appliedbiosystems

Axiom™ Propel XPRES 384HT Workflow

SITE PREPARATION GUIDE

for use with:
Axiom™ 384HT Array Plates
Axiom™ Propel XPRES Reagent Kit, 2x384HT
Multidrop™ Combi Reagent Dispenser

Catalog Numbers 952352 and 5840300
Publication Number MAN0018488
Revision B.0

ThermoFisher SCIENTIFIC

Manufacturer:
Thermo Fisher Scientific Baltics UAB |
V.A. Graiciuno 8, LT-02241 |
Vilnius, Lithuania

Products:
Axiom™ Propel XPRES Reagent Kit, 2x384HT

Manufacturer:
Affymetrix Pte Ltd |
7 Gul Circle #2M-01 |
Keppel Logistics Building |
Singapore 629563

Products:
Axiom™ 384HT Array Plates
Axiom™ myDesign™ Array Plates

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

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Revision history: Pub. No. MAN0018488

Revision	Date	Description
B.0	30 March 2021	• Added the Thermo Scientific™ Digital Microplate Shaker as a shaker option. • Added Cat. No. for Simco-Ion Technology blower. • For the Axiom Propel XPRES Training Kit, 2x384HT, updated the quantity to 4 of supplied Axiom DNA Training Plates, 96F, and updated the recommendations for the number of components needed for the runs.
A.0	28 July 2019	New publication.

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Contents

Assay equipment and supplies required

This chapter includes the supplier and ordering information for the equipment, software, reagents, arrays, labware, and other consumables that have been verified for use with the Applied Biosystems™ Axiom™ Propel XPRES 384HT Workflow.

Arrays, reagents, and software required

✓	Item	Source
Arrays		
☐	Axiom™ Array Plates or Axiom™ myDesign™ Array Plates (384HT array format plate)	Contact Thermo Fisher Scientific
Reagents		
☐	Axiom™ Propel XPRES Reagent Kit, 2x384HT (sufficient to process two 384HT array format plates)	952352
☐	Genomic DNA Standard (Ref 103), 10 ng/µL	951957
☐	2-Propanol, anhydrous, 99.5% (Isopropanol)	Sigma-Aldrich™, 278475
☐	E-Gel™ *48* Agarose Gels, 4%	G800804
☐	TrackIt™ Cyan/Orange Loading Buffer	10482028
☐	25 bp DNA Ladder	931343
☐	UltraPure™ DNase/RNase-Free Distilled Water	10977023
☐	Reagent Alcohol, Certified, 70% (v/v) (Ethanol solution 70%, reagent grade)	Fisher Scientific™, LC222102

(continued)

✓	Item	Source
Software		
☐	GeneChip™ Command Console™ (GCC)	version 6.1.1 or later
☐	Axiom™ Analysis Suite	version 5.0 or later

Axiom™ Propel XPRES Reagent Kit components

IMPORTANT! The Applied Biosystems™ Axiom™ Propel XPRES Reagent Kit, 2x384HT is for single use only. Large fill reagent kits are configured to include priming volumes for the Multidrop™ Combi cassettes and is incorporated into the master mix formulations. Discard all excess reagents after use.

Each Axiom™ Propel XPRES Reagent Kit, 2x384HT, Cat. No. 952352, is sufficient for 2 Axiom™ Array Plates (384HT array format).

Table 1 Components of the Axiom™ Propel XPRES Reagent Kit, 2x384HT.

Component	Part No.[1]	Storage
Axiom™ Propel XPRES Reagent Kit Module 1 for 384HT only	**952351**	–25°C to –15°C
Axiom™ Propel 10X Denat Solution	952176	
Axiom™ Propel Neutral Solution	952173	
Axiom™ Propel Water	952177	
Axiom™ Propel Amp Solution	952174	
Axiom™ XPRES Amp Enzyme	952349	
Axiom™ Propel Reagent Kit Module 2-1 for 96F or 384HT—Box 1 of 2	**952263**	–25°C to –15°C
Axiom™ Propel Frag Enzyme	952181	
Axiom™ Propel 10X Frag Buffer	952179	
Axiom™ Propel Precip Solution 2	952178	
Axiom™ Propel Hyb Buffer	952182	
Axiom™ Propel Hyb Solution 1	952183	
Axiom™ Propel Reagent Kit Module 2-2 for 96F or 384HT—Box 2 of 2	**952265**	2°C to 8°C
Axiom™ Propel Frag Diluent	952184	
Axiom™ Propel Frag Reaction Stop	952190	
Axiom™ Propel Precip Solution 1	952203	
Axiom™ Propel Resuspension Buffer	952206	
Axiom™ Propel Hyb Solution 2	951979	

Table 1 Components of the Axiom Propel XPRES Reagent Kit, 2x384HT. *(continued)*

Component	Part No.[1]	Storage
Module 3	—	Room temperature
Axiom™ Wash Buffer A	901446	
Axiom™ Wash Buffer B	901447	
Axiom™ Water	901578	
Axiom™ Propel Fast Wash Reagent Kit Module 4-1 for 96F or 384HT—Box 1 of 2	**952369**	–25°C to –15°C
Axiom™ Propel Ligation Buffer	952208	
Axiom™ Fast Ligation Enzyme	952367	
Axiom™ Propel Ligation Solution 1	952212	
Axiom™ Propel Probe Mix 1	952213	
Axiom™ Propel Stain Buffer	952214	
Axiom™ Propel Stabilize Solution	952215	
Axiom™ Propel Reagent Kit Module 4-2 for 96F or 384HT—Box 2 of 2	**952268**	2°C to 8°C
Axiom™ Propel Wash A	952218	
Axiom™ Propel Probe Mix 2	952217	
Axiom™ Propel Ligation Solution 2	952216	
Axiom™ Propel Stain 1-A	952219	
Axiom™ Propel Stain 2-A	952231	
Axiom™ Propel Stabilize Diluent	952248	
Axiom™ Water	952177	
Axiom™ Propel Hold Buffer	952254	
Axiom™ Propel Stain 1-B	952258	
Axiom™ Propel Stain 2-B	952260	

[1] Component Part Numbers are for identification puproses only. Kit components are not available for purchase separately.

Equipment required

The following table lists the equipment required for the Axiom™ Propel Fast Wash Workflow, 96-Array Format Assay. Subsequent pages detail the specific requirements for each item.

✓	Item	Details
☐	Preamplification/amplification staging area	page 8
☐	GeneTitan™ Multi-Channel Instrument with GeneChip™ Command Console™ software version 6.1.1 or later	page 8
☐	Microplate dispenser • (Recommended) Multidrop™ Combi Reagent Dispenser with SMART 2 option • Multidrop™ Combi Reagent Dispenser	page 8
☐	Plate sealer • Thermo Scientific™ ALPS™ 3000 Automated Microplate Heat Sealer	page 9
☐	Plate centrifuge • Sorvall™ Legend™ XTR Centrifuge • Sorvall™ Legend™ XFR Centrifuge • Sorvall™ X4R Pro-MD Centrifuge • Eppendorf™ Centrifuge 5810 R	page 10
☐	Oven requirements • Thermo Scientific™ Heratherm™ Advanced Protocol Microbiological Incubator, capacity 66 L • BINDER™ ED 56 Drying and Heating Chamber • BINDER™ BD 56 Standard-Incubator with natural convection	page 11
☐	Shakers	page 12
☐	Vortex mixer	page 12
☐	Mini centrifuge	page 12
☐	Liquid handler • VIAFLO™ 384 Base Unit • (optional) VIAFLO™ 96 Base Unit	page 13
☐	Thermal cycler recommendation and protocol • Applied Biosystems™ ProFlex™ 2 x 384-well PCR System	page 14
☐	Spectrophotometer • Multiskan™ Sky Microplate Spectrophotometer	page 14
☐	Fume hood	page 14

Preamplification/amplification staging area

Precautions are required when manipulating genomic DNA to avoid contamination with foreign DNA amplified in other reactions and procedures. It is recommended that genomic DNA manipulations are performed in a dedicated preamplification room or in an area separate from the main laboratory.

This preamplification area must have a dedicated set of pipettes and plasticware. If no dedicated area is available, use of a dedicated bench or a dedicated biosafety hood and dedicated pipettes is suggested. If no dedicated bench or biosafety hood is available, a set of dedicated pipettes is recommended.

GeneTitan™ Multi-Channel Instrument

The GeneTitan™ Multi-Channel (MC) Instrument automates array processing from target hybridization to data generation by combining a hybridization oven, fluidics processing, and state-of-the art imaging device into a single bench-top instrument.

When processing array plates from the Axiom™ Propel XPRES 384HT Workflow, the GeneTitan™ MC Instrument must be running with GeneChip™ Command Console™ software version 6.1.1 or later.

For a complete list of all equipment and supplies required for GeneTitan™ Multi-Channel Instrument installation and operation, consult the *GeneTitan™ Multi-Channel Instrument Site Preparation Guide* (Pub. No. 08-0305).

Contact Thermo Fisher Scientific for ordering information.

Microplate dispenser

Unless otherwise indicated, all materials are available through **thermofisher.com**. "MLS" indicates that the material is available from **fisherscientific.com** or another major laboratory supplier.

Item	Source
(Recommended) Multidrop™ Combi Reagent Dispenser with SMART 2 option	5840320
Multidrop™ Combi Reagent Dispenser	5840300

Note: The Multidrop™ Combi Reagent Dispensers must be installed and tested by a Field Application Scientist before use.

Install the Multidrop™ Combi Reagent Dispensers in an area away from other instrument exhaust fans. Exhaust fans can generate particulates in the air and cause temperature fluctuations in the Multidrop™ Combi working environment.

minION™2 Ionizing Air Blower

Discharge specifications: 2 seconds at 12 in (30 cm), fan high (1,000—100V)

The following ionizing air blower meets the requirements for the Axiom™ Propel XPRES 384HT Workflow.

Item	Source
minION™2 Ionizing Air Blower or equivalent	Simco-Ion™ Technology, 4011425, or MLS

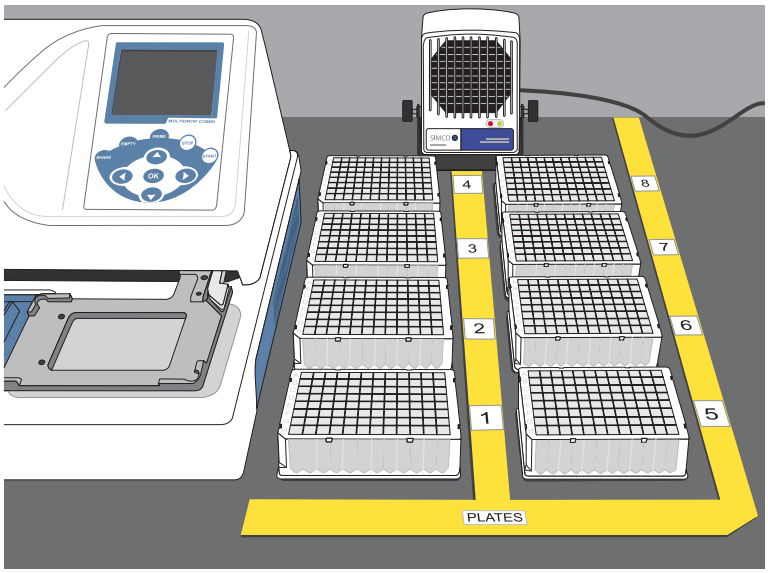


Figure 1 minION™2 Ionizing Air Blower placement

Place consumables (96-deepwell plates, scan trays, and stain trays) to be ionized within a distance of 12" x 36" from the ion blower for at least 10 seconds before using.

Plate sealer

The following plate sealer meets the requirements for the Axiom™ Propel XPRES 384HT Workflow.

Item	Source
Thermo Scientific™ ALPS™ 3000 Automated Microplate Heat Sealer[1]	AB3000

[1] The Easy Peel Seal is the sealing material used in the ALPS™ 3000 Automated Microplate Heat Sealer.

On receipt of shipment, open the package to check for damage that might have occured during shipment. Contact your local Field Application Scientist to set up the heat sealer if the service is not provided by the local Field Service Engineer.

Ensure that proper air supply is available. Air requirements: 50L/min at 80–87psi.

Plate centrifuge

The plate centrifuges listed are recommended for the Axiom™ Propel XPRES 384HT Workflow. (See Table 2.) When centrifuging and drying pellets, the centrifuge must be able to centrifuge plates at:

- Rcf: 3,200 × *g* with an appropriate rotor-bucket combination
- Temperature: 4°C

Relative centrifugal force (rcf) is calculated using the following formula:

$rcf = (1.118 \times 10^{-5}) R S^2$

Where R is the radius of the rotor in centimeters, and S is the speed of the centrifuge in revolutions per minute.

In addition, the bottom of the rotor buckets must be soft rubber to ensure that the 96-deepwell plates do not crack. Do not use buckets where the plates sit directly on a metal or hard plastic bottom.

Table 2 Plate centrifuge recommendations for the Axiom™ Propel XPRES 384HT Workflow.

Item	Source
Sorvall™ Legend™ XT/XF Centrifuge Series[1]	
Sorvall™ Legend™ XTR Centrifuge (refrigerated), with:	75004521 (120 V, 60 Hz) 75004523 (230 V, 50–60 Hz, USA and Canada) 75004520 (230 V, 50 Hz)
• TX-1000 Swinging Bucket Rotor Body • Adapter for TX-1000 Swinging Bucket Rotor • Buckets for TX-1000 Rotor	• 75003017 • 75007303 (pack of 4) • 75003001 (set of 4)
Sorvall™ Legend™ XFR Centrifuge (refrigerated), with:	75004539 (120 V, 60 Hz) 75004541 (230 V, USA and Canada) 75004538 (230 V, 50–60 Hz)
• TX-1000 Swinging Bucket Rotor Body • Adapter for TX-1000 Swinging Bucket Rotor • Buckets for TX-1000 Rotor	• 75003017 • 75007303 (pack of 4) • 75003001 (set of 4)
Other	
Sorvall™ X4R Pro-MD Centrifuge, with:	75009520 (220 V-240 V 50 Hz/230 V, 60 Hz) 75009521 (120 V, 50–60 Hz) 75009620 (220 V, 60 Hz)
• TX-1000 Swinging Bucket Rotor Body • Adapter for TX-1000 Swinging Bucket Rotor • Buckets for TX-1000 Rotor	• 75003017 • 75007303 (pack of 4) • 75003001 (set of 4)

Table 2 Plate centrifuge recommendations for the Axiom Propel XPRES 384HT Workflow. *(continued)*

Item	Source
Eppendorf™ Centrifuge 5810 R, with:	Fisher Scientific™, 022625551 (230 V, 50–60 Hz) Fisher Scientific™, 022625501 (120 V, 50–60 Hz, 15 A) Fisher Scientific™, 022625101 (120 V, 50–60 Hz, 20 A)
• Rotor A-4-81, with 4 MTP/Flex buckets	• Fisher Scientific™, 022638807 (rotor)

[1] XFR = floor model and XTR = bench model

Oven requirements

We recommend using either the Thermo Scientific™ Heratherm™ Advanced Protocol Microbiological Incubator, BINDER™ ED 56 Drying and Heating Chamber, or the BINDER™ BD 56 Standard-Incubator with natural convection that are listed in the following table. If another oven is used, it must meet the following requirements.

- Be able to maintain a constant temperature of 37°C for at least 24 hours, and have a temperature accuracy of ±1°C, and
- Be able to maintain a constant temperature of 48°C for at least 24 hours, and have a temperature accuracy of ±1°C.

Item	Source
Thermo Scientific™ Heratherm™ Advanced Protocol Microbiological Incubator, capacity 66 L • 120V, 60 Hz • 230V, 50/60 Hz	 • 51028066 • 51028133
BINDER™ ED 56 Drying and Heating Chamber • ED056UL-120V Voltage: 120 V 1~60 Hz • ED056-230V Voltage: 230 V 1~50/60 Hz	 • BINDER™, 9010-0334 • BINDER™, 9010-0333
BINDER™ BD 56 Standard-Incubator with natural convection • BD056UL-120V Voltage: 120 V 1~60 Hz • BD056-230V Voltage: 230 V 1~50/60 Hz	 • BINDER™, 9010-0324 • BINDER™, 9010-0323

Shakers

The following shakers are required for use in the Axiom™ Propel XPRES 384HT Workflow.

Unless otherwise indicated, all materials are available through **thermofisher.com**. "MLS" indicates that the material is available from **fisherscientific.com** or another major laboratory supplier.

IMPORTANT! Both types of shakers (Thermo Scientific™ Digital Microplate Shaker and VWR Signature™ High-Speed Microplate Shaker) are required and are not interchangeable. Use only the shaker specified in the instructions for the assay stage.

Item	Source
Either: • Thermo Scientific™ Compact Digital Microplate Shaker • Thermo Scientific™ Digital Microplate Shaker	 • 88880023 or 88880024 • 88882005 or 88882006
VWR Signature™ High-Speed Microplate Shaker	VWR, 10027-220

Vortex mixer

A vortex mixer is required for use in the Axiom™ Propel XPRES 384HT Workflow.

Unless otherwise indicated, all materials are available through **thermofisher.com**. "MLS" indicates that the material is available from **fisherscientific.com** or another major laboratory supplier.

Item	Source
Vortex mixer	**MLS**

Mini centrifuge

A mini centrifuge is required for use in the Axiom™ Propel XPRES 384HT Workflow.

Unless otherwise indicated, all materials are available through **thermofisher.com**. "MLS" indicates that the material is available from **fisherscientific.com** or another major laboratory supplier.

Item	Source
Mini centrifuge	**MLS**

Liquid handler

Two liquid handler configurations are recommended to perform the 384-well PCR plate merge (Stage 5), the in-process QC step (Stage 5A), and the transfer to hybridization tray step (Stage 6).

Table 3 Recommended liquid handler setup.

Item	Source
VIAFLO™ 384 Base Unit, with:	INTEGRA Biosciences, 6031
☐ 384 Channel Pipetting Head (2 µL to 50 µL)	INTEGRA Biosciences, 6136
☐ Spring Loaded Plate Holder A with slide function—384 well plate offset	INTEGRA Biosciences, 6215
☐ Spring Loaded Plate Holder B with slide function—384 well plate offset	INTEGRA Biosciences, 6220
☐ Installation and Training VIAFLO 384 (required)	INTEGRA Biosciences, 999111
VIAFLO™ 96 Base Unit or VIAFLO™ 384 Base Unit, with:	INTEGRA Biosciences, 6001 or 6031
☐ 96 Channel Pipetting Head (5 µL to 125 µL)	INTEGRA Biosciences, 6102
☐ Spring Loaded Plate Holder A with slide function—384 well plate offset	INTEGRA Biosciences, 6215
☐ Spring Loaded Plate Holder B with slide function—384 well plate offset	INTEGRA Biosciences, 6220
☐ Installation and Training VIAFLO 96 (required)	INTEGRA Biosciences, 999110

The minimum requirement for the Axiom™ Propel XPRES 384HT Workflow is a VIAFLO™ 384 Base Unit and both the 96 Channel Pipetting Head (5–125 µL) and 384 Channel Pipetting Head (2–50 µL). This option requires changing to the appropriate pipetting head that is used for the selected VIAFLO™ method.

For instructions on how to change the pipetting head on the VIAFLO™ Instrument:

- See the VIAFLO 96/384 Operating Instructions (Pub. No. 125950) posted on the INTEGRA Biosciences website.
- Contact INTEGRA Biosciences support.

Table 4 Minimum liquid handler requirement.

Item	Source
VIAFLO™ 384 Base Unit, with:	INTEGRA Biosciences, 6031
☐ 384 Channel Pipetting Head (2 µL to 50 µL)	INTEGRA Biosciences, 6136
☐ 96 Channel Pipetting Head (5 µL to 125 µL)	INTEGRA Biosciences, 6102
☐ Spring Loaded Plate Holder A with slide function—384 well plate offset	INTEGRA Biosciences, 6215
☐ Spring Loaded Plate Holder B with slide function—384 well plate offset	INTEGRA Biosciences, 6220
☐ Installation and Training VIAFLO 384 (required)	INTEGRA Biosciences, 999111

Thermal cycler recommendation and protocol

Verified thermal cyclers	Source
Applied Biosystems™ ProFlex™ 2 x 384-well PCR System[1]	4484077

[1] The ramp rate on the ProFlex™ 2 x 384-well PCR System can be programmed to 3.0C/sec (maximum).

IMPORTANT! Always use the heated lid option when programming a protocol. See the appropriate thermal cycler user guide for programming information.

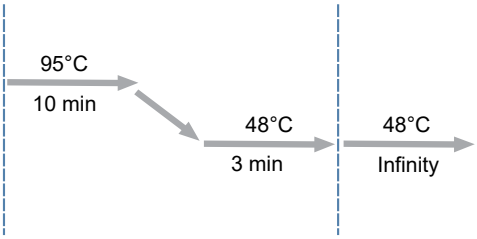


Figure 2 Axiom Denature thermal cycler protocol (Stage 6).

WARNING! Evaporation during denaturation can negatively affect assay performance. Use the recommended thermal cycler consumables and sealing film to eliminate condensation and evaporation.

Spectrophotometer

Specifications: Must be able to read DNA samples using UV/VIS absorbance setting at 260 nm, 280 nm and 320 nm wavelengths.

We recommend using the following spectrophotometer, or equivalent.

Item	Source
Multiskan™ Sky Microplate Spectrophotometer	51119600

Fume hood

Some procedures in the assay require the use of adequate local or general ventilation to keep airborne concentrations low. A fume hood is a way to achieve the desired concentration. Thus, a fume hood is strongly recommended for several steps of this assay.

Labware and accessories required

Labware and consumable ordering information

Unless otherwise indicated, all materials are available through **thermofisher.com**. "MLS" indicates that the material is available from **fisherscientific.com** or another major laboratory supplier.

Table 5 Labware and consumable images and ordering information.

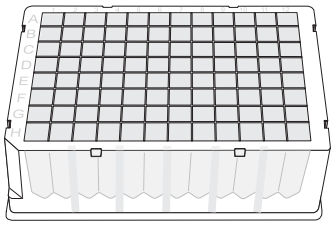
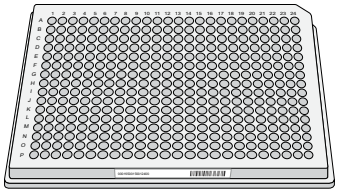
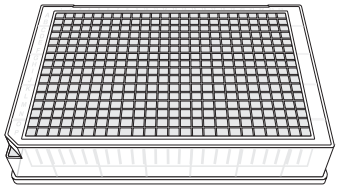
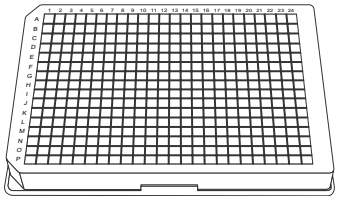
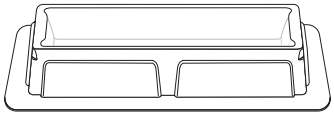
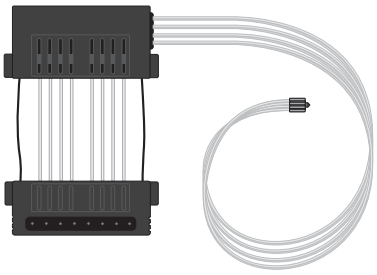
Item	Source	Image
ABgene™ 96-well 2.2 mL Polypropylene Deepwell Storage Plate, square wells, V-bottom **Note:** This plate is referred to as "96-deepwell plate" throughout this document.	Fisher Scientific™, AB0932	
PCR Plate, 384-well, raised chimney	Fisher Scientific™, AB0937	
ABgene™ 384-Well 250 µL Polypropylene Storage Plate	Fisher Scientific™, AB1178	
Greiner Bio-One™ UV-Star™ 384-Well Microplate Flat Bottom	Axiom™ 384HT Consumables Kit for QC, 902289	
Matrix™ Reagent Reservoir, 25 mL	Fisher Scientific™, 809311	
SMART 2 Standard tube dispensing cassette	N15137, single cassette N15138, 5-pack	

Table 5 Labware and consumable images and ordering information. *(continued)*

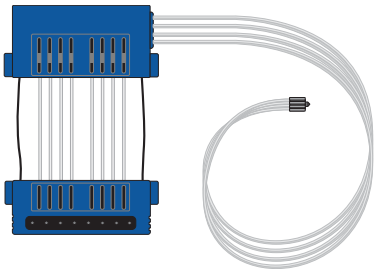
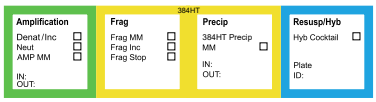
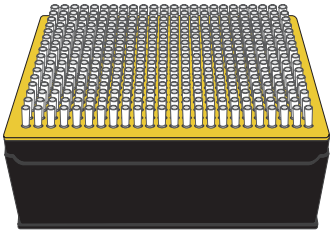
Item	Source	Image
SMART 2 Small tube plastic tip dispensing cassette	N15133, single cassette N15134, 5-pack	
Pipette tips, 1,000 µL	**MLS**	
Serological pipettes, following sizes: • 5 mL • 10 mL • 25 mL • 50 mL	**MLS**	
Electronic pipettor (for serological pipettes)	**MLS**	
Axiom™ Propel 384HT Tracker Label	952388	
XYZ GripTips™, 125 µL, 5 XYZ Racks of 384 Tips, Sterile, Filter	INTEGRA Biosciences, 6465	
50-mL centrifuge tubes	**MLS**	
Nunc™ 250 mL Wide Mouth Conical Centrifuge Tube	376814	

Table 5 Labware and consumable images and ordering information. *(continued)*

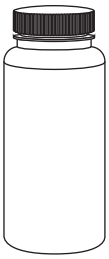
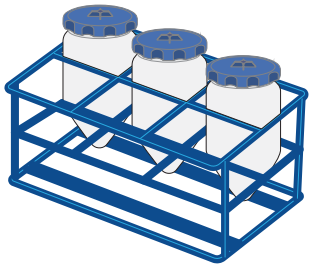
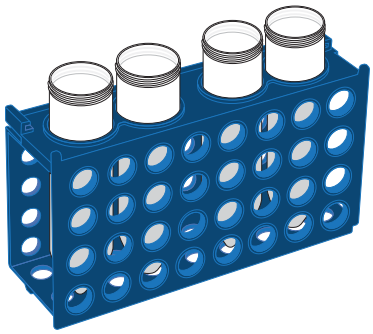
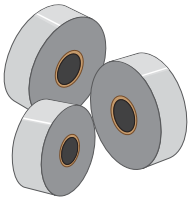
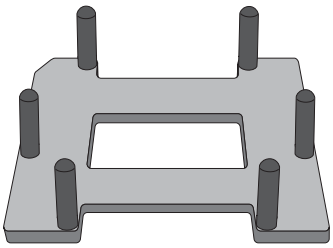
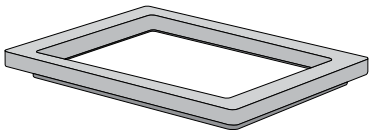
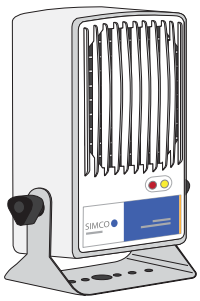
Item	Source	Image
Nalgene™ Wide-Mouth HDPE Economy Bottles with Closure	332189-0016	
Nunc™ Conical Tube Rack	374179	
Fisherbrand™ 4-Way Tube Rack	Fisher Scientific™, 03-448-12	
BTL Safety Carrier, black **Note:** This carrier is recommended as the secondary liquid waste container for the Multidrop™ Combi.	Fisher Scientific™, 50-109-4650	
Easy Peel Seal **Note:** The Easy Peel Seal is the sealing material used in the ALPS™ 3000 Automated Microplate Heat Sealer.	AB-3739	

Table 5 Labware and consumable images and ordering information. *(continued)*

Item	Source	Image
MicroAmp™ Clear Adhesive Film	4306311	
Plate Alignment Tool	13-0401	
384-Well PCR Plate Collar	952400	
minION™2 Ionizing Air Blower (or equivalent)	Simco-Ion™ Technology, 4011425, or **MLS**	
GeneTitan™ ZeroStat AntiStatic Gun and Ion-Indicator Cap **Note:** The GeneTitan™ ZeroStat AntiStatic Gun can be used as an alternative if the minION™2 Ionizing Air Blower is not available.	74-0014	

Axiom™ 384HT GeneTitan™ High Volume Consumables Kit

Table 6 Axiom™ 384HT GeneTitan™ High Volume Consumables Kit (Cat. No. 902629).

Contents[1]	Per kit[2]	Per run
384-Layout GeneTitan™ Stain Tray (Stain 1)	10	2
384-Layout Axiom™ Stain 2 Tray	5	1
384-Layout Axiom™ Stabilization Tray	5	1
384-Layout Axiom™ Ligation Tray	5	1
384-Layout GeneTitan™ Hybridization Tray	5	1
384-Layout GeneTitan™ Scan Tray and Cover	5	1
384-Layout GeneTitan™ Scan and Stain Tray Cover	25	5

[1] See Table 9 for detailed descriptions of each component.
[2] Each kit contains sufficient GeneTitan™ consumables to process 5 Axiom™ Array Plates in the GeneTitan™ MC Instrument.

GeneTitan™ 384HT bulk consumables

GeneTitan™ 384HT consumables are available in bulk quantities sufficient to process 10 Axiom™ 384HT array format plates. These trays are required for processing Axiom™ 384HT array format plates on the GeneTitan™ MC Instrument.

IMPORTANT! All covers must have barcodes. Discard any cover without a barcode.

Table 7 GeneTitan™ 384HT bulk consumable kits available.

Contents	Quantity	Source
Axiom™ GeneTitan™ Scan Trays and Covers, Bulk, 384HT	10	952381
Axiom™ GeneTitan™ Hybridization Trays, Bulk, 384HT	10	952382
Axiom™ GeneTitan™ Covers for Stain Trays, Bulk, 384HT	50	952383
Axiom™ GeneTitan™ Barcoded Stain Trays, Bulk, 384HT	50	952387

Table 8 GeneTitan™ 384HT consumables identification.

Contents[1]	Part number
384-Layout GeneTitan™ Stain Tray (Stain 1)	501279
384-Layout Axiom™ Stain 2 Tray	501394
384-Layout Axiom™ Stabilization Tray	501396
384-Layout Axiom™ Ligation Tray	501398
384-Layout GeneTitan™ Hybridization Tray	501278
384-Layout GeneTitan™ Scan Tray	501280
384-Layout GeneTitan™ Scan and Stain Tray Cover	501315

[1] See Table 9 for detailed descriptions of each component.

Table 9 GeneTitan™ tray consumables.

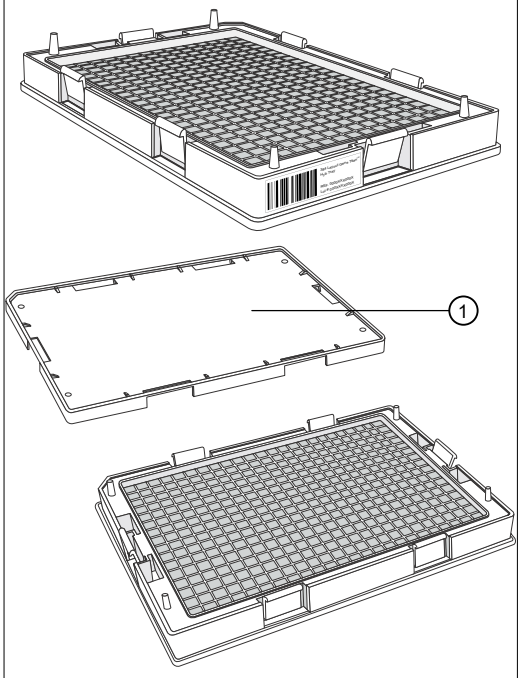
Item	Part No.	Image	Details
384-Layout GeneTitan™ Hybridization Tray	501278	 ① Hybridization tray cover to be discarded.	The 384-Layout GeneTitan™ Hybridization Trays are packaged in white pouches with the label "384 Layout GeneTitan™ Hyb Tray" ref# 501278 (pouch)/902278 (box) The hybridization trays are packaged with a protective cover that should be discarded before use. 384 hybridization tray cover, Part No. 203006

Table 9 GeneTitan tray consumables. *(continued)*

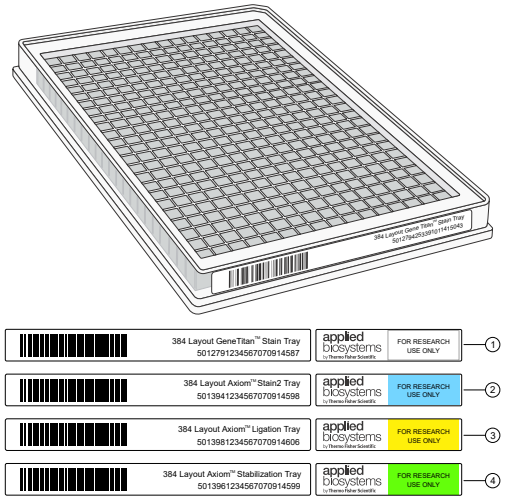
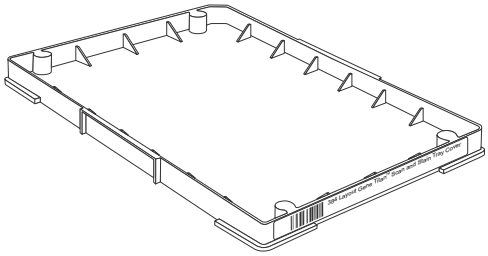
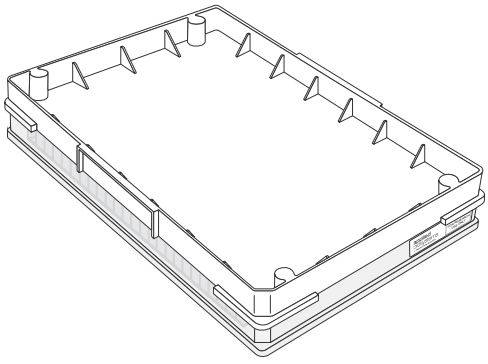
Item	Part No.	Image	Details
384 layout stain trays[1]	501279 - Stain 1 501394 - Stain 2 501398 - Ligation 501396 - Stabilization	 ① Stain 1 tray ② Stain 2 tray ③ Ligation tray ④ Stabilization tray	The stain trays are packaged in zip-top bags to keep them free of dust. Each stain tray is uniquely barcoded. **IMPORTANT!** Each stain tray is labeled with a name and an individual barcode. Ensure that you always use the appropriate tray with the correct reagent. Failure to do so can result in the wrong stain in the wrong location on the GeneTitan™ MC Instrument and assay failure. When transferring the trays to the GeneTitan™ MC Instrument, ensure that the trays are placed in the proper location in the drawer. Failure to do so results in an error and the GeneTitan™ MC Instrument will not proceed with processing trays.
384-Layout GeneTitan™ Scan and Stain Tray Cover	501315		The 384-Layout GeneTitan™ Scan and Stain Tray Covers are provided to prevent evaporation of the GeneTitan™ reagents in stain trays and the array holding buffer in the scan tray. The GeneTitan™ scan and stain tray covers are barcoded.
Stain tray cover, shown on top of the stain tray	Cover 501315		The stain trays must be placed in the GeneTitan™ MC Instrument with the stain tray cover.

Table 9 GeneTitan tray consumables. *(continued)*

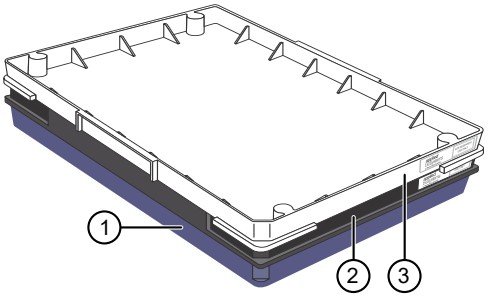
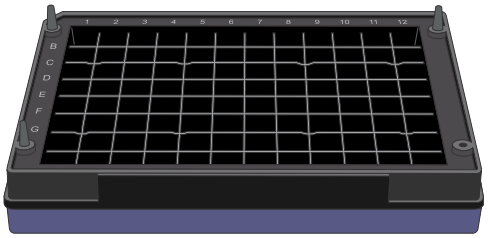
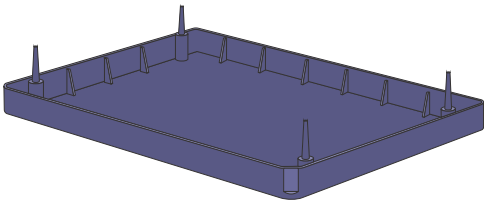
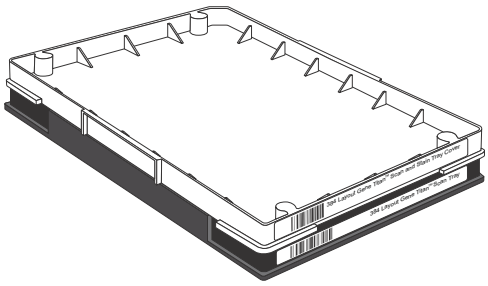
Item	Part No.	Image	Details
GeneTitan™ scan tray[1]		 ① Scan tray protective base ② 384-Layout GeneTitan™ Scan Tray ③ Barcoded scan tray cover	The Axiom™ scan tray package includes the following: • The GeneTitan™ scan tray includes a scan tray cover. The tray cover should be used to cover the scan tray before placing the tray in the GeneTitan™ MC Instrument. • The scan tray must be protected at all times from damage or exposure to dust. The scan tray must be in the blue scan tray protective base at all times except when loaded into the GeneTitan™ MC Instrument. • The blue scan tray protective base in the package is used to protect the bottom of the scan tray glass from damage. Remove the protective base from the scan tray before loading the scan tray with the scan tray cover in the GeneTitan™ MC Instrument.
GeneTitan™ scan tray on blue scan tray protective base			This combination of the GeneTitan™ scan tray on the protective blue scan tray protective base is to be used during the Multidrop™ dispensing step.
Blue scan tray protective base	202096		The blue scan tray protective base in the package is used to protect the bottom of the scan tray glass from damage. The blue scan tray protective base is distinct from the blue array plate protective base and must not be used with the array plate. Remove the protective base from the scan tray before loading in the GeneTitan™ MC Instrument

Table 9 GeneTitan tray consumables. *(continued)*

Item	Part No.	Image	Details
GeneTitan™ scan tray with cover	Scan tray 501280 Cover 501315		The GeneTitan™ scan tray must be loaded with the scan tray cover into the GeneTitan™ MC Instrument. **Do not** load the scan tray with the protective base.

[1] After aliquoting the appropriate solution to each tray type, the tray should be loaded into the GeneTitan™ MC Instrument with the barcode facing away from the operator. That is, the barcode should be on the back side.

Training kits

Axiom™ Propel XPRES Training Kit, 2×384HT

The Axiom™ Propel XPRES Training Kit, 2×384HT (Cat. No. 952418) is used for on-site customer training by the local field application scientist.

- Contains the reagents and GeneTitan™ consumables sufficient to process 1 training run and 1 proficiency run.
- The customer is required to provide 2 additional 384HT array format plates of their choice (custom or catalog), and 2×384 customer samples (1 each for the training and proficiency runs).
  Optionally, the customer can purchase 2 additional Axiom™ AIMS Array Plates and 4 additional Axiom™ DNA Training Plates, 96F. This additional AIMS data may not be useful, thus, using the customer's own plate and samples is highly recommended.
- Recommended training run: One Axiom™ AIMS 1 384S384 Layout Array Plate processed with samples from 2 Axiom™ DNA Training Plates, 96F (25 µL), and one 384HT array plate of the customer's choice processed with customer-provided DNA samples.
- Recommended proficiency run: One Axiom™ AIMS 1 384S384 Layout Array Plate processed with samples from 2 Axiom™ DNA Training Plates, 96F (25 µL), and one 384HT array plate of customer's choice processed with customer-provided DNA samples.
- Training evaluation is based on the data from 1 Axiom™ AIMS Array Plate processed with samples from a Axiom™ DNA Training Plate, 96F (25 µL).

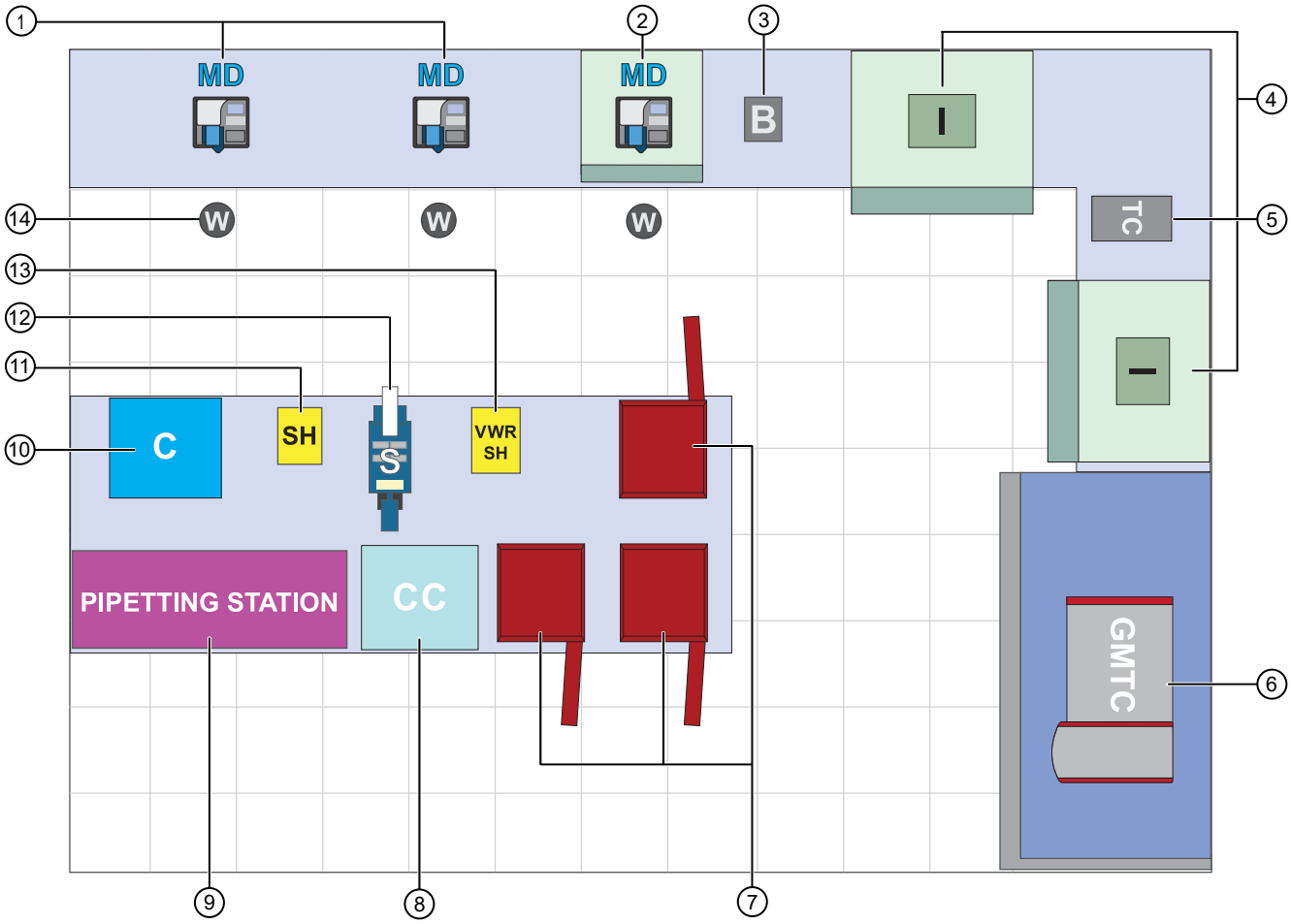
Training kit content, 2×384HT

Table 10 Axiom™ Propel XPRES Training Kit, 2×384HT (Cat. No. 952418) content

Quantity	Kit component
2	Axiom™ Propel XPRES Reagent Kit, 2x384HT (952352)
4	Axiom™ DNA Training Plate, 96F (25 µL) (902451)
2	Axiom™ AIMS 1 384S384 Layout Array Plate (550413)
1	Axiom™ 384HT GeneTitan™ High Volume Consumables Kit (902629)
1	Axiom™ 384HT Consumables Kit for QC (902289)[1]

[1] Each kit Includes 10×384 UV Plates. After training is complete, 6 plates will remain.

Laboratory layout example for 160K samples/year (8 plates/week) throughput



1. Multidrop™ Combi (1.2W x 1.1D ft²)
2. Multidrop™ Combi (1.2W x 1.1D ft²) under a fume hood
3. Balance (0.7 x 0.8 ft²)
4. INTEGRA Biosciences VIAFLO™ instrument (2 x 1 ft²)
5. Thermal cycler (1.1 x 1.8 ft²)
6. GeneTitan™ MC Instrument (7.7 x 3.8 ft²)
7. Ovens with doors open (1.9 x 2.1 ft² closed)
8. Cold Centrifuge (2.5 x 2.2 ft²)
9. Pipetting station
10. Centrifuge (1.8 x 2.2 ft²)
11. Shaker (0.8 x 1.1 ft²)
12. ALPS™ 3000 Automated Microplate Heat Sealer (0.6 x 1.4 ft²)
13. VWR Shaker (1 x 1.3 ft²)
14. Multidrop™ liquid waste bottle with secondary container

IMPORTANT!

- The Multidrop™ Combi under a fume hood is for Precipitation Master Mix and Hybridization Cocktail dispensing.
- Avoid locating centrifuges next to Multidrop™ Combi and Integra VIAFLO instruments.
- Avoid instrument exhaust directed towards the Multidrop™ Combi instruments. For example, GeneTitan™ MC Instrument or ovens positioned behind the Multidrop™ Combi instruments.
- Do not locate the balance next to shakers or ovens.

Storage space requirements

Table 11 Package dimensions for the Axiom™ Propel XPRES Reagent Kit, 2x384HT.

Module	Part No.	Storage	Height	Length	Width	Space
Axiom™ Propel Reagent Kit Module 1 for 96F array plates only, 4x96F	952262	–25°C to –15°C	14.5 cm	11.8 cm	10.8 cm	0.0018 m^3
Axiom™ Propel Reagent Kit Module 2-1 for 96F or 384HT	952263	–25°C to –15°C	10 cm	11.8 cm	5.5 cm	0.0006 m^3
Axiom™ Propel Reagent Kit Module 2-2 for 96F or 384HT	952265	2°C to 8°C	14.5 cm	11.8 cm	10.8 cm	0.0018 m^3
Module 3	901446, 901447, 901578	Room temperature	22 cm per bottle	9 cm per bottle	9 cm per bottle	8 bottles required, 0.0143 m^3
Axiom™ Propel Fast Wash Reagent Kit Module 4-1 for 96F or 384HT	952266	–25°C to –15°C	10 cm	11.8 cm	5.5 cm	0.0006 m^3
Axiom™ Propel Reagent Kit Module 4-2 for 96F or 384HT	952268	2°C to 8°C	14.5 cm	11.8 cm	10.8 cm	0.0018 m^3

Table 12 Storage space required for the Axiom™ Propel 4x96F Reagent Kit.

Kit	Number of kits	Total freezer space (–25°C to –15°C)	Total refrigerator space (2°C to 8°C)	Room temperature storage
Axiom™ Propel 4x96F Reagent Kit, Cat. No. 952341	1	0.0031 m^3	0.0037 m^3	0.0285 m^3

A Documentation and support

Related documentation

Document	Publication number	Description
Axiom™ Propel XPRES 384HT Workflow User Guide	MAN0018487	This document provides instruction on running the Axiom™ 2.0 Assay on 384HT-array format plates using a modular workflow with the Thermo Scientific™ Multidrop™ Combi Reagent Dispenser and array processing on the GeneTitan™ Multi-Channel Instrument.
Axiom™ 384HT and Mini 96 gDNA Sample Preparation Quick Reference	MAN0017719	An abbreviated reference on preparing the genomic DNA sample for 384HT and mini 96-format array plates.
GeneTitan™ MC Protocol for Axiom™ 384HT Array Plate Processing Quick Reference	MAN0017596	An abbreviated reference for processing Axiom™ 384HT Array Plates with the GeneTitan™ MC Instrument. This document is for experienced users.
Thermo Scientific™ *Multidrop™ Combi User Manual*	N05616	This document detailing the safety information, setup, use, maintenance, and troubleshooting for the Multidrop™ Combi Reagent Dispenser.
GeneTitan™ Multi-Channel Instrument User Guide	08-0308	The GeneTitan™ Multi-Channel (MC) Instrument automates array processing from target hybridization to data generation by combining a hybridization oven, fluidics processing, and state-of-the-art imaging device into a single benchtop instrument. This document detailing the use, care, and maintenance for the GeneTitan™ MC.
GeneTitan™ Multi-Channel Instrument Site Preparation Guide	08-0305	Provides guidance on creating and maintaining the proper environment required for the GeneTitan™ MC Instrument.
Thermo Scientific™ *ALPS™ 3000 Automated Laboratory Plate Sealer User Manual*	EXT0002597	Instructions on the setup and use of the ALPS™ 3000 Automated Microplate Heat Sealer.
Recommended Alternative Microarray Consumables Quick Reference	MAN0019853	A quick reference document identifying recommended alternative replacement consumables for use in microarray assays.

(continued)

Document	Publication number	Description
Software and analysis		
GeneChip™ Command Console™ User Guide	702569	This user guide provides instructions for using Applied Biosystems™ GeneChip™ Command Console™ software (GCC) used to control GeneChip™ instrument systems. GeneChip™ Command Console™ software provides an intuitive set of tools for instrument control and data management used in the processing of GeneChip™ arrays.
Axiom™ Analysis Suite User Guide	703307	Axiom™ Analysis Suite advances genotyping data analysis with a single-source software package to enable complete genotyping analysis of all Axiom™ arrays. This document provides instructions for using the software to automate the Best Practices Workflow to deliver accurate results in a single step for export in PLINK, VCF, or TXT formats.
Axiom™ Genotyping Solution Data Analysis User Guide	MAN0018363	This guide provides information and instructions for analyzing Axiom™ genotyping array data. It includes the use of Axiom™ Analysis Suite, Applied Biosystems™ Array Power Tools and SNPolisher R package to perform quality control analysis (QC) for samples and plates, SNP filtering before downstream analysis, and advanced genotyping methods.

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