

# RapidFire 400 System

## Safety Guide



Original instructions

# Contents

General safety information	3
Product description	3
Before using the RapidFire System	4
Graphical instrument symbols	5
General system safety hazards	7
Moving parts hazards	7
Solvents hazards	7
Electrical hazards	7
Radiation hazards	8
Possible misuse of the RapidFire System	9
Chemical safety	10
General chemical hazards	10
Chemical waste hazards	11
Environmental conformity and standards	12
Environmental operating ranges	12
Declaration of Conformity	12

## General safety information

# General safety information

This guide provides safety information for the RapidFire 400 System.

## Product description

The RapidFire 400 System is a sample purification and injection system that interfaces directly with the mass spectrometer.

The system is housed in a two-level frame. The top level is enclosed with a microplate handler, three plate stacks, robotic stages, and fluidic lines. The lower level includes a solvent tray, four fluidic pumps, and instrument control electronics. The controlling computer, monitor, keyboard and mouse are on the top level outside of the enclosed portion.

The whole system is on locking wheels enabling the system to be mobile.



## Before using the RapidFire System

Before using the RapidFire System, make sure:

- You are aware of the potential hazards and understand how to avoid being exposed to them.
- You have been properly trained in the correct and safe operation of the system.
- You have read and understood all material safety data sheets (MSDS) for chemicals handled.

The following figure shows the location of the warning labels on the RapidFire 400 System.

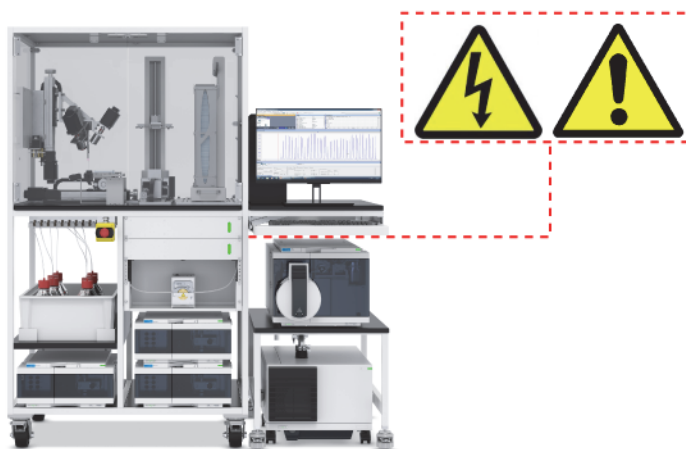





Figure 1. RapidFire 400 System warning label location

## Graphical instrument symbols

### Electrical symbols

The following table describes the electrical symbols that can be displayed on the RapidFire System.




**Table 1. Electrical symbols**

Symbol	Description
	Indicates this terminal may be connected to the signal ground reference of another instrument. This is not a safety grounding terminal.
	Indicates a safety grounding terminal that must be connected to earth ground before any other electrical connections are made to the instrument.
	Indicates a terminal that can receive or supply alternating current or voltage.

### Safety symbols

The following table describes the safety symbols that can be displayed on the RapidFire System. Each symbol appears by itself or with text that explains the relevant hazard. These safety symbols can also appear next to DANGER, WARNING, or CAUTION.

**Table 2. Safety symbols**

Symbol	Description
	Indicates that you must read the accompanying instructions (for example, the safety guide) for more information before proceeding.
	Indicates hazardous voltages.
	Indicates laser hazard. Located on the hand-held barcode scanner

## Graphical instrument symbols

### **WARNING**

---

Use the RapidFire System only as specified in the User Guide. Using the system in a manner not specified by Agilent Technologies can result in personal injury or damage to the system.

### **WARNING**

---

To avoid injury to personnel and potential damage to the equipment, do not attempt to lift the RapidFire System. To move the system, push the platform on its wheels. When in use, keep the wheels locked.

## General system safety hazards

### Moving parts hazards

**WARNING**

Moving parts can crush, puncture, and cut. Keep hands clear of moving parts while operating the instrument and keep interlock doors closed.



### Solvents hazards

**WARNING**

Always wear appropriate protection, including eye protection and gloves when working with solvents and chemicals. Refer to the applicable MSDS for more information about the materials you are using.

### Electrical hazards

**WARNING**

Severe electrical shock can result from operating the RapidFire System without its power cords correctly in place.

Grounding circuit continuity is required for the safe operation of the equipment.

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



## Radiation hazards

### WARNING

Connect the AC input power cords to properly grounded receptacles with adequate current capacity. The branch circuit over-current protection circuit breakers protecting the building receptacles must be rated not more than 20A.



### WARNING

Be sure that the RapidFire System main supply cables are routed in such a way as to minimize the risk of a tripping hazard. Agilent Technologies recommends the use of mechanical protection, such as a rubberized cable guard on the floor to cover and protect the main supply cables.

### WARNING

Make sure that the point at which the detachable power cords are connected to the RapidFire System is clear from clutter and that it is accessible at all times.

## Radiation hazards

The RapidFire System contains two barcode scanners for reading barcodes. The hand-held barcode scanner is categorized as a Class 3R laser.

### WARNING

**Do not look directly at the laser beam. Looking directly at the laser beam can result in serious eye injury.**



## Possible misuse of the RapidFire System

### WARNING

Take care to avoid the following situations:

- Do not work inside the RapidFire System unit without first disconnecting all power supply cables.
- Do not sit or stand on the tabletop of the RapidFire System platform.
- Do not operate the RapidFire System unless its wheels are locked in the brake position.
- Do not modify, remove, alter, or change the system electronics and hardware. Any modifications to the RapidFire System will void the warranty and the regulatory compliance of the system.
- Do not use any substance, chemical, solvent, solution, or any other material with or in the RapidFire System, unless you have read and understood, and are able to comply with its material safety data sheet (MSDS)

Do not operate the system outside of its acceptable environmental conditions as stated in “[Environmental operating ranges](#)” on page 12.

---

## Chemical safety

### General chemical hazards

#### **WARNING**

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

To minimize the hazards of chemicals:

- Read and understand the MSDS provided by the 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).
- Minimize the inhalation of chemicals. Do not leave chemical containers open. Use only with adequate ventilation (for example, a fume hood).
- Check regularly for chemical leaks or spills. If either of those occur, follow the cleanup procedures from the manufacturer, as recommended in the MSDS.
- Comply with all local, state/provincial, or national laws and regulations related to chemical storage, handling, and disposal.

## Chemical waste hazards

### WARNING

To prevent potential injury, refer to the Material Safety Data Sheet (MSDS) provided by the manufacturer, and observe all relevant precautions before handling any chemicals.

### CAUTION

**HAZARDOUS WASTE: Refer to Material Safety Data Sheets and local regulations for handling and disposal.**

To minimize the hazards of chemical waste:

- Read and understand the MSDS provided by the manufacturers of the chemicals before you store, or dispose of chemical waste.
- Provide primary and secondary waste containers. Both containers must be compatible with the waste material and meet federal, state/provincial, 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).
- Minimize the inhalation of chemicals. Do not leave chemical containers open.
- Handle chemical wastes in a fume hood.
- After emptying a 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.
- Ensure that the RapidFire System waste is stored, transferred, transported, and disposed of according to all local, state/provincial, and national regulations.

## Environmental conformity and standards

### Environmental operating ranges

The RapidFire System is for indoor use only. Use the RapidFire System within the following ranges:

**Table 3. RapidFire 400 System operating conditions**

Operating condition	Range
Pollution degree	2
Installation category	II
Temperature	4°C to 35°C
Relative humidity	20% to 90%, non-condensing
Electrical supply	100-240 VAC , 50/60 Hz, maximum 6 A for each of two power inlets
Environment	<ul style="list-style-type: none"> <li>• Non-explosive surroundings</li> <li>• Indoor use only</li> <li>• Laboratory use only</li> </ul>
Altitude	0 to 2000 meters
Noise level	Below 70 dbA


**Table 4. RapidFire 400 System fuse requirements**

Requirement	Value
Fuse, stage controller	2A, 250 VAC, SB, 5 x 20 mm, ceramic
Fuse, robot controller	2A, 250 VAC, SB, 5 x 20 mm, ceramic
Fuse, cooling unit controller	5A, 250 VAC, SB, 5 x 200 mm, ceramic

### Declaration of Conformity

The Declaration of Conformity (in English) for the RapidFire 400 System follows .

## Declaration of Conformity

 <b>Agilent Technologies</b>	<b>DECLARATION OF INCORPORATION</b> According to Directive 2006/42/EC, Annex II, part B
---	--

**Manufacturer's Name:** Agilent Technologies Singapore (International) Pte. Ltd.  
**Manufacturer's Address:** 1, Yishun Avenue 7,  
Singapore 768923

### Declares under sole responsibility that the product as originally delivered

**Product Name & Function:** RapidFire 400 Platform  
**Model & Part Numbers:** G9532A  
**Product Options:** This declaration covers all options of the above product  
**Serial Number(s):** SGYYWWXXNN (YY=20-99, WW=01-53, XX=M1, NN=00-99)

is incomplete machinery and must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of Machinery Directive 2006/42/EC. This equipment complies with all applicable EHSRs in Annex I, but cannot in itself perform a specific application, and is required to be installed and used only as part of the complete system, G9532AA.

**Agilent Technologies also hereby declares** that these models comply with the essential requirements of the following European Directives:

EMC Directive 2014/30/EU  
RoHS Directive 2011/65/EU

and conform with the following product standards:

**EMC:** IEC 61326-1:2012 / EN 61326-1:2013  
**Safety:** IEC 61010-1:2010 / EN 61010-1:2010  
IEC 61010-2-081:2015 / EN 61010-2-081:2015  
**Other:** EN 50581:2012

Relevant technical documentation is compiled in accordance with part B of Annex VII of the Machinery Directive. Agilent undertakes to transmit, via email, relevant information on the partly completed machinery in response to a reasoned request by national authorities.

### Contact established in the Community authorized to compile the technical file or the relevant technical documents:

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Strasse 8  
76337 Waldbronn, Germany

### Supplementary Information:

The products were tested in a typical configuration with Agilent Technologies test systems.  
This Declaration of Incorporation applies to above-listed products placed on the EU market after:

12/01/2020

Santa Clara, CA



Date



Location

Kevin Draper  
Quality Manager

For more information, please contact your local Agilent Technologies sales office, agent or distributor.

G9532-90004 Rev. A.00

## Declaration of Conformity

 <b>Agilent Technologies</b>	<b>DECLARATION OF CONFORMITY</b> According to EN ISO/IEC 17050-1: 2010 (EN)	
---	--	---

**Manufacturer's Name:** Agilent Technologies Singapore (International) Pte. Ltd.  
**Manufacturer's Address:** 1, Yishun Avenue 7,  
Singapore 768923

**Declares under sole responsibility that the product as originally delivered and installed**

**Product Name & Function:** RapidFire 400 System  
**Model & Part Numbers:** G9532AA  
**Product Options:** This declaration covers all options of the above system, including  
Chiller option (G9542A)  
**Serial Number(s)** SGYYWWXXNN (YY=20-99, WW=01-53, XX=M1, NN=00-99)

**complies with the essential requirements of the following applicable European Directives, and carries the CE marking accordingly:**

EMC Directive 2014/30/EU  
Machinery Directive 2006/42/EC  
RoHS Directive 2011/65/EU

**and conforms with the following product standards:**

**EMC:** IEC 61326-1:2012 / EN 61326-1:2013  
**Safety:** IEC 61010-1:2010 / EN 61010-1:2010  
IEC 61010-2-081:2015 / EN 61010-2-081:2015  
**Other:** EN 50581:2012

**Contact established in the Community authorized to compile the technical file or the relevant technical documents:**

Agilent Technologies Deutschland GmbH  
Hewlett-Packard-Strasse 8  
76337 Waldbronn  
Germany

**Supplementary Information:**

The products were tested in a typical configuration with Agilent Technologies test systems  
This DoC applies to above-listed products placed on the EU market after:

12/01/2020

Date

Santa Clara, CA

Location



Kevin Draper  
Quality Manager

For more information, please contact your local Agilent Technologies sales office, agent or distributor.

G9532-90001 Rev. A.00

This page intentionally left blank.

# In This Guide

Safety information for RapidFire 400 System

[www.agilent.com](http://www.agilent.com)

© Agilent Technologies, Inc. 2020



G9532-90005-9-PUI  
Printed in USA  
October 2020 Revision A.00

