TECHNICAL NOTE

Keeping Your IsoSpark Healthy

Ensuring consistent function of your IsoSpark System with routine maintenance

In this Technical Note we outline:

- Why maintenance is important
- What to check when performing cleaning runs
- When to perform cleaning
- How to order cleaning kits

BRUKER

Why is routine maintenance important?

Performing IsoSpark maintenance, such as cleaning runs every two weeks, keeps the fluidics in the IsoSpark at optimal performance to ensure consistent delivery of reagents.

When is routine maintenance necessary?

Within a 2-week time period, if experiments with less than 4 chips are run, or if the instrument will be idle, it is necessary to complete a maintenance cleaning.

What to check when performing cleaning runs

CO_2 Supply: Ensure that the CO_2 supply is adequate for a cleaning run. Adequate CO_2 is required to run the incubator as well as to move reagents through the fluidics manifold. Inadequate CO_2 pressure could result in the cleaning procedure being interrupted mid-run. Always verify the main valve of the CO_2 tank is open. Gauges can show sufficient tank and in-line pressure even when the cylinder valve is shut off.

- When using CO_2 tanks, make sure that the tank valve is open and there are no leaks on any fittings. An automatic switchover system with at least two tanks is recommended to ensure correct levels of CO_2 are delivered throughout the run. Contact Bruker support for an automatic switchover system recommendation.
- Bruker's recommended method to track CO_2 consumption by number of runs assumes 9 lbs of CO_2 is consumed per run. To calculate when tanks need to be replaced, subtract the empty weight from the tank (stamped on tank) from the total weight of the tank (tank + CO_2) to determine the volume of CO_2 in the tank. Based on this calculation, each 50 lbs CO_2 tank should be replaced after two runs. A two-bottle switch-over system is recommended to minimize unused CO_2.

Successful Completion of Cleaning: Upon completion of a cleaning run, a message will display indicating success. Should the instrument encounter any errors during cleaning, the IsoSpark will display a message indicating that additional support is required. In the event of a cleaning error, perform an additional maintenance cleaning run. If that clean passes, IsoSpark is sufficiently cleaned and can be used as normal. If the error persists after the additional cleaning run, please contact Bruker Support at support@isoplexis.com or by calling (475) 221-8402.

The IsoSpark

Figure 1 | The IsoSpark provides new and accessible layers of biological data at the single-cell level and the ability to interrogate the secreted proteome, the phosphoproteome, and the metabolome from single cells for the first time.

Cleaning Kit Ordering Information

Performing a cleaning run requires both Reusable Cleaning Chips and cleaning reagents; either the Reusable Cleaning Cartridge or Prefilled Single-Use Cleaning Cartridge:

- The Reusable Cleaning Chips last for up to one year's worth of cleanings.
- The Reusable Cleaning Cartridge also lasts for one year's worth of cleanings and is accompanied with an easy-to-follow reagent protocol. The Reusable Cleaning Cartridge is compatible with IsoSpark Software 1.10.3 or later.
- IsoSpark users also have the option to utilize Prefilled Single-Use Cleaning Cartridges that contain reagents for one cleaning cycle. The expiration for the Single-Use Cleaning Reagent kit is 6 months.

We also offer the Reusable Cleaning Kit: IsoSpark as a bundle option with both Reusable Cleaning Chips and Reusable Cleaning Cartridge. Please note that only reusable cleaning products are included with the instrument warranty or Bruker Service Agreement. Please see Table 1 for ordering information

Reminders

When loading chips into the instrument, ensure they are right side up. If a chip is loaded upside down, the instrument cannot scan the barcode and the chip tray must be opened and the chip inspected. If the correct chip position is not checked and is upside down, this can cause reagents to leak into the machine.

Cleaning Products and Ordering Information for Your IsoSpark

Product Name	Product Code
Reusable Cleaning Chips - 4	ISOCODE-1800-4
Reusable Cleaning Cartridge	S-ISOCODE-1701-4
Reusable Cleaning Kit: IsoSpark	S-ISOCODE-1801-4
Prefilled Single-Use Cleaning Cartridge	S-ISOCODE-1700-4

Table 1 | How to order cleaning kits.