

Ion GeneStudio™ S5 Food Protection System

Pub. No. MAN0018795 Rev. A.0

For use with:

- Ion GeneStudio™ S5 Food Protection Instrument
- Ion GeneStudio™ S5 Plus Food Protection Instrument
- Ion GeneStudio™ S5 Prime Food Protection Instrument

Thank you for your order of the Ion GeneStudio™ S5 Food Protection System!

This pre-installation checklist describes the tasks that you should complete before installation, and lists the materials that you need for successful Ion GeneStudio™ S5 Food Protection System installation and training.

Review the tables in this checklist, and indicate with a checkmark that you have completed the tasks and that your laboratory has on-hand or immediate access to (that is, in the same building on the same floor) each required item.

Carefully review the *Ion GeneStudio™ S5 Food Protection System Site Preparation Guide* (Pub. No. MAN0017966) provided by your Ion Concierge Representative. Also, additional materials are required for system workflow, including library preparation, template preparation, and sequencing. Visit thermofisher.com/ngsresources for details.

You must sign and submit this checklist, along with the *Ion GeneStudio™ S5 Food Protection System IT Checklist* (Pub. No. MAN0017970), before installation can be scheduled. Your Field Service Engineer (FSE) will contact you to discuss the completed checklists to ensure that all supplies are available at your site before the start of installation and training.

General preinstallation and training tasks

| ✓ | Ensure that you have: |
|--------------------------|---|
| <input type="checkbox"/> | Completed the <i>Ion GeneStudio™ S5 Food Protection System IT Checklist</i> (Pub. No. MAN0017970). |
| <input type="checkbox"/> | Reviewed the <i>Ion GeneStudio™ S5 Food Protection System Site Preparation Guide</i> (Pub. No. MAN0017966), verified that you can meet the site requirements, and completed the site preparation checklist in the guide. |
| <input type="checkbox"/> | Stored all reagents and materials according to the instructions in the <i>Ion GeneStudio™ S5 Food Protection System Site Preparation Guide</i> and in the individual product information sheets. |
| <input type="checkbox"/> | Created a basic account on thermofisher.com , then used that account to sign into Connect. Go to thermofisher.com/register for more information. |

Ordering information

Some Thermo Fisher Scientific-supplied items may not be available on the website. You can order these items by telephone.

| Location | Contact information |
|--------------------|--|
| North America | 1 800 955 6288 |
| Europe | 00 800 5345 5345 |
| All other regions: | Visit thermofisher.com/askaquestion . |

Materials required for installation

If you need assistance with installation, contact the following:

| Location | Contact information |
|---------------|--|
| Europe | microbiology.techsupport.uk@thermofisher.com |
| North America | microbiology@thermofisher.com |

Ion S5™ Installation Kit

The Ion S5™ Installation Kit is included with your instrument order and is required during installation. This kit is not available for separate purchase.

| Contents | Part No. | Quantity | Storage |
|---|----------|----------|----------------|
| Ion S5™ Installation Kit (Part No. A27215) items | | | |
| Ion 540™ Chip Kit | A27765 | 4 pack | 15°C to 30°C |
| Ion S5™ Sequencing Solutions | A27767 | 1 | |
| Ion S5™ Sequencing Reagents | A27768 | 1 | -30°C to -10°C |
| Ion 540™ Control Ion Spheres | A28195 | 1 | |
| Ion 540™ Loading Reagents OT2 | A27897 | 1 | |
| Ion S5™ Cartridge Tool | A28308 | 2 | 15°C to 30°C |
| Ion Chef™ S5 Series Chip Balance | A29022 | 1 | |

| ✓ | Ensure that: |
|--------------------------|--|
| <input type="checkbox"/> | The Ion S5™ Installation Kit is on site. |
| <input type="checkbox"/> | All items are stored properly. |

General materials and laboratory equipment

The following general materials and laboratory equipment are required for installation. They also are required for training and starting your projects.

Unless otherwise indicated, all materials are available through thermofisher.com. MLS: Fisher Scientific (fisherscientific.com) or other major laboratory supplier.

| ✓ | Description ^[1] | Source |
|--------------------------|--|--------|
| <input type="checkbox"/> | Nuclease-free, molecular biology grade water | MLS |
| <input type="checkbox"/> | Microcentrifuge suitable for 1.5 ml and 2.0 ml tubes, min 11,000 × <i>g</i> | MLS |
| <input type="checkbox"/> | 1.5 ml nuclease-free microtubes | MLS |
| <input type="checkbox"/> | Isopropanol (100%), ≥100 mls | MLS |
| <input type="checkbox"/> | P2, P20, P200, P1000 µL pipette set and barrier tips, 1 set | MLS |
| <input type="checkbox"/> | Uninterruptible Power Supply (UPS) We recommend the use of a UPS for laboratories that experience power outages or line voltage fluctuations. For Ion GeneStudio™ S5 Systems, the UPS specification is 1.5-kVA. | MLS |
| <input type="checkbox"/> | PCR Workstation A PCR workstation is recommended where template preparation cannot be done in a dedicated, pre-PCR area of your lab (for example, a separate room). | MLS |
| <input type="checkbox"/> | Vortex | MLS |
| <input type="checkbox"/> | Thermal Cycler (SimpliAmp™ Thermal Cycler recommended) | A24811 |

^[1] Thermo Fisher Scientific has verified this protocol using this specific material. Substitution may adversely affect system performance.

Additional materials and laboratory equipment required for installation

The following materials and laboratory equipment are required for Ion GeneStudio™ S5 Food Protection System during installation of your Ion Chef™ Food Protection System.

The Ion Chef™ Installation Kit is included with your Ion Chef™ Food Protection System order, and it is required during installation. This kit is not available for separate purchase.

Unless otherwise indicated, all materials are available through **thermofisher.com**. MLS: Fisher Scientific (**fisherscientific.com**) or other major laboratory supplier.

| Contents | Part No. | Quantity | Storage |
|--|----------|----------|--------------|
| Ion Chef™ Installation Kit (Part No. 4488374) items | | | |
| Ion Chef™ Install Supplies | 4488382 | 1 | 15°C to 30°C |
| Ion Chef™ Calibration Kit v2 | A34301 | 1 | 15°C to 30°C |
| Ion Chef™ S5 Series Chip Balance | A29022 | 2 | 15°C to 30°C |

| ✓ | Ensure that: |
|--------------------------|--|
| <input type="checkbox"/> | The Ion Chef™ Installation Kit is on site. |
| <input type="checkbox"/> | All items are stored properly. |

| ✓ | Ion Chef™ Food Protection System additional equipment ^[1] | Source |
|--------------------------|--|--------|
| <input type="checkbox"/> | Uninterruptible Power Supply (UPS) We recommend the use of a UPS for laboratories that experience power outages or line voltage fluctuations. For the Ion Chef™ Food Protection System, the UPS specification is 1,2-kVA. | MLS |

^[1] Thermo Fisher Scientific has verified this protocol using this specific material. Substitution may adversely affect system performance.

Materials required for training and starting your projects

The following materials and laboratory equipment are required for instrument operation training (at your laboratory only) and for starting your projects.

Required materials for training and starting your projects

The following materials and laboratory equipment are required for the Thermo Scientific™ NGS Food Authenticity workflow for instrument operation (at your laboratory only), training, and starting your projects.

Unless otherwise indicated, all materials are available through **thermofisher.com**. MLS: Fisher Scientific (**fisherscientific.com**) or other major laboratory supplier.

| ✓ | Description ^[1] | Source |
|--------------------------|--|---|
| <input type="checkbox"/> | Ion 510™ & Ion 520™ & Ion 530™ Food Protection Kit–Chef [1 sequencing run per initialization]) <ul style="list-style-type: none"> • Ion S5™ Chef Supplies (A27755) • Ion S5™ Chef Solutions (A27754) • Ion 520™ & Ion 530™ Chef Reagents (A27756) • Ion S5™ Sequencing Solutions (A27767) • Ion S5™ Sequencing Reagents (A27768) OR | A39476 |
| <input type="checkbox"/> | Ion 510™ & Ion 520™ & Ion 530™ Food Protection Kit–Chef [2 sequencing runs per initialization) <ul style="list-style-type: none"> • Ion S5™ Chef Supplies (A27755) • Ion S5™ Chef Solutions (A27754) • Ion 540™ Chef Reagents (A27758) • Ion S5™ Sequencing Solutions (A27767) • Ion S5™ Sequencing Reagents (A27768) AND | A39477 |
| <input type="checkbox"/> | Ion 510™ Food Protection Chip Kit OR Ion 520™ Food Protection Chip Kit | A27769 OR A39473 |
| <input type="checkbox"/> | Qubit 4.0 Food Protection Starter Pack | A39533 |
| <input type="checkbox"/> | DynaMag™-2 Magnet | 12321D |
| <input type="checkbox"/> | E-Gel™ Starter Pack (low throughput gels) OR E-Gel™ Imager System with UV Light Base | G8342ST OR 4466611 |
| <input type="checkbox"/> | Mother E-Base™ Device appropriate to your region | EBM03 (EU/UK/CN) |
| <input type="checkbox"/> | Daughter Base Device (optional) | EBD03 |
| <input type="checkbox"/> | SGS All Species ID Meat DNA Analyser I kit OR SGS All Species ID Meat DNA Analyser II kit AND SGS All Species ID Fish DNA Analyser I kit OR SGS All Species ID Fish DNA Analyser II kit AND SGS All Species ID Plant DNA Analyser I kit OR SGS All Species ID Plant DNA Analyser II kit | A38452 OR A38453 AND A38454 OR A38455 AND A38456 OR A38457 |
| <input type="checkbox"/> | E-Gel™ 48 Agarose Gels, 2% OR E-Gel™ 96 Agarose Gels, 2%E-Gel™ | G800802 OR G700802 |
| <input type="checkbox"/> | E-Gel™ Low Range Quantitative DNA Ladder OR E-Gel™ 50 bp DNA Ladder | 12373031 OR 10488099 |
| <input type="checkbox"/> | E-Gel™ Sample Loading Buffer, 1X | 10482055 |
| <input type="checkbox"/> | Qubit™ dsDNA BR Assay Kit | Q32853 |
| <input type="checkbox"/> | Qubit™ Assay Tubes | Q32856 |

^[1] Thermo Fisher Scientific has verified this protocol using this specific material. Substitution may adversely affect system performance.

Other required equipment and consumables

The following additional materials and laboratory equipment are required for the Thermo Scientific™ NGS Food Authenticity workflow for instrument operation (at your laboratory only), training, and starting your projects.

Unless otherwise indicated, all materials are available through **thermofisher.com**. MLS: Fisher Scientific (**fisherscientific.com**) or other major laboratory supplier.

| ✓ | Description ^[1] | Source |
|--------------------------|---|-----------------------------------|
| <input type="checkbox"/> | Agencourt™ AMPure™ PCR Purification kit | Beckman-Coulter A63880/ A63881 |
| <input type="checkbox"/> | Homogeniser (sample dependent) | MLS |
| <input type="checkbox"/> | Laboratory mixer (vortex mixer or equivalent) | MLS |
| <input type="checkbox"/> | Block heater suitable for 1.5 ml and 2.0 ml tubes, 56°C, 70°C | MLS |
| <input type="checkbox"/> | Dry Block Insert | MLS |
| <input type="checkbox"/> | Centrifuge suitable for 50 ml tubes (liquid samples only) | MLS |
| <input type="checkbox"/> | Dry block thermometers | MLS |
| <input type="checkbox"/> | Pestle and mortar (hard samples only) | MLS |
| <input type="checkbox"/> | Laboratory scale | MLS |
| <input type="checkbox"/> | Freezer | MLS |
| <input type="checkbox"/> | Fridge | MLS |
| <input type="checkbox"/> | TRIS buffer, pH 8.0 | MLS |
| <input type="checkbox"/> | TE Buffer (10 mM Tris-Acetate pH 8.0, 1 mM EDTA) | MLS |
| <input type="checkbox"/> | Liquid nitrogen (hard samples only) (Optional) | MLS |
| <input type="checkbox"/> | Ethanol absolut | MLS |
| <input type="checkbox"/> | CTAB extraction buffer (plant samples only) | MLS |
| <input type="checkbox"/> | PVPP (plant samples only) | MLS |
| <input type="checkbox"/> | Disposable gloves, talcum powder free | MLS |
| <input type="checkbox"/> | Plastic paraffin film | MLS |
| <input type="checkbox"/> | Aerosol-resistant and nuclease-free micropipette tips | MLS |
| <input type="checkbox"/> | PCR microtubes, or PCR 8-tube/12-tube strips, or PCR reaction plate (high profile) as appropriate to thermal cycler | MLS |
| <input type="checkbox"/> | Caps for 0.2 ml (if not included), or strip caps, or adhesive film | MLS |
| <input type="checkbox"/> | Homogeniser tubes | MLS |
| <input type="checkbox"/> | Microsoft™ Excel™ | Microsoft |

^[1] Thermo Fisher Scientific has verified this protocol using this specific material. Substitution may adversely affect system performance.

Questions?

Contact your Ion Concierge Team or your local Field Application Scientist (FAS) for any questions you may have.

| Location | Support contact information |
|---------------|--|
| North America | Ion Concierge Team: uslen.sha.strategica@thermofisher.com |
| Europe | Ion Concierge Team: foodprotection.concierge@thermofisher.com |

Completion

By signing this checklist, the site representative acknowledges that:

- The site will have on-hand or immediate access to all equipment and materials that are listed in this document before installation and training.
- Should the site not have the equipment and materials that are listed in this document when the FSE or FAS arrives for installation and training, installation and/or training will be rescheduled.
- At the discretion of Thermo Fisher Scientific, the site may also incur additional charges for all travel expenses and FAS/FSE time corresponding to rescheduled installation and training.

Site representative signature:

Site representative name:

Title:

Institution:

Date:

| Location | How to return the completed checklist to Thermo Fisher Scientific |
|---------------|---|
| Europe | Email this completed checklist to: EMEA.Concierge@thermofisher.com . |
| North America | Email this completed checklist to: concierge@thermofisher.com . |



Life Technologies Holdings Pte Ltd | Block 33 | Marsiling Industrial Estate Road 3 | #07-06, Singapore 739256
For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

The information in this guide is subject to change without notice.

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| Revision | Date | Description |
|----------|-------------------|---------------------|
| A.0 | 13 September 2019 | Initial publication |

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