

# Mabtech IRIS™

## FluoroSpot/ELISpot reader

# Table of Contents

Introduction .....	3
Intended use .....	3
Symbols .....	3
Labels .....	3
Contact information .....	3
Regulatory information .....	4
Quality Management System (QMS) .....	5
Safety .....	6
Product description .....	8
Overview .....	8
In this package .....	8
Cleaning/Decontamination .....	9
Disposal .....	9
Warranty .....	9
Technical specifications .....	10
Setup and installation .....	11
How to use the Mabtech IRIS™ FluoroSpot/ELISpot reader ....	14
Service, maintenance, and transport .....	16
To replace the fuses .....	17





# Introduction

## Intended use

Mabtech IRIS™: Detection of secreting cells in ELISpot and FluoroSpot assay.  
**For research use only.**


## Symbols


These symbols are shown on the reader:




Symbols	Description
	Complies with the directives listed under "Regulatory information"
	Serial number
	Electronic waste, disposal according to WEEE
	<b>Warning!</b> The operating instructions must be consulted in all cases where this symbol is marked.

## Labels

Machine label:



**Mabtech IRIS™ FluoroSpot/ELISpot reader**  
P/N: 2000  
100-240 VAC, 50-60 Hz, 1 A max, 100 W  
Fuse: F4A H, 250 VAC, 5x20 mm  
Inputs: USB 2.0/3.0 and 1000BASE-T  
2020-09-30 Made in Sweden  
S/N:  SN1234  
Revision: R3A  
Box 1233, SE-131 28 Nacka Strand, SWEDEN  
[www.mabtech.com](http://www.mabtech.com)



## Contact information

Mabtech AB  
Augustendalstorget 9  
SE-131 52 Nacka Strand  
Sweden

Customer service:  
Phone: +46 8 716 27 00  
E-mail: [mabtech@mabtech.com](mailto:mabtech@mabtech.com)

# Regulatory information

The Mabtech IRIS™ FluoroSpot/ELISpot reader complies with the following directives:

Directive	Applied standards
<b>CE mark for the European Economic Area (EEA)</b>	
2014/30/EU – Electromagnetic Compatibility Directive (EMC)	<ul style="list-style-type: none"> <li>• EN 61326-1, edition 3:2013-01-11</li> <li>• EN 61326-2-6, edition 2:2013-05-03</li> <li>• EN 55011, edition 5:2016-04-01 +A1:2017-04-21+A11:2020-03-06+A2:2021-04-09</li> <li>• EN 61000-3-2, edition 5:2019-03-01, edition 4:2014-08-22</li> <li>• EN 61000-3-3, edition 3:2013-08-23+A1:2019-08-02</li> </ul>
2014/35/EU – Low Voltage Directive (LVD)	<ul style="list-style-type: none"> <li>• EN 61010-1, edition 3:2010-10-15+ A1:2019-02-22</li> <li>• EN 61010-2-101, edition 2:2017-02-24 <i>Safety test according to particular requirements for in vitro diagnostic (IVD) medical equipment.</i></li> <li>• EN 62471, edition 1:2008-09-12</li> </ul>
2011/65/EU – Restriction of Hazardous Substances Directive (RoHS)	<ul style="list-style-type: none"> <li>• CENELEC EN IEC 63000, edition 1:2018-12-07</li> </ul>
2006/42/EC – Machinery Directive (MD)	

## North America

FCC Part 2	<ul style="list-style-type: none"> <li>• §§2.906 SDoC:2019-10-01</li> </ul>
FCC Part 15*	<ul style="list-style-type: none"> <li>• §15.107:2019-10-01</li> <li>• §15.109:2019-10-01</li> </ul>
ICES-003	<ul style="list-style-type: none"> <li>• Issue 7:2020-10-15</li> </ul>

## International Standards

EMC	<ul style="list-style-type: none"> <li>• IEC 61326-1, edition 2:2012-07-10</li> <li>• IEC 61326-2-6, edition 2:2012-07-10</li> <li>• CISPR 11, edition 6:2015-06-09+A1:2016-06-23+A2:2019-01-18</li> <li>• IEC 61000-3-2, edition 5:2018-01-26; edition 4:2014-05-26</li> <li>• IEC 61000-3-3, edition 3:2013-05-14+A1:2017-05-18</li> </ul>
Safety	<ul style="list-style-type: none"> <li>• IEC 61010-1, edition 3:2010-06-10+A1:2016-12-16</li> <li>• IEC 61010-2-101, edition 2:2015-01-23</li> <li>• IEC 62471, edition 1:2006-07-26</li> </ul>

\*This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to

provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### Quality Management System (QMS)

Standard	Description
EN ISO 13485:2016, Edition 4:2016-03-02	<ul style="list-style-type: none"><li>• Medical devices - Quality management systems - Requirements for regulatory purposes</li></ul>
EN ISO 9001:2015, Edition 5:2015-09-15	<ul style="list-style-type: none"><li>• Quality management systems – Requirements</li></ul>

# Safety

Before you install or operate the system, you must read the safety information. There is a risk of user injury or damage to the system if the instructions in this manual are not followed.



**Warning!** Risk of personal injury if instructions are not followed.



**Caution!** Risk of material damage if instructions are not followed.



**Note:** General information or advice on optimal use of the system.



**Warning!** The Mabtech IRIS™ FluoroSpot/ELISpot reader must only be used by trained persons.



**Warning!** Do not remove the cover of the reader. Injury to eyes from UV light can result. All internal service and maintenance work must be done by an approved technician. Contact Mabtech for more information.



**Warning!** Do not keep or use flammable or non-flammable liquids near the system. Risk of fire.



**Warning!** Use caution when you put a microtiter plate in the reader. Risk of injury to the fingers.



**Warning!** Do not look inside the machine during reading. Risk of injury to eyes from UV light.



**Warning!** Follow the instructions in this manual when you lift or move the reader. Risk of injury to the persons or damage to the system.



**Warning!** The instrument may not be used together with biohazardous substances.



**Warning!** Do not use the instrument near sources of strong electromagnetic radiation (e.g. unshielded intentional RF sources), as these can interfere with the operation of the instrument.



**Warning!** Do not connect faulty equipment to the system. Risk of electrical shock and damage to the system.



**Warning!** Connect all cables correctly when you install the system. Risk of electrical shock.



**Warning!** To disconnect power, unplug either end of the power cable. Place the reader so that the plug can be easily separated from the wall socket.



**Caution!** Only use the microtiter plate types specified under “Technical specifications.” Other plates can cause malfunction and electrical failure.



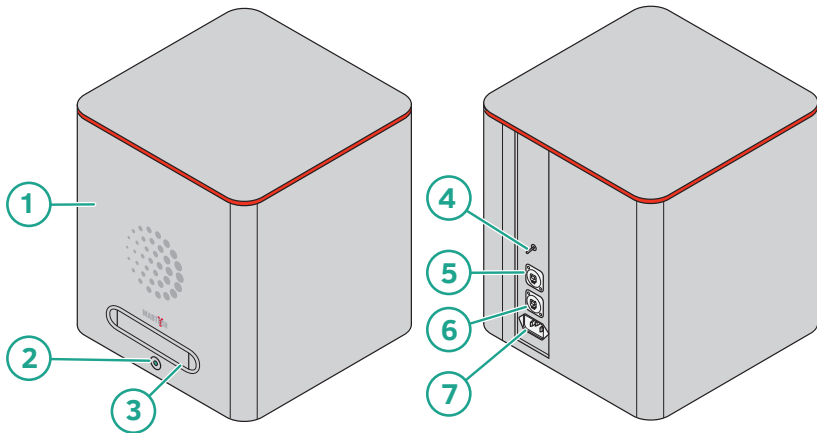
**Caution!** Do not insert microtiter plates that contain liquid. Risk of short circuit in the reader.



**Caution!** Do not place objects near or on the reader. Vibrations from the reader can make objects fall.

# Product description

## Overview



Number	Description	Number	Description
1	Cover	5	USB port
2	Power button	6	Ethernet port
3	Door to plate loader	7	IEC inlet with fuse holder
4	Programming switch*		

\*Programming switch should be set downwards

### In this package

The following parts are included in the package:

- Mabtech IRIS™ FluoroSpot/ELISpot reader
- USB cable
- Ethernet cable
- Power cable
- Spare fuse
- Operating Instructions (this manual)



## Cleaning/Decontamination

Clean the outside of the Mabtech IRIS™ FluoroSpot/ELISpot reader with a damp cloth when needed.

**Before you send the system to any third party, fill out a certificate of decontamination to ensure that the instrument does not contain any potential contaminants.**



**Warning!** The instrument may not be used with biohazardous substances.

**Please note that Mabtech cannot accept any instrument or parts that may be contaminated with biohazardous substances such as viable biological agents, harmful quantities of chemicals, or radioactive materials.**

## Disposal



By the end of the reader life, recycle at a designated local reception point for Waste Electrical and Electronic Equipment (WEEE). You must not discard the reader as household waste.

## Warranty

Refer to the Mabtech General Terms & Conditions of Sale found on <http://www.mabtech.com/terms-and-conditions> or the contractual agreement between the seller and the buyer.



**Caution!** Failure to obey the instructions in this manual will void the warranty.



**Caution!** The safety of any system or equipment that incorporates the Mabtech IRIS™ FluoroSpot/ELISpot reader is the responsibility of the person connecting the reader to that system or equipment.

# Technical specifications

## Power supply

AC input voltage	100 to 240 VAC
AC input current	Max 1 A @100–240 VAC
AC frequency	50 to 60 Hz
DC input voltage	5 VDC, 0.5 A max
Power consumption	100 W max
Fuses	Quick-Acting F4A H, 250 VAC (H = High Breaking Capacity (Ceramic Tube))

## Operation and Maintenance

Interfaces	1 RJ45 port LAN 1000BASE-T
	USB 3.0
Dimensions (H × W × D)	505 mm × 430 mm × 400 mm
Weight	25.5 kg
Environmental specifications	For indoor use only, +5°C to +40°C (+41°F to +104°F) Altitude up to 2000 m Relative humidity range: 5–95% Pollution Degree 2
Mains supply tolerance (%) or absolute mains supply values (voltage fluctuations of the nominal voltage)	+/-10%
Transient overvoltages	Overvoltage Category II Surge Level 3 (CM 12 ohm) & 4 (DM 2 ohm): 2 kV–1.2/50 µs
IP class	IP20

## Key features

Read/calculation speed	ELISpot < 2 min/plate FluoroSpot 1 color < 5 min/plate FluoroSpot 2 colors < 7 min/plate FluoroSpot 3 colors < 10 min/plate FluoroSpot 4 colors < 13 min/plate
Resolution (H × W)	2048 × 2048 pixels
Approved plate types	96-well filter plates with 0.45 µm PVDF membrane: IPFL, MSIP, or MAIPSWU10 (with an adapter)

The Mabtech IRIS™ FluoroSpot/ELISpot reader must be connected to a computer equipped with the Mabtech Apex™ -software.

# Setup and installation



**Warning!** Follow the instructions in this manual when you lift or move the reader. Risk of injury to person or damage to the system.



**Warning!** Do not use or keep flammable liquids near the system. Risk of fire.



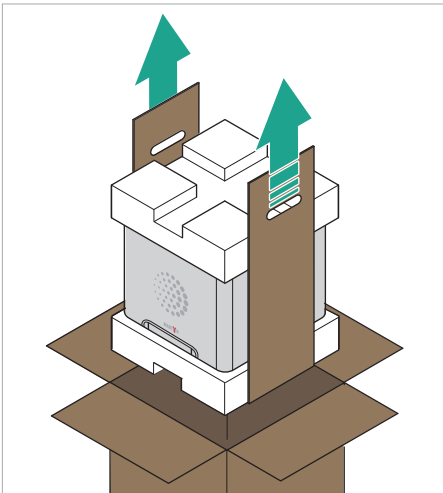
**Caution!** The reader is heavy. Place it on a solid table. Use two people to lift or move the reader.



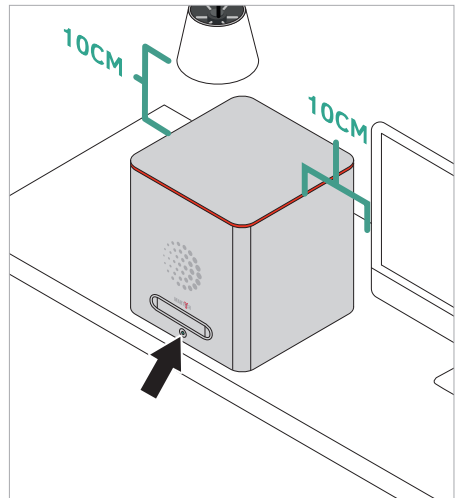
**Caution!** Keep other equipment more than 10 cm away from the reader. Risk of malfunction caused by overheating.



**Note:** Keep the packaging in case the system needs to be sent back to Mabtech for service.

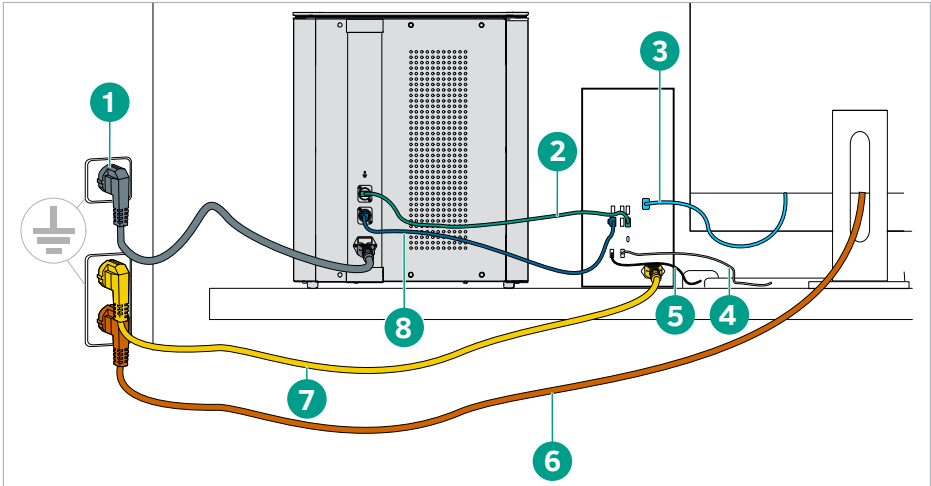


1. Lift the Mabtech IRIS™ FluoroSpot/ELISpot reader out of the box by the handles.



2. Place the Mabtech IRIS™ FluoroSpot/ELISpot reader upright on a solid table. Remove the inner packaging. Make sure that you have received all components specified in the section “In this package” on page 8.

**3.** Connect the USB, Ethernet, and power cables



Number	Description	Number	Description
1	Power cord IRIS	5	Mouse cord
2	USB cord	6	Power cord monitor
3	Display port cable (marked D)	7	Power cord computer
4	Keyboard cord	8	Ethernet cable



**Warning!** Do not connect faulty equipment to the system. Risk of electrical shock and damage to the system.

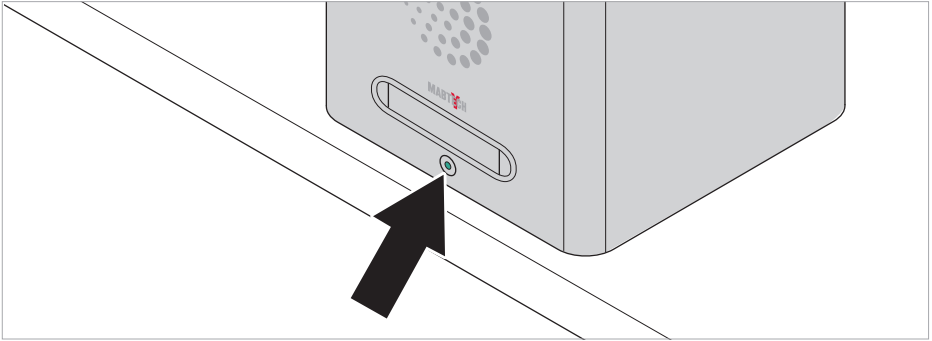


**Caution!** Connect the Mabtech IRIS™ FluoroSpot/ELISpot reader to a grounded outlet. The input voltage must be between 100-240 VAC, 50-60 Hz.

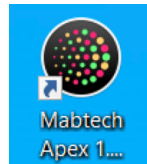


**Note:** In the event of power failure, the reader might have to be re-started.

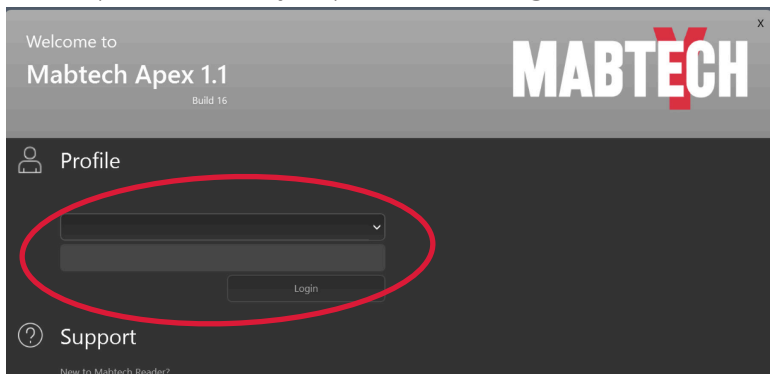
**4.** Push the power button to turn on the Mabtech IRIS™ FluoroSpot/ELISpot reader.



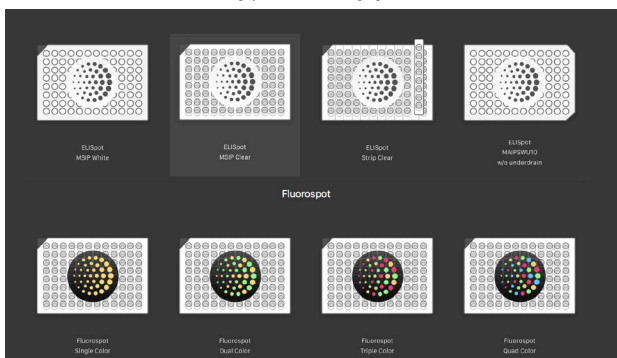
# How to use the Mabtech IRIS™ FluoroSpot/ELISpot reader



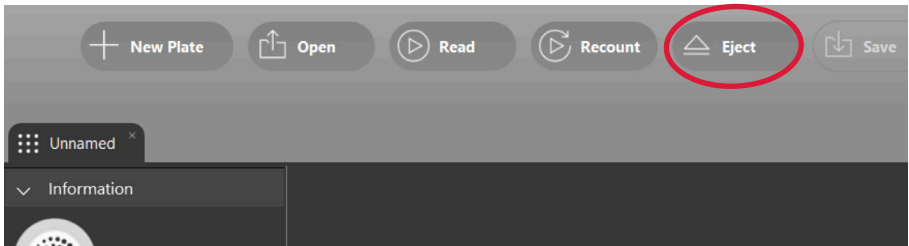
1. Start the computer and double-click on the program symbol. The login screen is shown.
2. Select a profile and enter your password. Click **Login**.



3. Double-click on the type of assay you wish to run.

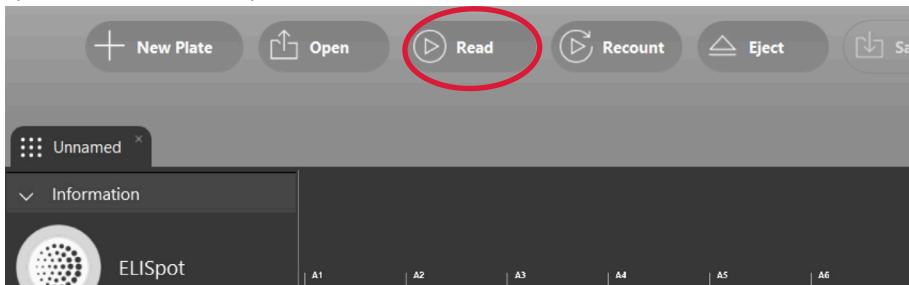


4. Click **Eject**. The reader ejects the plate loader.

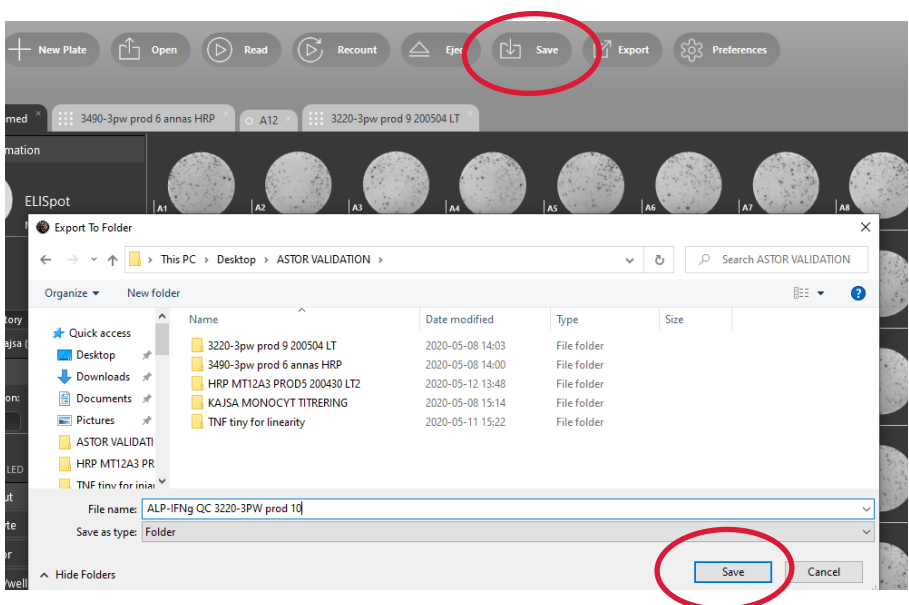


5. Put the microtiter plate in the plate loader and secure the plate using the manual lock system.

6. In Mabtech Apex™, click **Read**. The reader retracts the plate loader. The microtiter plate is read and the spots are counted.



7. Click **Save** and select a folder. Click **Save**.



# Service, maintenance, and transport



**Warning!** Do not remove the cover of the reader. Injury to eyes from UV light can occur. All internal service and maintenance work must be done by a technician approved by Mabtech. Contact Mabtech for more information.



**Caution!** Only use shielded signal cables that are shorter than 3 m to comply with applicable EMC requirements. If the USB cable is longer than 2 m, the connection between the reader and the computer can stop working.



**Caution!** Use only the parts specified below. Using other parts will void the warranty.

Return the equipment in the same box that it arrived in for repair/service/transport. Environmental conditions for transport and storage should be according to IEC 60068-2 and IEC 60721-3:

- Public transportation: -40 to +70°C
- Storage locations: -25 to +55°C

Only the following parts can be replaced by the user:

Part	Description
Power cable	<ul style="list-style-type: none"><li>• 240 V/10 A (international) or 100 V/15 A (North America)</li><li>• IEC 60320-1 C13 connector</li></ul>
Ethernet cable	<ul style="list-style-type: none"><li>• Shielded Ethernet cable (SFTP or STP)</li><li>• Cat. 5e or 6A</li><li>• RJ45 male – RJ45 male</li><li>• ≤ 3 m</li></ul>
USB cable	<ul style="list-style-type: none"><li>• Shielded USB cable</li><li>• Type A 3.0 male - type B 3.0 male</li><li>• ≤ 2m</li></ul>
Fuses x 2	<ul style="list-style-type: none"><li>• Cartridge fuses SP 5×20</li><li>• 250V 4A</li><li>• IEC 60127-2</li><li>• Quick-Acting F, H (H = High Breaking Capacity (Ceramic Tube))</li></ul>



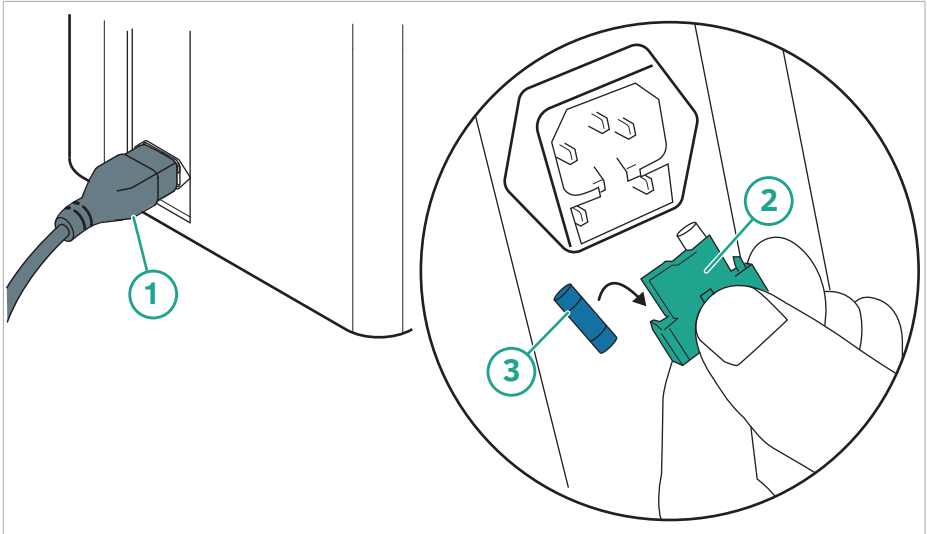
**Note:** All components in Mabtech IRIS™ are compliant with RoHS(Restriction of Hazardous Substances Directive, 2011/65/EU).



## To replace the fuses



**Warning!** Disconnect the power before replacing the fuses. Risk of electrical shock.



1. Pull out the power cable from the IEC inlet.
2. Remove the fuse holder from the IEC inlet with a flat screwdriver or similar tool.
3. Replace the fuses.
4. Plug the fuse holder and the power cable back in.





Developed and manufactured by MABTECH AB, Sweden, whose quality management system complies with the standards ISO 9001:2015 & ISO 13485:2016.

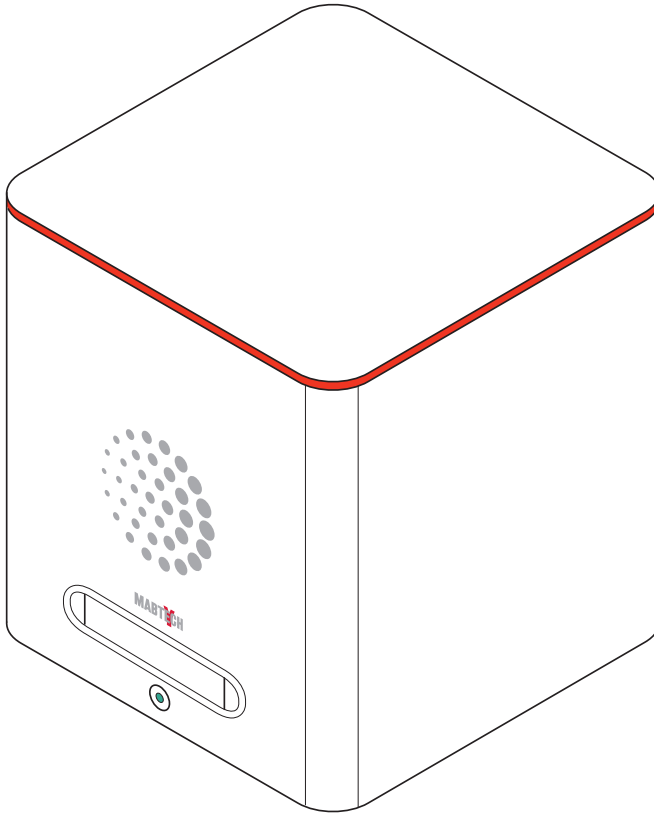


**The products are for research use only.**

MABTECH shall not be liable for the use or handling of the product or for consequential, special, indirect or incidental damages there from.

**Mabtech AB (Head Office)**  
Sweden  
Tel: +46 8 716 27 00  
mabtech@mabtech.com

**Mabtech, Inc.**  
USA  
Tel: +1 513 871-4500  
mabtech.usa@mabtech.com



# Mabtech IRIS™

Lecteur FluoroSpot/ELISpot

# Table des matières

Introduction .....	3
Utilisation prévue.....	3
Symboles.....	3
Étiquettes.....	3
Coordonnées de contact.....	3
Informations réglementaires.....	4
Système de gestion de la qualité (QMS) .....	5
Sécurité .....	6
Description du produit.....	8
Vue d'ensemble.....	8
Contenu.....	8
Nettoyage/décontamination.....	9
Mise au rebut .....	9
Garantie.....	9
Spécifications techniques.....	10
Configuration et installation.....	11
Guide d'utilisation du lecteur Mabtech IRIS™ FluoroSpot/ELISpot ...	14
Entretien, maintenance et transport.....	16
Remplacement des fusibles.....	17





# Introduction

## Utilisation prévue

Mabtech IRIS™ : détection des cellules sécrétrices lors d'un test ELISpot et FluoroSpot.  
**À des fins de recherche uniquement.**

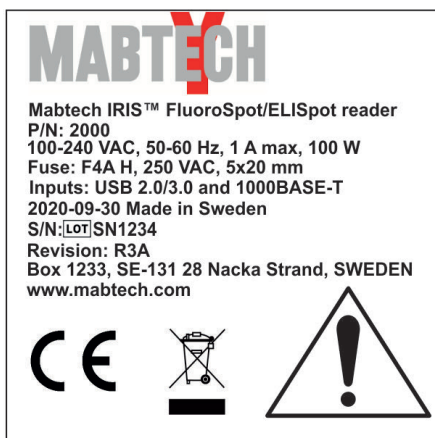
## Symboles

Les symboles répertoriés ci-dessous sont indiqués sur le lecteur :

Symboles	Description
	Conforme aux directives répertoriées dans la section « Informations réglementaires »
	Numéro de série
	Mise au rebut des déchets électroniques DEEE
	<b>Avvertissement !</b> Le mode d'emploi doit être impérativement consulté dès lors que ce symbole apparaît.

## Étiquettes

Étiquette présente sur le lecteur :



## Coordonnées de contact

Mabtech AB  
Augustendalstorget 9  
SE-131 52 Nacka Strand  
Suède

Service client :  
Téléphone : +46 8 716 27 00  
Email : [mabtech@mabtech.com](mailto:mabtech@mabtech.com)

# Informations réglementaires

Le lecteur Mabtech IRIS™ FluoroSpot/ELISpot est conforme aux directives suivantes :

Directive	Normes appliquées
<b>Marquage CE pour l'Espace économique européen (EEE)</b>	
2014/30/UE – Directive relative à la compatibilité électromagnétique (CEM)	<ul style="list-style-type: none"><li>• EN 61326-1, édition 3:2013-01-11</li><li>• EN 61326-2-6, édition 2:2013-05-03</li><li>• EN 55011, édition 5:2016-04-01 +A1:2017-04-21+A11:2020-03-06+A2:2021-04-09</li><li>• EN 61000-3-2, édition 5:2019-03-01, édition 4:2014-08-22</li><li>• EN 61000-3-3, édition 3:2013-08-23+A1:2019-08-02</li></ul>
2014/35/UE – Directive relative aux limites de tension (LVD)	<ul style="list-style-type: none"><li>• EN 61010-1, édition 3:2010-10-15+ A1:2019-02-22</li><li>• EN 61010-2-101, édition 2:2017-02-24 <i>Test de sécurité dans le cadre des exigences particulières pour les dispositifs médicaux de diagnostic in vitro (DIV).</i></li><li>• EN 62471, édition 1:2008-09-12</li></ul>
2011/65/UE – Directive relative à la limitation de certaines substances dangereuses (RoHS)	<ul style="list-style-type: none"><li>• EN CEI 63000 CENELEC, édition 1:2018-12-07</li></ul>
2006/42/CE – Directive relative aux machines (DM)	

## Amérique du Nord

FCC Partie 2	<ul style="list-style-type: none"><li>• §§2.906 SDoC:2019-10-01</li></ul>
FCC Partie 15*	<ul style="list-style-type: none"><li>• §15.107:2019-10-01</li><li>• §15.109:2019-10-01</li></ul>
ICES-003	<ul style="list-style-type: none"><li>• Numéro 7:2020-10-15</li></ul>

## Normes internationales

CEM	<ul style="list-style-type: none"><li>• CEI 61326-1, édition 2:2012-07-10</li><li>• CEI 61326-2-6, édition 2:2012-07-10</li><li>• CISPR 11, édition 6:2015-06-09+A1:2016-06-23+A2:2019-01-18</li><li>• CEI 61000-3-2, édition 5:2018-01-26; édition 4:2014-05-26</li><li>• CEI 61000-3-3, édition 3:2013-05-14+A1:2017-05-18</li></ul>
Sécurité	<ul style="list-style-type: none"><li>• CEI 61010-1, édition 3:2010-06-10+A1:2016-12-16</li><li>• CEI 61010-2-101, édition 2:2015-01-23</li><li>• CEI 62471, édition 1:2006-07-26</li></ul>



\* Conformément à la section 15 de la certification FCC, ce lecteur a été testé et déclaré conforme aux spécifications d'un appareil numérique de classe B. Ces contraintes sont destinées à apporter une protection raisonnable contre les interférences nocives lorsque le lecteur est utilisé dans un environnement résidentiel. Étant donné que ce lecteur produit, utilise et émet de l'énergie sous forme de radiofréquences, ce dernier peut, s'il n'est pas installé et employé conformément aux instructions, provoquer des interférences nuisibles pour les communications radio. Cependant, des interférences peuvent toujours survenir au sein d'une installation spécifique. Si ce lecteur occasionne des interférences nuisibles à la réception de la radio ou de la télévision, ce qui peut être détecté en allumant ou éteignant ledit lecteur, l'utilisateur peut essayer d'éliminer ces interférences en suivant au moins l'une des procédures suivantes :

- Réorienter l'antenne de réception, ou la placer à un autre endroit.
- Augmenter la distance séparant le lecteur du récepteur.
- Brancher le lecteur sur une prise de courant d'un circuit autre que celui utilisé pour le récepteur.
- Contacter votre revendeur ou un technicien radio/TV qualifié pour obtenir une assistance.

## Système de gestion de la qualité (QMS)

Norme	Description
EN ISO 13485:2016, Edition 4:2016-03-02	<ul style="list-style-type: none"><li>• Dispositifs médicaux - Systèmes de management de la qualité - Exigences à des fins réglementaires</li></ul>
EN ISO 9001:2015, Edition 5:2015-09-15	<ul style="list-style-type: none"><li>• Systèmes de management de la qualité - Exigences</li></ul>

# Sécurité

Avant d'installer ou d'utiliser le lecteur, lisez impérativement les consignes de sécurité. En cas de non-respect des instructions énumérées dans ce mode d'emploi, l'utilisateur risque de se blesser ou d'endommager le système.



**Avertissement !** Risque de blessures corporelles en cas de non-respect des instructions.



**Mise en garde !** Risque d'endommagement du lecteur en cas de non-respect des instructions.



**Remarque :** Informations générales ou conseils pour une utilisation optimale du lecteur.



**Avertissement !** Le lecteur Mabtech IRIS™ FluoroSpot/ELISpot ne doit être utilisé que par des personnes qualifiées.



**Avertissement !** Ne retirez pas la coque du lecteur. La lumière UV peut entraîner des lésions oculaires. Tous les travaux d'entretien et de maintenance effectués en interne doivent être réalisés par un technicien agréé. Contactez Mabtech pour obtenir plus d'informations.



**Avertissement !** Ne stockez ou n'utilisez jamais de liquides inflammables ou non inflammables à proximité du lecteur. Risque d'incendie.



**Avertissement !** Soyez prudent lorsque vous placez une plaque de microtitration dans le lecteur. Risque de blessures aux doigts.



**Avertissement !** Ne regardez pas à l'intérieur du lecteur pendant que celui-ci est en fonctionnement. La lumière UV peut entraîner des lésions oculaires.



**Avertissement !** Suivez les instructions présentes dans ce mode d'emploi pour soulever ou déplacer le lecteur. Risque de blessures corporelles ou d'endommagement du lecteur.



**Avertissement !** Le lecteur ne doit en aucun cas être utilisé avec des substances infectieuses.



**Avertissement !** N'utilisez pas le lecteur à proximité de sources à rayonnement électromagnétique puissant (par exemple, des sources RF intentionnelles non blindées) puisque celles-ci pourraient interférer avec le bon fonctionnement du lecteur.



**Avertissement !** Ne connectez aucun équipement défectueux au système. Risque de choc électrique et d'endommagement du lecteur.



**Avertissement !** Branchez correctement tous les câbles lors de la mise en service du lecteur. Risque de choc électrique.



**Avertissement !** Afin de couper l'alimentation, débranchez l'une des extrémités du câble d'alimentation. Installez le lecteur de sorte que vous puissiez facilement retirer la prise du secteur.



**Mise en garde !** Utilisez uniquement les modèles de plaques de microtitration spécifiés dans la section « Spécifications techniques ». L'utilisation d'autres plaques que celles mentionnées dans le présent manuel peut entraîner un dysfonctionnement et une panne électrique.



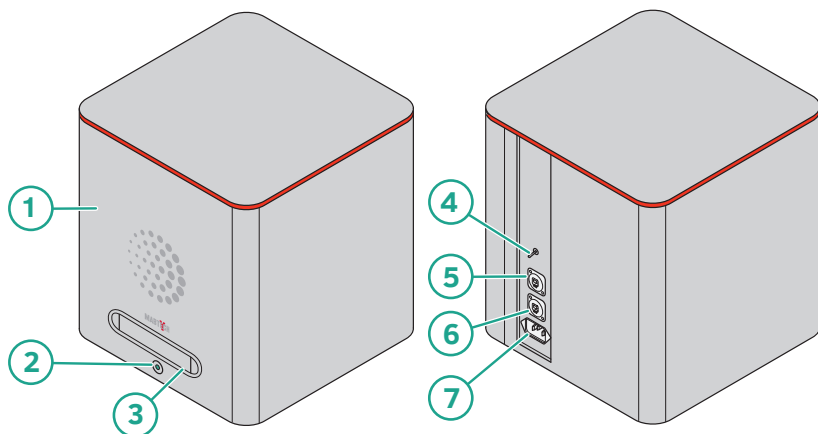
**Mise en garde !** N'insérez pas de plaques de microtitration contenant du liquide. Risque de court-circuit au niveau du lecteur.



**Mise en garde !** Ne placez aucun objet à proximité ou sur le lecteur. En effet, les vibrations émises par le lecteur peuvent faire tomber des objets.

# Description du produit

## Vue d'ensemble



Numéro	Description	Numéro	Description
1	Coque	5	Port USB
2	Bouton d'alimentation	6	Port Ethernet
3	Trappe d'accès au chargeur de plaques	7	Entrée IEC avec porte-fusible
4	Sélecteur de programme*		

\*Le sélecteur de programme doit être orienté vers le bas

## Contenu

Les pièces suivantes sont incluses dans le présent pack :

- Lecteur Mabtech IRIS™ FluoroSpot/ELISpot
- Câble USB
- Câble Ethernet
- Câble d'alimentation
- Fusible de rechange
- Mode d'emploi (ce manuel)

## Nettoyage/décontamination

Si besoin, nettoyez l'extérieur du lecteur Mabtech IRIS™ FluoroSpot/ELISpot avec un chiffon humide.

**Avant d'expédier le lecteur à un tiers, remplissez une attestation de décontamination pour garantir que ledit lecteur ne renferme pas d'agents contaminants.**



**Avertissement !** Le lecteur ne doit en aucun cas être utilisé avec des substances infectieuses.

**Veillez remarquer que Mabtech ne peut en aucun cas accepter d'instrument ou de pièce potentiellement contaminé(e) par des substances infectieuses telles que des agents biologiques viables, des quantités nocives de produits chimiques ou des substances radioactives.**

## Mise au rebut



Une fois le lecteur hors d'usage, recyclez-le dans un point de collecte local habilité à gérer les déchets d'équipements électriques et électroniques (DEEE). Vous ne devez en aucun cas jeter votre lecteur comme s'il s'agissait d'un simple déchet ménager.

## Garantie

Consultez les Conditions générales de vente Mabtech disponibles sur <http://www.mabtech.com/terms-and-conditions> ou le contrat de vente établi entre vous, l'acheteur, et le vendeur.



**Mise en garde !** Le non-respect des instructions contenues dans ce mode d'emploi entraînera l'annulation de la garantie.



**Mise en garde !** La sécurité de tout système ou équipement intégrant le lecteur Mabtech IRIS™ FluoroSpot/ELISpot relève de la responsabilité de la personne ayant intégré ledit lecteur audit système ou équipement.

# Spécifications techniques

## Alimentation électrique

Tension d'entrée AC	100 à 240 VCA
Courant d'entrée AC	1 A max. @100 - 240 VCA
Fréquence AC	50 à 60 Hz
Tension d'entrée CC	5 VCC, 0,5 A max.
Consommation d'énergie	100 W max.
Fusibles	F4A H à action rapide, 250 VCA (H = haut pouvoir de coupure (tube en céramique))

## Fonctionnement et maintenance

Interfaces	1 port LAN RJ45 1000BASE-T
	USB 3.0
Dimensions (h × l × p)	505 mm × 430 mm × 400 mm
Poids	25,5 kg
Spécifications environnementales	Pour une utilisation en intérieur uniquement, +5 °C à +40 °C (+41 °F à +104 °F) Jusqu'à 2000 m d'altitude Plage d'humidité relative : 5 – 95 % Degré de pollution 2
Tolérance de l'alimentation secteur (%) ou valeurs absolues de l'alimentation secteur (variations de tension de la tension nominale)	+/- 10 %
Surtensions transitoires	Catégorie de surtension II Niveau de protection contre les surtensions 3 (12 ohms en mode nominal) et 4 (2 ohms en mode différentiel) : 2 kV – 1,2/50 µs
Indice IP	IP20

## Principales caractéristiques

Vitesse de lecture/calcul	ELISpot < 2 min/plaque FluoroSpot 1 couleur < 5 min/plaque FluoroSpot 2 couleurs < 7 min/plaque FluoroSpot 3 couleurs < 10 min/plaque FluoroSpot 4 couleurs < 13 min/plaque
Résolution (h × l)	2048 × 2048 pixels
Modèles de plaques approuvés	Plaques de filtration 96 puits avec membrane en PVDF de 0,45 µm : IPFL, MSIP ou MAIPSWU10 (avec adaptateur)

Le lecteur Mabtech IRIS™ FluoroSpot/ELISpot doit être branché à un ordinateur équipé du logiciel Mabtech Apex™.

# Configuration et installation



**Avvertissement !** Suivez les instructions présentes dans ce mode d'emploi pour soulever ou déplacer le lecteur. Risque de blessures corporelles ou d'endommagement du lecteur.



**Avvertissement !** N'utilisez ou ne stockez jamais de liquides inflammables à proximité du lecteur. Risque d'incendie.



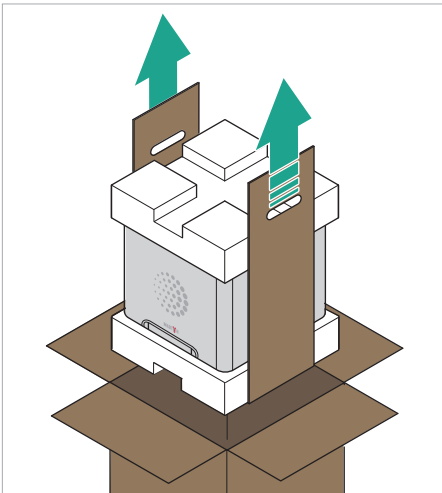
**Mise en garde !** Le lecteur est lourd. Placez-le sur une table robuste. Soulevez ou déplacez le lecteur à deux personnes.



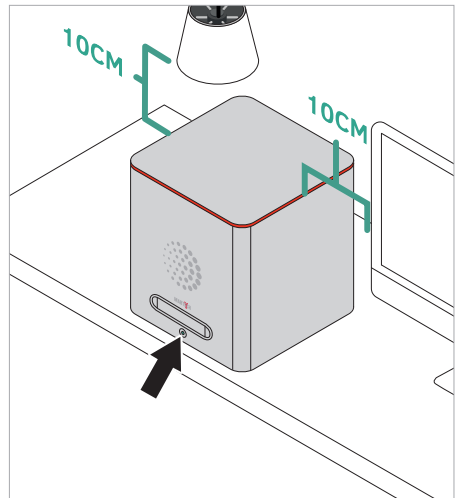
**Mise en garde !** Gardez les autres équipements à plus de 10 cm du lecteur. Risque de dysfonctionnement causé par une surchauffe.



**Remarque :** Conservez l'emballage au cas où le lecteur devrait être renvoyé à Mabtech pour réparation.

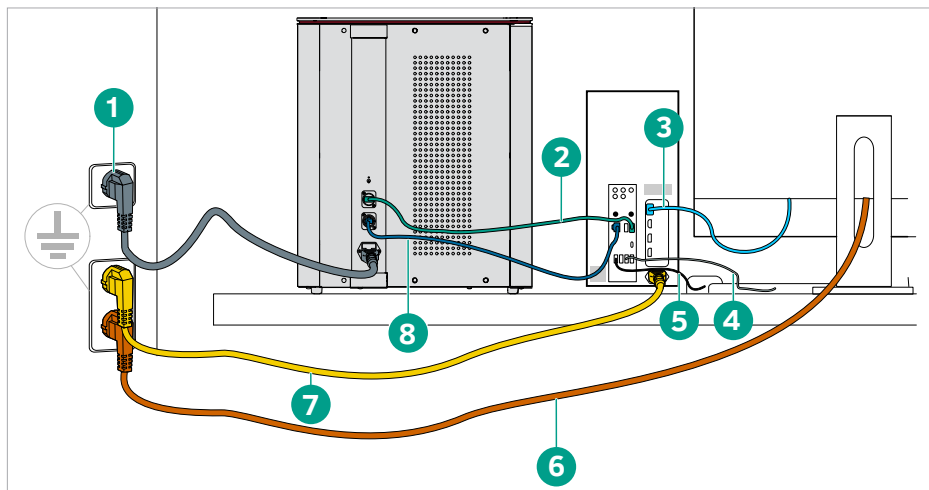


1. Sortez le lecteur Mabtech IRIS™ ~FluoroSpot/ELISpot de la boîte à l'aide des poignées.



2. Positionnez le lecteur Mabtech IRIS™ FluoroSpot/ELISpot à la verticale sur une table robuste. Retirez l'emballage intérieur. Assurez-vous d'avoir reçu tous les composants spécifiés dans la section « Contenu » consultable en page 8.

### 3. Branchez les câbles USB, Ethernet et d'alimentation



Numéro	Description	Numéro	Description
1	Câble d'alimentation du lecteur IRIS	5	Fil de la souris
2	Câble USB	6	Câble d'alimentation de l'écran
3	Câble DisplayPort (marqué D)	7	Câble d'alimentation de l'ordinateur
4	Câble du clavier	8	Câble Ethernet



**Attention !** Ne connectez aucun équipement défectueux au système. Risque de choc électrique et d'endommagement du lecteur.



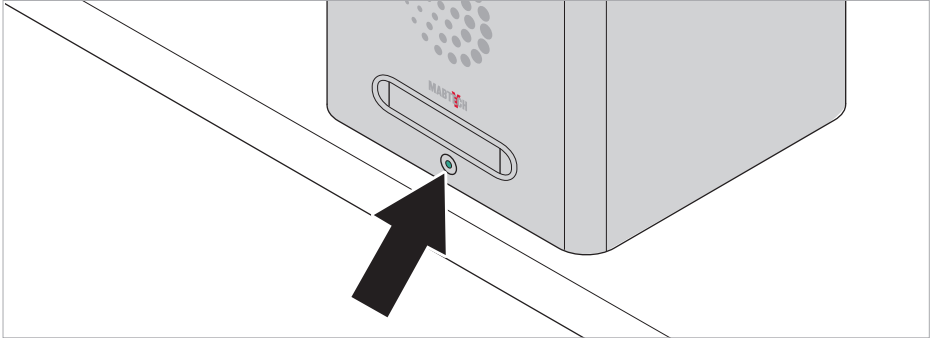
**Mise en garde !** Branchez le lecteur Mabtech IRIS™ FluoroSpot/ELISpot sur une prise reliée à la terre. La tension d'entrée doit être comprise entre 100 - 240 VCA, 50 - 60 Hz.



**Remarque :** en cas de coupure de courant, le lecteur devra être redémarré.

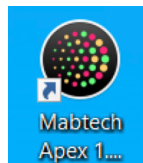


4. Appuyez sur le bouton d'alimentation pour allumer le lecteur Mabtech IRIS™ FluoroSpot/ELISpot.

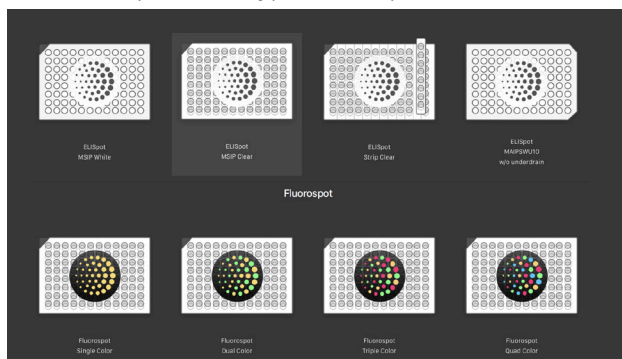


# Guide d'utilisation du lecteur Mabtech IRIS™ FluoroSpot/ELISpot

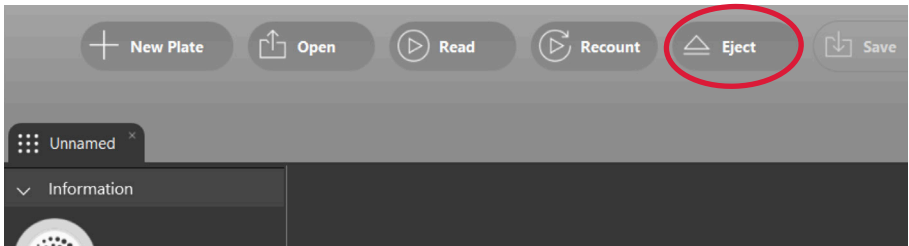
1. Démarrez l'ordinateur et double-cliquez sur le symbole du programme. L'écran de connexion s'affiche.
2. Sélectionnez un profil et saisissez votre mot de passe. Cliquez sur **Login**(Connexion).



3. Double-cliquez sur le type de test que vous souhaitez exécuter.

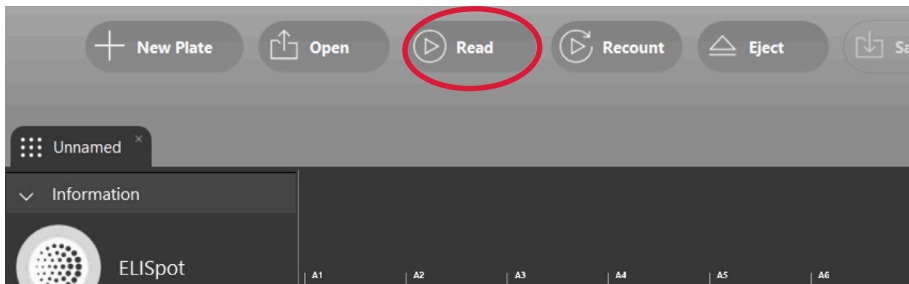


4. Cliquez sur **Eject** (Éjecter). Ainsi, le lecteur éjecte le chargeur de plaques.

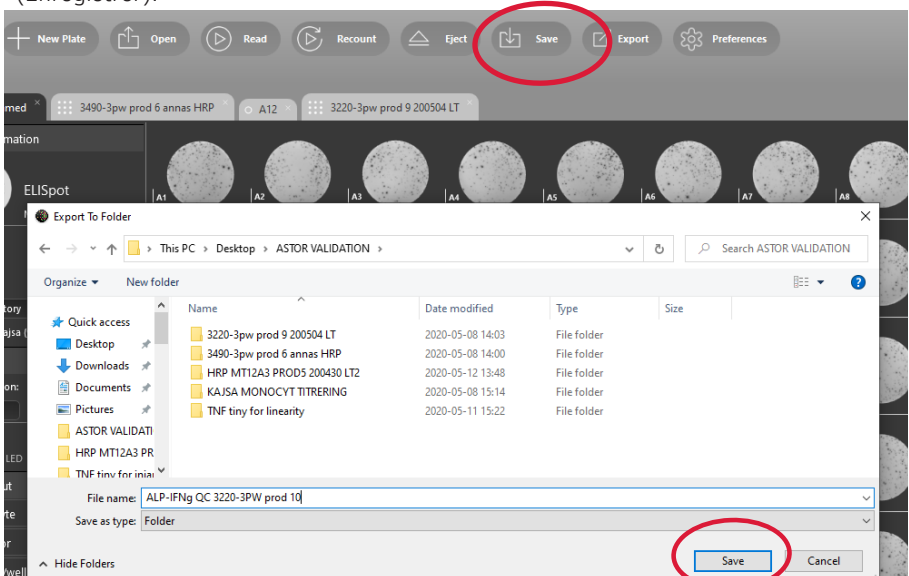


5. Placez la plaque de microtitration sur le chargeur de plaques et fixez-la à l'aide du système de verrouillage manuel.

6. Depuis le logiciel Mabtech Apex™, cliquez sur **Read** (Lire). Ainsi, le lecteur avale le chargeur de plaques. La plaque de microtitration est alors lue. La numérotation des puits peut alors commencer.



7. Cliquez sur **Save** (Enregistrer) et sélectionnez un dossier. Cliquez sur **Save** (Enregistrer).



# Entretien, maintenance et transport



**Avvertissement !** Ne retirez pas la coque du lecteur. La lumière UV peut entraîner des lésions oculaires. Tous les travaux d'entretien et de maintenance effectués en interne doivent être réalisés par un technicien agréé par Mabtech. Contactez Mabtech pour obtenir plus d'informations.



**Mise en garde !** N'utilisez que des câbles de signal blindés d'une longueur inférieure à 3 m pour respecter les exigences relatives à la CEM en vigueur. Si le câble USB mesure plus de 2 mètres, la connexion entre le lecteur et l'ordinateur risque de ne pas fonctionner correctement.



**Mise en garde !** Utilisez uniquement les pièces spécifiées ci-dessous. L'utilisation d'autres pièces annulera la garantie.

Que ce soit pour des réparations, un entretien, ou simplement l'expédier, réutilisez le carton d'origine. Les conditions environnementales relatives au transport et au stockage doivent être conformes aux normes CEI 60068-2 et CEI 60721-3 :

- Transports en commun : -40 à +70 °C
- Sites de stockage : -25 à +55 °C

L'utilisateur peut uniquement remplacer les pièces suivantes :

Pièce	Description
Câble d'alimentation	<ul style="list-style-type: none"><li>• 240 V/10 A (internationale) ou 100 V/15 A (Amérique du Nord)</li><li>• Connecteur C13 répondant à la norme CEI 60320-1</li></ul>
Câble Ethernet	<ul style="list-style-type: none"><li>• Câble Ethernet blindé (SFTP ou STP)</li><li>• Cat. 5e ou 6A</li><li>• RJ45 mâle – RJ45 mâle</li><li>• ≤ 3 m</li></ul>
Câble USB	<ul style="list-style-type: none"><li>• Câble USB blindé</li><li>• Type A 3.0 mâle - Type B 3.0 mâle</li><li>• ≤ 2 m</li></ul>
Fusibles x 2	<ul style="list-style-type: none"><li>• Fusibles à cartouche SP 5×20</li><li>• 250 V, 4 A</li><li>• CEI 60127-2</li><li>• F à action rapide, H (H = haut pouvoir de coupure (tube en céramique))</li></ul>

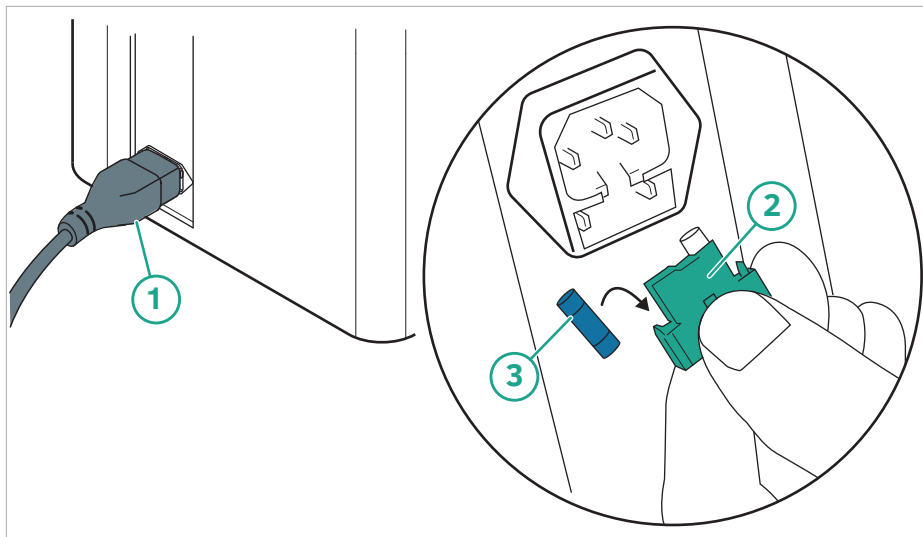


**Remarque :** Tous les composants du lecteur Mabtech IRIS™ sont conformes à la directive RoHS (directive relative à la limitation de certaines substances dangereuses, 2011/65/UE).

## Remplacement des fusibles



**Avertissement !** Débranchez l'alimentation avant de remplacer les fusibles. Risque de choc électrique.



1. Retirez le câble d'alimentation de l'entrée IEC.
2. Retirez le porte-fusible de l'entrée IEC à l'aide d'un tournevis plat ou d'un outil similaire.
3. Remplacez les fusibles.
4. Rebranchez le porte-fusible et le câble d'alimentation.





Developed and manufactured by MABTECH AB, Sweden, whose quality management system complies with the standards ISO 9001:2015 & ISO 13485:2016.



**The products are for research use only.**

MABTECH shall not be liable for the use or handling of the product or for consequential, special, indirect or incidental damages there from.

**Mabtech AB (Head Office)**  
Sweden  
Tel: +46 8 716 27 00  
mabtech@mabtech.com

**Mabtech, Inc.**  
USA  
Tel: +1 513 871-4500  
mabtech.usa@mabtech.com



# Certificate of Instrument Decontamination

To ensure the safety of your colleagues, transport personnel, Mabtech personnel, service engineers and any third party involved in the use, service, refurb, disposal or transportation of the instrument, it is essential that you characterize any potential contaminants to which the instrument was exposed and describe any decontamination procedure used to clean the instrument. Prior to returning the instrument to a contracted recycler or Mabtech, whether for repair, maintenance, trade-in, loan or waste, this form must be completed and signed by the customer. The form shall thereafter be attached to the outside of transport packing and emailed to Customer Service. Prior to performance of any service of an instrument, the completed form must have been received by Mabtech or any contracted third party.

**Instrument ID**

Model:	Serial Number:
Description:	Reason for returning:
RMA Number (if required):	

**Potential Contaminants**

<p><b>Radioactive materials:</b> Has this instrument been exposed to radioactive materials?                  YES <input type="checkbox"/> NO <input type="checkbox"/></p>	<p>If YES, please specify the radioactive isotopes:</p>
<p><b>Biological agents:</b> Has this instrument been exposed to biological agents? YES <input type="checkbox"/> NO <input type="checkbox"/></p>	<p>If YES, please state the viable biological agent(s), their Hazard Group(s) and Biological Level/Category of Contamination:</p>
<p><b>Hazardous chemicals:</b> Has this instrument been exposed to chemicals that are toxic in quantities harmful to human contact, carcinogenic, mutagenic, toxic for reproduction, sensitizing, and/or which has not been fully tested?                  YES <input type="checkbox"/> NO <input type="checkbox"/></p>	<p>If YES, please specify the hazardous chemicals:</p>

**Decontamination**

**If YES is answered to any of the above potential contaminants**, describe the procedures used for cleaning the instrument for biological, radioactive and other hazardous contaminants. Please include any sheets and radioactive survey results applicable indicating levels at or below local background levels:

**Acknowledgement**

The customer understands and agrees that decontamination is critical to issues of health and safety and that thoroughly completing this Certificate is essential. The customer represents that customer has removed all kinds of biological agents, non-hazardous chemicals, hazardous chemicals, and radioactive materials from the instrument and that customer performed all decontamination procedures as described in this Certificate and completed this Certificate accurately, truthfully and in full. Customer hereby assumes all responsibility and liability for and shall defend and indemnify Mabtech against injury or damage of whatever kind incurred by Mabtech, its employees, contractors, and/or agents that result directly or indirectly from Customer's breach of this representation and warranty. The Customer accepts that Mabtech has no obligation to repair, service, or transport any product if this Certificate is not completed in full.

Name:	Signature:
Company/Institute:	Date:
Phone:	Email:

## Instrument Decontamination Procedures

The following procedures are examples of instrument decontamination procedures and serves as support only. Please refer to decontaminant manufacturers' instructions, the WHO's Laboratory Biosafety Manual or other sources of procedures that may apply at your company or institute. In case you have any questions, or if you need further advice, please refer to the person in charge of Environment, Health and Safety issues at your work place, or to your Mabtech representative.

### Biological Agents

The World Health Organisation ("WHO") Laboratory Biosafety Manual describes decontamination procedures that are used for instruments. Customers are required to refer to the current version of this manual (Edition 3) available at [https://www.who.int/csr/resources/publications/biosafety/WHO\\_CDS\\_CSR\\_LYO\\_2004\\_11/en/](https://www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/) for identifying the appropriate procedure. The customer must assess the suitability of these methods for the biological agents concerned and adherence to any warnings in the instrument's Operating Instructions. Commonly used decontamination agents described in WHO's manual are:

1. Sodium hypochlorite (1:10 dilution of bleach) that gives 5g/l concentration is a general all-purpose disinfectant. However, it should be prepared fresh each time. Avoid mixing bleach with acid as this would release toxic chloride gas.
2. Formaldehyde (Formalin) a solution of gas in water if about 37% concentration. It is effective for all microorganisms and spores at temperatures > 20°C. Formaldehyde is not active against prions. It is a suspected carcinogen and safety precautions must be followed when handling the chemical.
3. Glutaraldehyde is generally supplied in a solution of approximately 2%. It is active against vegetative bacteria, spores, fungi and lipid/nonlipid viruses. It may take several hours to kill spores. Glutaraldehyde is toxic and precautions must be taken when handling the chemical.
4. Phenolic compounds are active against vegetative bacteria and lipid-containing viruses, and if properly formulated, against mycobacteria. Phenolic compounds are not active against spores and poorly against non-lipid viruses. Certain phenolic compounds may be inactivated by water hardness. Phenolic compounds are toxic and can penetrate the skin. Safety precautions must be followed
5. Alcohols such as 70% ethanol or 70% isopropanol are active against vegetative bacteria, fungi and lipid-containing viruses but not against spores. Their action against non-lipid viruses are variable. Alcohols are flammable and must not be used near open flames or heat.
6. Hydrogen peroxide is a strong oxidant and can be a potent broad-spectrum germicide. However, a 3-6% solution of hydrogen peroxidase is relatively slow and limited as

germicide. Hydrogen peroxide can be corrosive and affect the skin and mucous membrane, and precautions must be taken when handling the chemical.

## Special instructions Hazard Group 3 or 4

1. Instruments used in Biosafety/Containment Level 3 or 4 laboratories must be decontaminated by the Customer using an internationally approved sterilization procedure.
2. The Customer must then move the instrument to a laboratory with Containment Level 1 or 2. Mabtech personnel are not allowed to enter into a Containment Level 3 or 4 laboratory to perform maintenance or service.
3. It may not be possible for Mabtech to service or transport instruments used in Level 3 or 4 laboratories.

## Radioactive Materials

1. Apply an industry standard radioactive decontaminant (Radiacwash® or similar) to the instrument and wipe surfaces as directed by the manufacturer's instructions.
2. Survey the instrument with an appropriate radioactive-measuring instrument.
3. Satisfactory decontamination is defined as survey results at or below background level, or in the US only, for service work excluding transportation, level designated to be clean or safe in the Customer's regulatory approved Site Radioactive materials License.

## Hazardous Chemicals

1. Areas exposed to hazardous chemicals should be washed with an acceptable solvent such as ethanol or isopropanol.
2. Rinse the surface with detergent and water.

**Please note that Mabtech cannot accept any instrument or parts that may be contaminated with viable biological agents, harmful quantities of chemicals or radioactive materials.**

## Basic Service Contract

This Service Agreement (“Agreement”) is being made between [name, address] (hereinafter the “Customer”), and Mabtech AB located at Augustendalstorget 9, 131 52 Nacka Strand, Sweden (hereinafter “Mabtech”) on [xx xx, 2020]. The customer and Mabtech may also be referred to as “Party” or together as the “Parties”. This Agreement will become effective on [xx xx, 2020] (“Effective Date”).

### 1. Services

Mabtech agrees to perform basic services (“Services”) on Mabtech IRIS 2000-#[ID] during the term of this Agreement.

The Services in this package will be performed remotely and cover the following items:

- Yearly performance qualification of instrument functions and light sources using calibration plates, including documentation.
- Technical support and user training/inquiries\*.
- Software updates when available.
- Mabtech will repair reader if broken: the instrument is sent to Mabtech Global Service Centre for repair at user’s costs.

\*Mabtech will provide technical support for the preinstalled Mabtech Apex software. Third party software may require support from the respective vendors.

### 2. Compensation

The Services will be performed on a fixed yearly price of [3600 EUR] excl. VAT, with the addition of material cost which will be charged according to Mabtech’s list price with a discount of 25%. All material expenses must be approved by the Customer before commencement.

The Service undertaking in this Agreement does not cover repair or replacement of parts with regard to defects or damage caused by the Customer’s neglect, the misuse or alteration of the instrument or the failure to follow any manuals or instructions relating to the instrument. In such event travel, labor and parts will be charged separately.

### 3. Warranty

Mabtech warrants that all Services will be carried out with reasonable care and skill. Mabtech’s sole liability for breach of this warranty shall be at its discretion to give credit for or reperform the Services in question. A six-month warranty will be given to new replaced parts.

**4. Payment**

Unless otherwise agreed in writing, payment in full shall be made to Mabtech in the currency invoiced no later than thirty (30) days from the date of invoice. The yearly fee will be invoiced prior to the Effective Date, and for the following years until termination, a new yearly fee will be invoiced prior to each anniversary of the Effective Date.

**5. Termination**

This Agreement shall remain in effect until terminated in writing by one of the parties with 30 days notice.

If Mabtech terminates the Agreement, the Customer will be refunded for any unused service fees on a pro rata basis. If Customer terminates the Agreement, no refund will be made.

**6. Assignment**

The Parties may not assign this Agreement to a third party, unless both Parties agree to the assignment in writing. Mabtech shall have the right appoint subcontractors to perform part of the Services, but shall remain responsible for the Services towards the Customer.

**7. General terms and conditions**

The Services are subject to Mabtech General Conditions of Sale attached as Appendix 1. However, in the event of conflicting provisions this Agreement shall prevail.

**[customer name]**

Mabtech AB

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# Full Service Contract

This Service Agreement (“Agreement”) is being made between [name address] (hereinafter the “Customer”), and Mabtech AB located at Augustendalstorget 9, 131 52 Nacka Strand, Sweden (hereinafter “Mabtech”) on [xx xx, 2020]. The customer and Mabtech may also be referred to as “Party” or together as the “Parties”. This Agreement will become effective on [xx xx, 2020] (“Effective Date”).

## 1. Services

Mabtech agrees to perform services (“Services”) on Mabtech IRIS 2000-#[ID] during the term of this Agreement

The Services cover the following items:

- Yearly on-site performance qualification of instrument functions and light sources using calibration plates, including documentation.
- Yearly on-site hardware maintenance and internal inspection, including documentation.
- Online technical support and user training/inquiries\*.
- Software and firmware upgrades when available.
- On-site repairs (max. 2 days of work) to be performed within 3 weeks from request. If problem is not solved within 2 weeks from first service meeting, Mabtech will provide a temporary replacement until the original instrument is repaired.\*\*

\*Mabtech will provide technical support for the preinstalled Mabtech Apex software. Third party software may require support from the respective vendors.

\*\* The replacement instrument will be shipped within 3 days from request.

Any additional or unscheduled Services or deliverables not defined above must be mutually agreed upon by both parties in writing.

## 2. Compensation

The Services will be performed on a fixed yearly price of [€5500] excl. VAT. Replacement parts for the Service are included in the price.

The Service undertaking in this Agreement does not cover repair or replacement of parts with regard to defects or damage caused by the Customer’s neglect, the misuse or alteration of the instrument or the failure to follow any manuals or instructions relating to the instrument. In such event travel, labor and parts will be charged separately.

## 3. Warranty

Mabtech warrants that all Services will be carried out with reasonable care and skill. Mabtech’s sole liability for breach of this warranty shall be at its discretion to give credit for or reperform the Services in question. A six-month warranty will be given to new replaced parts.

## 4. Payment

Unless otherwise agreed in writing, payment in full shall be made to Mabtech in the currency invoiced no later than thirty (30) days from the date of invoice. The yearly fee will be invoiced prior to the Effective Date, and for the following years until termination, a new yearly fee will be invoiced prior to each anniversary of the Effective Date.

**5. Termination**

This Agreement shall remain in effect until terminated in writing by one of the parties with 30 days notice.

If Mabtech terminates the Agreement the Customer will be refunded for any unused service fees on a pro rata basis. If Customer terminates the Agreement, no refund will be made.

**6. Assignment**

The Parties may not assign this Agreement to a third party, unless both Parties agree to the assignment in writing. Mabtech shall have the right appoint subcontractors to perform part of the Services, but shall remain responsible for the Services towards the Customer.

**7. General terms and conditions**

The Services are subject to Mabtech General Conditions of Sale attached as Appendix 1. However, in the event of conflicting provisions this Agreement shall prevail.

**[customer name]**

Mabtech AB

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_



## Appendix 1 – Noise Levels

Sounds source	Noise level (dB)
Monotone buzzing from Mabtech IRIS while turned on but not reading. Distance 0.5 m.	36.4
Irregular sharp noise from rotating wheels in Mabtech IRIS while reading FluoroSpot plate in 4 color mode. Distance 0.5 m.	45.0



Jesper Larsson  
Head of Instruments  
2022-04-21

**Contact Details**

Email: [mabtech@mabtech.com](mailto:mabtech@mabtech.com)  
Phone: +46 8 716 27 00  
Fax: +46 8 716 27 01

**Mailing Address**

Mabtech AB  
Box 1233  
SE-131 28 Nacka Strand  
Sweden

**Visiting Address**

Mabtech AB  
Augustendalstorget 9  
SE-131 52 Nacka Strand  
Sweden

**Organisation/Finance**

Organisation no: 556 276-8225  
VAT no: SE556276822501