



# NanoCollect WOLF G2<sup>®</sup> Cell Sorter Site Readiness Guide

Thank you for purchasing the WOLF G2 Cell Sorter instrument. To get you started and to assure a successful and timely installation, please refer to this specification or set of requirements. Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably. This document is an information guide and checklist prepared for you that outlines the supplies, consumables, space, and utility requirements for your equipment.

## Section A: Customer Readiness

Ensure that your site meets the following specifications before the installation date. NanoCollect Biomedical, Inc. reserves the right to reschedule the installation dependent upon the readiness of your site. For details, see specific sections within this checklist, including:

- The necessary laboratory or bench space is available.
- Power requirements and sufficient outlets are available at location.
- Environmental conditions at location.
- The required operating supplies necessary for the product and installation.
- Please have users of the instrument present throughout these services.
- Should your site not be ready for whatever reasons, please contact your NanoCollect representative as soon as possible to re-arrange services.

## Section B: Customer Information

If you have questions or problems in providing anything described above, please contact NanoCollect Technical Support Hours: Monday–Friday, 6:00 AM–5:00 PM Pacific Standard Time (9:00 AM–8:00 PM EST).

E-mail: [support@nanocellect.com](mailto:support@nanocellect.com)

Phone: (877) 745-7678 (Extension #3)

## Section C: Dimensions and Weight

Please identify the laboratory bench space before your instrument arrives based on the following table. Pay special attention to the total height and total weight requirements for all system components to avoid bench space with overhanging shelves. In addition to space for the instrument itself, allow additional space for the computer and keyboard. Adequate space must be provided around instrument for ventilation and access to the communication’s connector. Allow at least 6 inches around the instrument and computer to allow for proper ventilation and protect the instrument and computer from accidental liquid spills.

| Instrument Description             | Weight |      | Height |      | Depth |      | Width |      |
|------------------------------------|--------|------|--------|------|-------|------|-------|------|
|                                    | kg     | lbs  | cm     | in   | cm    | in   | cm    | in   |
| WOLF G2 Cell Sorter Dimensions     | 24.5   | 54   | 37.6   | 14.8 | 34.5  | 13.6 | 45.8  | 18.0 |
| N1 Single Cell Dispenser           | 2.5    | 5.5  | 16.5   | 6.5  | 21.1  | 8.3  | 21.4  | 8.4  |
| CS1 Chiller-Stirrer                | 1.365  | 3.0  | 13.66  | 5.38 | 9.07  | 3.57 | 13.7  | 5.39 |
| CS1 Chiller-Stirrer Control Module | N.L.   | N.L. | 5.5    | 2.16 | 13.43 | 5.29 | 13.52 | 5.32 |

## Section D: Power Requirements

| Instrument Description   | Power Requirements      |
|--------------------------|-------------------------|
| WOLF G2 Cell Sorter      | 100-240V, 50-60Hz, 2A   |
| N1 Single Cell Dispenser | 24VDC, 2A               |
| CS1 Chiller-Stirrer      | 100-240V, 50-60Hz, 1.1A |

**NOTE:** NanoCollect recommends customers in areas prone to power failures and other events that abruptly terminate the function of the instrument and computer to use a 1.5-kVA uninterruptible power supply (UPS) to help prevent data corruption and possibly system damage.

## Section E: Environmental Requirements

| Instrument Description   | Temperature           | Humidity                 | Altitude    |
|--------------------------|-----------------------|--------------------------|-------------|
| WOLF G2 Cell Sorter      | 15°-30°C (59°-86°F)   | <80% relative humidity   | Up to 2000m |
| N1 Single Cell Dispenser | 15°-30°C (59°-86°F)   | <80% relative humidity   | Up to 2000m |
| CS1 Chiller-Stirrer      | 15°- 25°C, (59°-77°F) | 5%-60% relative humidity | Up to 2000m |

**NOTE:** This instrument must be installed and operated only in an environment that ensures a pollution degree 2 (or better) according to IEC/EN 61010-1. If used in areas with higher pollution degree, the device needs to be protected accordingly.

## Section F: Wolf G2 Cell Sorter and N1 Single Cell Dispenser Components

The WOLF G2 Cell Sorter comes with the following components:

- WOLF G2 Cell Sorter
- WOLFViewer software
- All-in-one computer
- Waste container
- 2 Power cords
- 1 Ethernet cable
- Tube holder
- NanoCollect Calibration Beads
- NanoCollect 9-Peak Rainbow Alignment Beads
- Reference Cartridge
- Laser Alignment Report

If you have also purchased the N1 Single Cell Dispenser, the unit comes with:

- N1 Single Cell Dispenser
- N1 Single Cell Dispenser Alignment Tool
- N1 Single Cell Dispenser Alignment Plate
- VGA Cable

If you have also purchased the CS1 Chiller-Stirrer, the unit comes with:

- CS1 Chiller-Stirrer Device (with metal mounting bracket)
- Control Module, Ethernet Cable
- Power Supply, Power Supply Cable
- 3x Magnetic Stir bars

## Section G: Additional Supplies Required but Not Provided

Please ensure that you have access to the following prior to installation.

- 20 mL syringes
- 0.22 sterile-filtered PBS (Phosphate-buffered saline solution)
- 0.22 µm syringe filters
- 50 mL conical tubes
- 5 mL FACS tubes
- 37-40 µm cell strainers
- Optical-grade isopropanol wipes
- Vortex
- 96-or 384-well plates (If using N1 Single Cell Dispenser)
- 10% bleach for liquid waste decontamination, if biological materials are used
- EtOH for surface cleaning
- Any assay controls needed

**The following is a list of approved reagents for use with this system:**

Cell culture media, PBS, or other typical aqueous based buffers. For 405 nm laser configurations: addition of up to 5% BSA in PBS, and 1% BSA in culture medium is recommended. For all other laser configurations, addition of up to 5% BSA in PBS, and 2% BSA in culture medium is recommended.

**The following is a list of non-approved reagents:**

Organic solvents, high salt content buffers, bleach, ethanol, oils (mineral oil, etc). Addition of BSA in amounts higher than 5%. FBS is not recommended. Do not use household bleach as a decontamination solution as it contains fluorescent whitening agents that may interfere with fluorescent staining. Bleach may also negatively affect the lifespan of the cartridge components.

## Section H: General Safety

- The WOLF G2 Cell Sorter is intended for general laboratory Research Use Only (RUO).
- The WOLF G2 Cell Sorter is NOT intended for diagnostic testing or clinical use.
- Always follow product labelling and manufacturer's recommendations. Please contact NanoCelect Biomedical, Inc. if you have questions about how to proceed or if you are uncertain about these instructions.
- If this instrument is used in a manner not specified by the manufacturer, the protection provided by the instrument may be impaired.
- NanoCelect Biomedical, Inc. urges its customers to comply with all national health and safety standards such as the use of barrier protection. This may include, but is not limited to, protective eyewear, gloves, and suitable laboratory attire when operating or maintaining the instrument.

## Section I: Operator / User Safety Warnings

Safety symbols and labels alert you to potentially dangerous conditions. These symbols, together with text, apply to specific procedures and appear as needed on the instrument and throughout this manual. Do not remove these labels.



### Biohazard / Biological Risk

Consider all materials (specimens, reagents, controls, etc.) and areas these materials come into contact with as being potentially infectious and/or life threatening. Wear appropriate laboratory attire, follow universal laboratory safety protocols, and adhere to local regulations.



**Electrical shock hazard.**

There is the possibility of electrical shock when the instrument is plugged into the power source.



**Laser radiation / hazard**

Consider all laser sources as being potentially hazardous to eyesight. Wear the proper protective eyewear and never look directly into laser light.



**Laser aperture hazard**

Directed laser light is emitted from the aperture indicated with this label. Follow all laser radiation / hazard warnings. There is risk of personal injury if the laser safety interlock is bypassed.



**CLASS 1 LASER PRODUCT.**

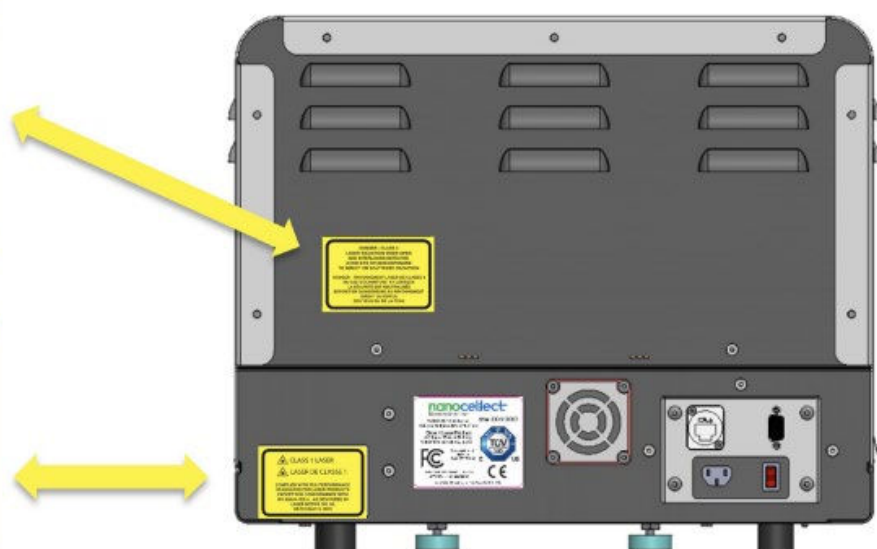
Any laser product which during operation does not permit human access to laser radiation (accessible emission, see IEC 60825-1:2014 3.2) in excess of the AEL of Class 1 for applicable wavelengths and emission duration (see IEC 60825-1:2014 5.3 and 4.3 e).



**CLASS 4 LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION**

Any laser product which during operation permits human access to laser radiation (accessible emission, see IEC 60825-1:2014 3.2) in excess of the AEL of Class 1 and Class 2, as applicable, but which does not permit human access to laser radiation in excess of the AEL of Classes 3R and 3B (respectively) for any emission duration and wavelength (see IEC 60825-1:2014 5.3 d and 5.3 e).

**Warning Labels Location.** The laser warning labels are placed on the rear of the instrument. Refer to the figure below for the exact location of the labels.



## Section J: Laser Safety

The WOLF G2 Cell Sorter contains a solid-state 408nm, 488nm, 561nm and/or 637nm laser under the case, and a secondary optical cover with a safety interlock. The instrument, nevertheless, may pose certain hazards associated with these lasers, if misused.

WOLF G2 Cell Sorter is designed to comply/conform with the IEC/EN 60825-1:2014 and CAN/CSA-E60825-1:15 standards and requirements. Although the laser diode output power is 55 mW, to comply/conform with Class 1 laser product, the laser is securely installed in an optical chamber to limit the Accessible Emission below the Accessible Emission Limit (AEL) of all 408nm, 488nm, 561nm, and 637nm laser. WOLF G2 Cell Sorter is designed to comply/conform with the IEC/EN 60825-1:2014 and CAN/CSA-E60825-1 as well as the Class 1 Laser product standards and requirements. WOLF G2 Cell Sorter is a Class 1 laser product.

**The following elaborates the conformity and compliance of the significant subclauses selected:**

***Subclause 6.15.2 Collateral radiation:***

The WOLF G2 Cell Sorter 405nm, 488nm, 561nm and 637nm (55mW) lasers, which was properly secured in a protective optical chamber/housing, can still emit collateral radiation. However, under the TUV SUD's laser emission safety check and test, the collateral radiation is less than Accessible Emission Limit (AEL) of all 405nm, 488nm, 561nm and 637nm laser at normal operating conditions and single fault conditions, both of which are significantly lower than the Accessible Emission Limit (AEL) for 405nm Class 1 laser radiation of 39  $\mu$ W, or 224  $\mu$ W for 488nm laser, 390  $\mu$ W for 561nm laser, and 390  $\mu$ W for 637nm laser.

***Subclause 6.16 Power limiting circuit:***

The WOLF G2 Cell Sorter, although designed with a 405nm, 488nm, 561nm and 637nm (55mW) laser with a properly regulated power supply and feedback loop circuit to regulate the emission power, a single fault condition might occur during malicious operation. However, under the TUV SUD's LASER emission safety check and test, even at such single fault condition, the LASER module will either shut off/cut off or limit the collateral radiation below the Accessible Emission Limit (AEL) for Class 1 laser radiation, 39  $\mu$ W for 405nm, 220  $\mu$ W for 488nm, 390  $\mu$ W for 561nm, and 390  $\mu$ W for 637nm laser.

Eye and skin exposure to direct and reflected laser light is hazardous. Never remove or attempt to remove the internal covers. Ensure that all optical filters are securely positioned. Prevent stray reflections from other surfaces. Never place any foreign object in the path of the laser beam. Only NanoCollect personnel can install, remove, or repair the laser. Do not open the laser enclosure for any reason. Always return the instrument to NanoCollect for repair. Never operate the unit in the presence of flammable gases or fumes. Turn off the instrument when not in use.

Do not tamper with the laser interlock. The laser interlock deactivates the laser when the top cover of the laser chamber is opened. Never attempt to override the interlock.

## Section K: Biohazard Precautions

Biological samples are potentially dangerous and/or life threatening. Depending on the laboratory environment, there could be a risk of biological, chemical, or radiological contamination. If you have contact with samples, sample tubes, sample waste, the waste container, and/or associated tubing, handle as if potentially infectious or life threatening. Wear protective clothing, gloves, and eyewear.

Care must be taken when removing the cartridge after completion of a sorting experiment to protect users from possible drops of liquid. Dispose of all samples and waste according to proper handling procedures and local regulations. Always treat liquid waste with 0.5% NaOCl (bleach) before disposal. Dispose of liquid waste according to local regulations. Always empty the liquid waste container daily or when prompted by software to prevent spillover and possible biohazard risk. Consult appropriate Material Safety Data Sheets when necessary.