

WARNING! **Ensure appropriate electrical supply.** For safe operation of the instrument:

- Plug the system into a properly grounded receptacle with adequate current capacity.
- Ensure the electrical supply is of suitable voltage.
- Never operate the instrument with the ground disconnected. Grounding continuity is required for safe operation of the instrument.

WARNING! **Power Supply Line Cords.** Use properly configured and approved line cords for the power supply in your facility. If the line cord is damaged, contact Technical Support.

WARNING! **Disconnecting Power.** To fully disconnect power either detach or unplug the power cord, positioning the instrument such that the power cord is accessible.

Cleaning and decontaminating the instrument

CAUTION! Using cleaning or decontamination methods other than those recommended by the manufacturer can compromise the safety or quality of the instrument.

CAUTION! **CLEANING AND DECONTAMINATION**

Only use the cleaning and decontamination methods specified in the manufacturer's user documentation. It is the responsibility of the operator (or other responsible person) to ensure the following requirements are met:

- No decontamination or cleaning agents are used that could cause a HAZARD as a result of a reaction with parts of the equipment or with material contained in the equipment.
- The instrument is properly decontaminated a) if hazardous material is spilled onto or into the equipment, and/or b) prior to having the instrument serviced at your facility or sending the instrument for repair, maintenance, trade-in, disposal, or termination of a loan (decontamination forms may be requested from customer service).
- Before using any cleaning or decontamination methods (except those recommended by the manufacturer), confirm with the manufacturer that the proposed method will not damage the equipment.

Note: Clean exterior of the unit with a water dampened cloth and simple detergent only. Refer to "Sterilization procedure" on page 90 for more information.

Instrument component and accessory disposal

To minimize negative environmental impact from disposal of electronic waste, do not dispose of electronic waste in unsorted municipal waste. Follow local municipal waste ordinances for proper disposal provision and contact customer service for information about responsible disposal options.

Laser safety

The CellInsight™ CX7 Pro HCS Platform is classified and conformant to IEC\EN 60825-1:2014, 21 CFR 1040.0, and CFR 1040.11 as an applicable Class 1 laser product.

WARNING! This unit is supplied with an interlock device which protects the end-user from laser radiation in excess of Class 1 limits for Maximum Permissible Exposure under normal operating conditions. However, if the user overrides the interlock device in any manner, the user can be exposed to a Class 4 laser from the Light Engine and a Class 3R from the Laser Autofocus Device.

CAUTION! **Modifications to the instrument outside of normal operation or use may result in hazardous radiation exposure.**

In the event that the user overrides the interlock device (or removes the instrumentation chassis panels or instrument lid), note the following safety precautions regarding the Light Engine and the Laser Autofocus Device.

Lasers can burn the retina, causing permanent blind spots. To ensure safe laser operation:

- Never look directly into the laser beam.
- Do not remove safety labels, instrument protective panels, or defeat safety interlocks.
- The system must be installed and maintained by a Thermo Fisher Scientific Technical Representative.
- Remove jewelry and other items that can reflect a laser beam into your eyes or those of others
- Wear proper eye protection and post a laser warning sign at the entrance to the laboratory if the laser protection is defeated for servicing
- DO NOT operate the laser when it cannot be cooled by its cooling fan; an overheated laser can cause severe burns on contact.
- Use of controls or adjustments or performance of procedures other than those provided in this guide may result in hazardous radiation exposure.

Light engine

The system is equipped with a 7 color LED/laser, solid-state light engine for fluorescence excitation. The Light Engine is a Class 4 Laser Product, 742–754 nm, 4W CW Max.

WARNING! **CLASS 4 LASER – VISIBLE AND INVISIBLE LASER RADIATION – AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION! WEAR THE REQUIRED LASER PPE!**

The CellInsight™ CX7 Pro HCS Reader contains a Class 4 laser device, conformant to IEC\EN 60825-1:2014. The wavelength of the laser is 750 nm CW and the maximum output power is 4W Max. Avoid direct eye exposure!
Wear laser protective glasses with an optical density greater than 6 (OD > 6) for wavelengths less than 400 nm, and an optical density greater than 7 (OD > 7) for wavelengths at 720–810 nm.

Laser autofocus device

The system is equipped with a laser autofocus device. The Laser Autofocus Device is Class 3R Laser Product, 720–740 nm, 2.0 mW Max.

WARNING! **CLASS 3R LASER – INVISIBLE LASER RADIATION – AVOID EXPOSURE TO BEAM! WEAR THE REQUIRED LASER PROTECTIVE EYEWEAR!**

The CellInsight™ CX7 Pro HCS Reader contains a Class 3R laser device, conformant to IEC\EN 60825-1:2014. The wavelength of the laser is 720–740 nm. The output power is 2.0 mW Max. Avoid direct eye exposure!
Wear laser protective glasses with an optical density greater than 6 (OD > 6) for wavelengths less than 400 nm, and an optical density greater than 7 (OD > 7) for wavelengths at 720–810 nm.

Safety and electromagnetic compatibility (EMC) standards

The instrument design and manufacture complies with the following standards and requirements for safety and electromagnetic compatibility.

Safety standards

Reference	Description
EU Directive 2014/35/EU	European Union “Low Voltage Directive”
IEC 61010-1 EN 61010-1 UL 61010-1 CAN/CSA C22.2 No. 61010-1	*Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*
IEC 61010-2-081 EN 61010-2-081	*Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-081: Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes*
IEC 60825-1 EN 60825-1	*Safety of laser products – Part 1: Equipment classification and requirements*
21 CFR 1040.10 and 1040.11 as applicable	U.S. FDA Health and Human Services (HHS) “Radiological health performance standards for laser products” and “Radiological health performance standards for specific purpose laser products”

EMC standards

Reference	Description
EU Directive 2014/30/EU	European Union “EMC Directive”
EN 61326-1 IEC 61326-1	*Electrical Equipment for Measurement, Control and Laboratory Use – EMC Requirements – Part 1: General Requirements*
AS/NZS CISPR 11	*Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical (ISM) Radiofrequency Equipment*

(continued)

Reference	Description
ICES-001, Issue 4	*Industrial, Scientific and Medical (ISM) Radio Frequency Generators*
FCC Part 15 Subpart B (47 CFR)	*U.S. Standard Radio Frequency Devices* This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. This equipment has been designed and tested to CISPR 11 Class A. In a domestic environment it may cause radio interference, in which case, you may need to take measures to mitigate the interference. Do not use this device in close proximity to sources of strong electromagnetic radiation (e.g. unshielded intentional RF sources), as these can interfere with the proper operation.

Environmental design standards

Reference	Description
Directive 2012/19/EU	European Union “WEEE Directive”—Waste electrical and electronic equipment
Directive 2011/65/EU & Commision Delegated Directive (EU) 2015/863	European Union “RoHS Directive”—Restriction of hazardous substances in electrical and electronic equipment
SJ/T 11364-2014	“China RoHS” Standard—Marking for the Restricted Use of Hazardous Substances in Electronic and Electrical Products For instrument specific certificates, visit our customer resource page at **www.thermofisher.com/us/en/home/technical-resources/rohs-certificates.html**.

Chemical safety

Chemical hazard warning

WARNING! **CHEMICAL HAZARD!**

Before handling any chemicals, refer to the Safety Data Sheet (SDS) provided by the manufacturer, and observe all relevant precautions.

WARNING! **CHEMICAL HAZARD!**

All chemicals in the instrument, including liquid in the lines, are potentially hazardous. Always determine what chemicals have been used in the instrument before changing reagents or instrument components. Wear appropriate eyewear, protective clothing, and gloves when working on the instrument.

WARNING! **CHEMICAL STORAGE HAZARD!**

Never collect or store waste in a glass container because of the risk of breaking or shattering. Reagent and waste bottles can crack and leak. Each waste bottle should be secured in a low-density polyethylene safety container with the cover fastened and the handles locked in the upright position. Wear appropriate eyewear, clothing, and gloves when handling reagent and waste bottles.

General safety guidelines

To minimize the hazards of chemicals:

- Read and understand the Safety Data Sheets (SDSs) provided by the chemical manufacturer before you store, handle, or work with any chemicals or hazardous materials.
- Minimize contact with chemicals. Wear appropriate personal protective equipment when handling chemicals (for example, safety glasses, gloves, or protective clothing). For additional safety guidelines, consult the SDS.
- Minimize the inhalation of chemicals. Do not leave chemical containers open. Use only with adequate ventilation (for example, fume hood). For additional safety guidelines, consult the SDS.
- Check regularly for chemical leaks or spills. If a leak or spill occurs, follow the manufacturer's cleanup procedures as recommended in the SDS.
- Comply with all local, state/provincial, or national laws and regulations related to chemical storage, handling, and disposal.

Chemical waste safety

Chemical waste hazard

CAUTION! **HAZARDOUS WASTE!**

Refer to Safety Data Sheets (SDSs) and local regulations for handling and disposal.

Chemical waste safety guidelines

To minimize the hazards of chemical waste:

- Read and understand the Safety Data Sheets (SDSs) provided by the manufacturers of the chemicals in the waste container before you store, handle, or dispose of chemical waste.
- Provide primary and secondary waste containers. (A primary waste container holds the immediate waste. A secondary container contains spills or leaks from the primary container. Both containers must be compatible with the waste material and meet federal, state, and local requirements for container storage.)
- Minimize contact with chemicals. Wear appropriate personal protective equipment when handling chemicals (for example, safety glasses, gloves, or protective clothing). For additional safety guidelines, consult the SDS.
- Minimize the inhalation of chemicals. Do not leave chemical containers open. Use only with adequate ventilation (for example, fume hood). For additional safety guidelines, consult the SDS.
- Handle chemical wastes in a fume hood.
- After emptying the waste container, seal it with the cap provided.
- Dispose of the contents of the waste tray and waste bottle in accordance with good laboratory practices and local, state/provincial, or national environmental and health regulations.

Waste disposal

If potentially hazardous waste is generated when you operate the instrument, you must:

- Characterize (by analysis, if necessary) the waste generated by the particular applications, reagents, and substrates used in your laboratory.
- Ensure the health and safety of all personnel in your laboratory.
- Ensure that the instrument waste is stored, transferred, transported, and disposed of according to all local, state/provincial, and/or national regulations.

IMPORTANT! Radioactive or biohazardous materials may require special handling, and disposal limitations may apply.

Electrical safety

DANGER! **ELECTRICAL SHOCK HAZARD!**

Severe electrical shock can result from operating the CellInsight™ CX7 Pro HCS Platform without its instrument panels in place. Do not remove instrument panels. High-voltage contacts are exposed when instrument panels are removed from the instrument.

Fuses

WARNING! **FIRE HAZARD!**

For continued protection against the risk of fire, replace fuses only with fuses of the type and rating specified for the instrument.

Power

DANGER! **ELECTRICAL HAZARD!**

Grounding circuit continuity is vital for the safe operation of equipment. Never operate equipment with the grounding conductor disconnected.

DANGER! **ELECTRICAL HAZARD!**

Use properly configured and approved line cords for the voltage supply in your facility.

DANGER! **ELECTRICAL HAZARD!**

Plug the system into a properly grounded receptacle with adequate current capacity.

Physical hazard safety

Moving parts

WARNING! **PHYSICAL INJURY HAZARD!**

Moving parts can crush and cut. Keep hands clear of moving parts while operating the instrument. Disconnect power before servicing the instrument.

Biological hazard safety

WARNING! **BIOHAZARD!**

Biological samples such as tissues, body fluids, and blood of humans and other animals have the potential to transmit infectious diseases. Follow all applicable local, state / provincial, and / or national regulations. Wear appropriate protective eyewear, clothing, and gloves. Read and follow the guidelines in these publications.

In the U.S.:

- U.S. Department of Health and Human Services guidelines published in *Biosafety in Microbiological and Biomedical Laboratories* (stock no. 017-040-00547-4; **www.cdc.gov/OD/ohs/biosfty/bmbl4/bmbl4toc.htm**)
- Occupational Safety and Health Standards, Bloodborne Pathogens (29 CFR§1910.1030; **www.access.gpo.gov/nara/cfr/waisidx_01/29cfr1910a_01.html**)
- Your company's / institution's Biosafety Program protocols for working with/handling potentially infectious materials.
- Additional information about biohazard guidelines is available at: **www.cdc.gov**

In the EU:

- Check your local guidelines and legislation on biohazard and biosafety precaution, and the best practices published in the World Health Organisation (WHO) Laboratory Biosafety Manual, third edition **www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/**

Documentation and support

Customer and technical support

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  - User guides, manuals, and protocols
  - Certificates of Analysis
  - Safety Data Sheets (SDSs; also known as MSDSs)

  Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale at **www.thermofisher.com/us/en/home/global/terms-and-conditions.html**. If you have any questions, please contact Life Technologies at **www.thermofisher.com/support**.