Appendix 1

National Microbiology Framework Agreement
Order Form - C340556

FROM

Authority:	The Secretary of State for Health and Social Care as part of the Crown acting through the UK Health Security Agency 10 South Colonnade, London, E14 4PU (the "Authority").
Invoice address:	All invoices must be sent, quoting a valid purchase order number (PO Number), to: [redacted] UKHSA Billing Address: Accounts Payable; UK Health Security Agency, Manor Farm Road, Porton Down, Salisbury, SP4 0JG UKHSA VAT No: GB888851648
Contract Manager:	[redacted]
Secondary Contact: eg. business operational contact, project manager	[redacted]
Procurement lead	[redacted]
Name and address for notices:	[redacted]
Internal reference (if applicable):	To be quoted on all correspondence relating to this Order Form: Contract Reference: C340556

TO

Supplier:	Roche Diagnostics Ltd (Company Number: 00571546)

Contract Manager:	[redacted]
Secondary Contact:	[redacted]
Account Manager:	[redacted]
Name and address for notices:	FAO – Commercial Contract Department Address: Roche House Charles Avenue Burgess Hill West Sussex RH15 9RY

Applicable terms and conditions

The following terms and conditions are applicable to the Contract for this Order:

Appendix A	Call-off Terms and Conditions for the Supply of Goods and the Provision of Services	**Applicable to this Contract**
Appendix B	Optional Additional Call-off Terms and Conditions for Installation and Commissioning Services	☐ **(only applicable if this box is checked)**
Appendix C	Optional Additional Call-off Terms and Conditions for Maintenance Services	☐ **(only applicable if this box is checked)**
Appendix D	Optional Additional Call-off Terms and Conditions for Bespoke Research, Development and Manufacturing Requirements	☐ **(only applicable if this box is checked and to the extent the applicable terms are included in Annex A (Order Specific Key Provisions))**
Appendix E	Optional Additional Call-off Terms and Conditions for Reagent Rental	☐ **(only applicable if this box is checked)**
Appendix F	Optional Additional Call-off Terms and Conditions for Managed Equipment Services	☐ **(only applicable if this box is checked)**
Appendix G	Optional Additional Call-off Terms and Conditions for Clinical Laboratory Diagnostic Testing Services	☐ **(only applicable if this box is checked and to the extent the applicable terms are included in Annex A (Order Specific Key Provisions))**
Appendix H	Further Optional Additional Call-off Terms and Conditions Each of the following clauses in Appendix H is only applicable to this Contract if the relevant box is checked:	**(only applicable if one or more boxes are checked)**
	1. TUPE applies at the commencement of the provision of Services ☐	
	2. TUPE on exit ☐	
	3. Different levels and/or types of insurance ☐	
	4. Induction training for Services ☐	
	5. Further Authority obligations ☒	

	6. Assignment of Intellectual Property Rights in deliverables, materials and outputs of the Services	☐	
	7. Inclusion of a Change Control Process	☐	
	8. Authority step-in rights	☐	
	9. Guarantee	☐	
	10. Termination for convenience	☐	
	11. Pre-Acquisition Questionnaire	☐	
	12. Time of the essence (Goods)	☐	
	13. Time of the essence (Services)	☐	
	14. Specific time periods for inspection	☐	
	15. Specific time periods for rights and remedies under Clause 3.6 of Schedule 2 of Appendix A	☐	
	16. Right to terminate following a specified number of material breaches	☐	
	17. Expert Determination	☒	
	18. Consigned Goods	☐	
	19. Improving visibility of Sub-contract opportunities available to Small and Medium Size Enterprises and Voluntary, Community and Social Enterprises	☐	
	20. Management Charges and Information	☐	
	21. COVID-19 related enhanced business continuity provisions	☐	
	22. Buffer stock requirements	☐	
	23. Modern slavery	☒	
The additional Order Specific Key Provisions set out at Annex A (Order Specific Key Provisions) to this Order Form shall also apply to this Contract.			☒ **(only applicable if this box is checked)**

1. CONTRACT DETAILS
(1.1) Commencement Date: The Contract shall commence on the date of signature by the Authority.
(1.2) Services Commencement Date (if applicable): Not Applicable
(1.3) Contract Price ((i) breakdown and (ii) payment profile): 1.3.1 The maximum value of the Goods that can be ordered under this Contract is £30,326.00 (third thousand, three hundred twenty-six pounds) only (excluding VAT). **(the "Contract Price")**. Full details of the Contract Price are contained in Annex B- Quotation, below. For the avoidance of doubt, the Authority is not required to order Goods up to the full Contract Price.
(1.4) Term of Contract: 1.4.1 The Contract shall commence on the date the Order Form is signed by the Authority **(the "Commencement Date")** and shall, unless extended, in accordance with its terms, expire on 31st March 2025 **(the "Term").** 1.4.2 Satisfactory delivery of the Goods by no later than 31 March 2025, otherwise the order will be cancelled. (For the avoidance of doubt: (a) deliveries which arrive on time but are not unloaded due to the driver's decision; (b) deliveries which do not arrive; and (c) deliveries which arrive at the wrong delivery location, shall also be considered late.) 1.4.3 This Contract is subject to the Supplier receiving a Purchase Order from the Authority for the Goods no later than 11 March 2025. Failure from the Authority to issue a Purchase Order by that date would automatically terminate the Contract at no cost to either Party.
(1.5) Term extension options: Not applicable

2. GOODS AND/OR SERVICES REQUIREMENTS
(2.1) Description of the Goods / Services: The supplier shall provide the Goods as stated in Annex B – Quotation and Annex C - Specification

The instrument shall meet the following specifications:

Dimensions - W x D x H: 24 in x 24 in x 21.5 in (57.4 cm x 58.8 cm x 49.7 cm)

Weight - 121 lb (approx. 55 kg)

Power consumption - 200–240 Vac (50/60 Hz, 1500 VA)

Reaction volumes - 5 µL–20 µL (384-well),10 µL–100 µL (96-well)

Temperature control - Peltier-based heating/cooling from 37°C–95°C (20° starting temperature to perform specific melting curve analyses)

Heating rate - 96-well block: 4.4°C/s

Cooling rate - 96-well block: 2.2°C/s

Excitation - LightCycler® 480 LED Lamp (430-630 nm)

Detector - Cooled monochrome CCD camera

Filters -

Excitation (nm): 440, 465, 498, 533, 618

Detection (nm): 488, 510, 580, 610, 640, 660

Computer - Pentium PC with Windows 7

(2.2) Premises and Location(s) at which the Goods / Services are to be delivered / provided:

The Goods shall be delivered by the Supplier in accordance with the following instructions:

2.2.1 The Goods shall be delivered to the Authority at the following address **("Premises and Location"**):

UK Health Security Agency
Manor Farm Road
Porton Down
Wiltshire
SP4 0JG

2.2.2 All planned deliveries of the Goods shall be pre-advised by the Supplier to the Authority's primary delivery contact known as the **"Secondary Contact"**) at least 2 (two) Business Days prior to shipping:

Name: [redacted]
Phone:
E-mail:
Deliveries must be made between the hours of 08:00 to 16:00 on a Business Day.

2.2.3 The Supplier shall ensure that all Goods are labelled with the PO number, product description, part number, volume, batch number, storage requirements and barcode.

2.2.4 Delivery of the Goods shall be considered to have occurred when the Secondary Contact or other authorised representative of the Authority at the Authority's Premises and Locations has signed the delivery note, as required in clause 2.3 of the Call-Off Terms and Conditions, confirming receipt stating the satisfactory delivery of the Goods, has taken place.

(2.3) Key personnel of the Supplier to be involved in the Goods / Services:

Name: [redacted]
Phone:
E-mail:

(2.4) Performance standards:

2.4.1 The supplier shall deliver the service according to the Quotation in Annex B and specification in Annex C, and good industry standards.

(2.5) Quality standards:

2.5.1 The supplier shall follow the quality standards as set out in the Quotation in Annex B and specification in Annex C.

2.5.2 If the Goods are deemed to be Defective Goods by the Authority, the Authority, at its sole discretion, shall provide a written notice to the Supplier in accordance with Schedule 2, Clause 3 of the Call-Off Terms and Conditions.

(2.6) Contract monitoring arrangements:

N/A

(2.7) Management information and meetings:

N/A

3. CONFIDENTIAL INFORMATION (if applicable)

(3.1) The following information shall be deemed Confidential Information:

- Supplier pricing.
- Contact details including, but not limited to, email addresses, landline / mobile phone numbers, etc. of Staff.
- Contact details including, but not limited to, email addresses, landline / mobile phone numbers, etc. of Authority's representatives.

(3.2) Duration that the information shall be deemed Confidential Information:

For a period of three (3) years after the expiry or earlier termination of this Contract unless otherwise agreed in writing by the Parties.

4. DATA PROCESSING (if applicable)

(4.1) Personal Data to be processed by the Supplier:

Not Applicable

5. LEASE / LICENSE (if applicable)

(5.1) The Authority is granting the following lease or licence to the Supplier:

N/A

Signature:

For and on behalf of the Authority

DocuSigned by:

[redacted]

Full Name: [redacted]

Job Title/Role:

Date Signed: 10th March 2025

Signature:

For and on behalf of the Supplier

DocuSigned by:

[redacted]

Full Name: [redacted]

Job Title/Role:

Date Signed: 10/03/2025

Annex A

Order Specific Key Provisions

1. Ordering Procedure

1.1. The Authority may, but shall not be obliged to, provide the Supplier with POs for Goods up to, but not cumulatively exceeding the Contract Price.

1.2. The Supplier shall as part and parcel of the delivery of the Goods provide to the Authority any relevant technical information, quality standard, testing and validation information, and any handling and storage information.

1.3. The Goods shall be inspected by the Authority within 5 working days of delivery. The Supplier warrants that any Goods that are shown to fail the Specification in accordance with clause 3.2 and/or 3.6 of the Call-Off Terms and Conditions, within the expiry date required for the Goods, are either replaced or, where the Authority no longer requires replacement Goods in accordance with clause 3.5 of the Call-Off Terms and Conditions the Authority, receives full credit for the Rejected Goods, except for where the defect is the result of the Authority's act or omission.

2. Invoicing Terms

2.1. Payment terms are net 30 days from receipt of a valid invoice.

2.2. Following signature of the Contract by both Parties, each time the Authority wishes to order the Goods, it will issue a PO to the Supplier. The Supplier must be in receipt of a valid PO before processing an Order.

2.3. The Supplier shall provide an invoice to the Authority for all Goods delivered to the Authority.

2.4. All invoices must be sent for approval and shall include the proof of delivery to the Authority's designated finance mailbox e-mail: payables@ukhsa.gov.uk and their agreed representative before being submitted for payment.

2.5. The Supplier shall provide compliant invoices that include, as a minimum, a valid PO number, PO line item number (if applicable), PO line description, and the details (name and telephone number) of the Authority's authorised representative. Non-compliant invoices will be sent back to the Supplier, which may lead to a delay in a payment.

2.6. In support of Goods delivered, the Supplier shall provide to the Authority a signed delivery note confirming receipt of the Goods at the Authority's nominated Premises and Locations.

2.7. Supplier queries regarding payment must be forwarded to the Authority's Accounts Payable section by email to: [redacted]

2.8. The Supplier shall provide a current statement of accounts on a quarterly basis; this is a standard commercial process and should show all invoices raised and amounts outstanding.

3. Authority Obligations

Notwithstanding any other obligations that the Authority may have in this Contract, for the duration of the Contract, the Authority shall be responsible for providing the services detailed within this Schedule.

Authority Provided Services & Obligations

Premises and Laboratory

3.1. The Authority shall ensure that the Supplier (and any sub-contractor) has appropriate access to the Premises in order to allow the Supplier to comply with regulatory requirements and/or its obligations under this Contract.

3.2. The Authority shall provide utilities (mains water, electricity, telecoms, waste and drainage) connections to enable the Supplier to access utilities required to operate the Equipment. Unless otherwise agreed in writing between the Parties the Authority shall not be entitled to recharge or set-off the costs of such utilities provided to the Supplier.

3.3. The Authority shall ensure that the mains water supplied is of consistent quality, pressure and volume as required to operate the Equipment.

3.4. The Authority shall ensure that the Premises where the Equipment, Middleware, Consumables and all other elements of the solution are located are maintained at a temperature, atmospheric levels of CO2, and humidity suitable for the operation of the Equipment, Middleware, Consumables and all other elements of the solution whilst taking into account any heat output increases from any additional provisions to the laboratory.

3.5. The Authority shall ensure that the premises are maintained to a standard to prevent loss or damage to Equipment, Middleware, Consumables and all other elements of the solution, caused by deterioration of the fabric of the building or ingress of water and lit to a standard that meets hospital building regulations.

3.6. The Authority shall notify the Supplier via the Supplier's nominated Contract Manager, or equivalent role, of any Equipment, Middleware and all other elements of the solution that are to be moved by the Authority outside the originally installed/designated Premises.

3.7. The Authority shall ensure that the operating environment is clean and tidy and that equipment intakes / outlets are unobstructed.

Laboratory Equipment

3.8. The Authority shall ensure that the Equipment, Middleware and all other elements of the solution are used solely for the purpose for which they have been designed, in accordance with the Supplier's tender response and manufacturer's guidelines.

3.9. The Authority shall ensure that Equipment is operated within the required environmental parameters, and appropriate decontamination procedures are adhered to, as and when required.

3.10. The Authority shall ensure the Equipment is kept safe and secure, it is treated appropriately and not maliciously damaged, it is not sold, hired, or transferred to another party and that there are no alterations, modifications or additions to the Equipment and that no security is granted over the Equipment.

3.11. The Authority shall ensure that all reasonable instructions, guidance or rules provided by the Supplier, or the Sub-Suppliers, and notified to the Authority relating to the proper use of any aspect of the Equipment, including but not limited to recommendations for routine maintenance of, and operation of, any item of Equipment are followed and that maintenance is carried out by trained Authority personnel in accordance with the most recent relevant item of Equipment's manufacturer's operating manual.

Laboratory Materials

3.12. All barcodes, sample tubes, sample types and sample containers must be fully compliant with the specifications required as described in the instrument user manual.

3.13. The Authority shall ensure, unless agreed otherwise in writing, that the Supplier's reagents are utilised on the Equipment. The Parties agree that the use by the Authority of any third party / off- label reagents and consumables shall invalidate any warranty provisions provided on the Equipment.

3.14. The Authority shall ensure that the consumables and reagents are used solely for the purpose for which they have been designed, in accordance with the Supplier's tender response and manufacturer's guidelines.

3.15. The Authority shall ensure that Laboratory Materials are stored in accordance with good industry practice and in accordance with the written instructions of the Supplier within a reasonable timeframe from such instructions having been provided to the Authority.

3.16. The Authority shall record the receipt and use of all Laboratory Materials within its inventory management system

3.17. The Authority agrees, where required, to check the quantity and quality of all deliveries of consumables from the Sub-Suppliers upon delivery to the Authority site and report to the Supplier any discrepancies or inconsistencies between the quantity and quality received by the Authority and the quantity and quality specified in any order placed by the Authority within ten (10) days of delivery of such order.

Information Technology & Technical Interfacing

3.18. The Authority agrees to provide access to the Supplier to its Wi-Fi network for the connection of handheld devices to facilitate the Suppliers inventory management solution and any technical troubleshooting.

3.19. The Authority will allow the supplier to comply with security labelling as noted in supplier documentation. Including but not limited to the implementation of Supplier Managed Firewalls between clinically validated diagnostics systems (excluding near-patient) and the Authority network.

3.20. The Authority shall carry out virus checking in relation to the Authority's IT Infrastructure (excluding the Equipment, Middleware and all other elements of the Solution) using nominated virus detection software in accordance with manufacturer's operating instructions and guidance manuals as applicable.

3.21. The Authority staff shall follow instructions for technical troubleshooting as guided by the Supplier's technical support staff.

3.22. In instances where server (both virtual and physical) environments are supplied by the Authority, as a minimum, the server should be configured and managed in alignment with the NCSC 10 Steps to Cyber security guidance (https://www.ncsc.gov.uk/collection/10-steps) and the server shall be provided in a timely fashion, which does not impact on the overall timelines of the contract.

3.23. Where there is a need for the completion of a data protection agreement and/or data protection impact assessment, this is treated as priority and brought to the necessary personnel from the Authority side (e.g. information governance teams).

Training

3.24. The Authority shall ensure that all staff who require access to the Equipment, Middleware, Consumables and all other elements of the solution including water and UPS systems are made available for full training according to a training schedule agreed by the Supplier and the Authority. The Authority shall ensure that the training is completed by their staff prior to using the Equipment. The training shall include, where relevant, training in adverse incident reporting requirements.

3.25. The Authority shall ensure that staff are available for training as scheduled by the Supplier in order to ensure safe operation of the equipment and avoid implementation delays.

3.26. The Authority shall ensure that only fully trained and competent staff shall operate the Equipment during the Term of the Contract.

3.27. The Authority shall ensure that appropriately trained Authority staff and/or delegated staff will be responsible for the safe external cleaning of all Equipment after service commencement.

Authority Staff

3.28. The Authority shall ensure that their staff cooperate fully with the Supplier to enable the Supplier and/or the Sub-Suppliers, employees or agents to provide the Services during the Term.

3.29. The Authority shall provide staff at the required level to meet its obligations with regard to contract management and other project meetings.

3.30. The Authority must ensure that there is sufficient qualified staff available to operate the Equipment at all times.

3.31. The Authority should provide a list of names and contacts within the Organisation for the Supplier to liaise with, including those responsible for the operation of other Authority Contracts such as PFI, Transport, IT (LIMS) etc.

3.32. The Authority's staff will treat all Supplier staff and representatives with respect and fairness in accordance with acceptable business conduct.

3.33. The Authority should provide a safe working environment for the Supplier's staff and representatives, complying with health and safety regulation.

General

3.34. The Authority shall make payments in accordance with this Contract and as specifically detailed in the Finance Schedule.

3.35. The Authority shall ensure that Authority staff speak to Supplier staff politely, respectfully and ensure a collaborative working relationship.

Annex B

Quotation

Product Description	Warranty	Quantity	Unit Price (excl. VAT)
LightCycler 480 II (96-well)	**12 months**	**1**	[redacted]

**** The Supplier reserves the right to refuse any Purchase Order received after 11 March 2025.***

Financial Schedule

The prices below are subject to contract. All prices are without VAT.

Total Costs years

Delivery	Number of reportables per year	Costs year 1	Total costs years 1-1
Lab 1			[redacted]
Instruments			
Net sum (without VAT)			

Instrument costs

Instrument	Reference	Number	Acquisition type	Costs year 1	Total costs years 1-1
Lab 1					[redacted]
LightCycler 480, 96		1	Purchase		
Net sum (without VAT)					

Roche Diagnostics Limited

Charles Avenue
Burgess Hill
West Sussex, RH15 9RY
England
Company Reg. No: 571546

[redacted]

Annex C

Specification

The Specification from Roche includes:

Dimensions - W x D x H: 24 in x 24 in x 21.5 in (57.4 cm x 58.8 cm x 49.7 cm)

Weight - 121 lb (approx.55 kg)

Power consumption - 200–240 Vac (50/60 Hz, 1500 VA)

Reaction volumes - 5 µL–20 µL (384-well),10 µL–100 µL (96-well)

Temperature control - Peltier-based heating/cooling from 37°C–95°C (20° starting temperature to perform specific melting curve analyses)

Heating rate - 96-well block: 4.4°C/s
Cooling rate - 96-well block: 2.2°C/s
Excitation - LightCycler® 480 LED Lamp (430-630 nm)
Detector - Cooled monochrome CCD camera
Filters -
Excitation (nm): 440, 465, 498, 533, 618
Detection (nm): 488, 510, 580, 610, 640, 660

Computer - Pentium PC with Windows 7

3 Specifications of the LightCycler® 480 Instrument

The specifications given below are identical for the LightCycler® 480 Instrument I and the LightCycler® 480 Instrument II.

The LightCycler® 480 Instrument is equipped with a block cycler unit accommodating either 96- or 384-well format:

LightCycler® 480 Instrument II, 96-wells	Cat. No. 05 015 278 001
LightCycler® 480 Instrument II, 384-wells	Cat. No. 05 015 243 001

3.1 General

Dimensions	57.4 × 58.8 × 49.7 cm (W × D × H)
Bench loading capacity	65 kg including control unit components
Weight	55 kg
Power supply/consumption	200-240 Vac (+10%/-15%) 50/60 Hz (+/- 2 Hz) 1.5kVA
Noise level	< 60 dB (A)
Protection class	I
Installation/overvoltage category	II
Electromagnetic emission	Class B
Heat output During run (mean value): In Standby:	~4000 Btu/h or 4200 kJ/h ~850 Btu/h or 900 kJ/h

3.2 Environmental Parameters

Temperatures allowed during transportation/ storage/packaging	-25°C to +60°C
Relative humidity allowed during transportation/ storage/packaging	10% to 95%, no condensation
Temperatures allowed during operation	+15°C to +32°C
Relative humidity allowed during operation	Max. 80% at +32°C, no condensation Min. 30% at +15°C to +32°C
Altitude/pressure allowed during operation	0 — 2000 m above sea level 80 — 106 kPa

3.3 Interfaces

The LightCycler® 480 Instrument provides the following external interfaces:

Interface	Device
LAN 10/100 Base T	Connection to control unit for instrument control and data transfer

3.4 Sample Capacity

Number of samples per run	96 or 384
Sample volume	▶ 96-well thermal block cycler: 10 — 100 µl ▶ 384-well thermal block cycler: 5 — 20 µl *Smaller reaction volumes down to 3µl are possible but require an oil overlay.*

3.5 Shipping

The LightCycler® 480 Instrument is shipped in a palletized styrofoam container encircled by a cardboard box.

The original shipping container must be transferred unopened to the installation site. On delivery, carefully inspect the containers. Make a note of any indications of physical damage, and record your observations in the accompanying shipping documents. It is essential that you report any suspected damage immediately to Roche Diagnostics and to the shipping agent before accepting the unit.

Use only the original packaging for transportation or relocation of the LightCycler® 480 Instrument.

3.6 Control Unit

A fully equipped control unit is delivered by Roche with the LightCycler® 480 Instrument.

By using special software (laboratory information management system, LIMS) it is possible to access the LightCycler® 480 Control Unit by remote control and to combine it, for example, with an automated robotic plate-loading system. To enable this functionality, you must install the optionally available LightCycler® 480 LIMS Interface Module. Contact your Roche representative for more information.

4 Specifications of the Detection Unit

4.1 Excitation

Xenon

Type	Xenon reflector lamp
Wattage	100 W
Lifetime	> 500 h

LED

Type	White power LED
Wattage	10 W
Lifetime	> 10,000 h

4.2 Detector

Type	Monochrome CCD camera
Resolution	1024 × 1344 pixel
Integration time	10 ms to 10 s
Integration time selection	Dynamic or manual
Sensitivity	< 0.2 nmol/l fluorescein, typically 0.1 nmol/l (20 µl reaction volume)
Reproducibility	CV ≤ 0.15%
Crosstalk well-to-well	< 0.2% optically < 0.02% with software correction

4.3 Optical Filter

For the LightCycler® 480 Instrument two different filter sets exist:

- Filter set of the LightCycler® 480 Instrument I
- Filter set of the LightCycler® 480 Instrument II

4.3.1 Optical Filter Set of the LightCycler® 480 Instrument I

Excitation wavelengths (nm)	Bandpass	Band Width (BW)
	450 nm	30 nm
	483 nm	35 nm
	523 nm	20 nm
	558 nm	30 nm
	615 nm	30 nm
Emission wavelengths (nm)	500 nm	20 nm
	533 nm	20 nm
	568 nm	20 nm
	610 nm	20 nm
	640 nm	20 nm
	670 nm	20 nm

4.3.2 Optical Filter Set of the LightCycler® 480 Instrument II

Excitation wavelengths (nm)	Bandpass	Band Width (BW)
	440 nm	35 nm
	465 nm	25 nm
	498 nm	40 nm
	533 nm	25 nm
	618 nm	35 nm
Emission wavelengths (nm)	488 nm	20 nm
	510 nm	20 nm
	580 nm	20 nm
	610 nm	20 nm
	640 nm	20 nm
	660 nm	95 nm (long pass)

5 Specifications of the Thermal Block Cyclers

Two different thermal block cycler units are available for the LightCycler® 480 Instrument:

- LightCycler® 480 Thermal Block Cycler Unit 96 Silver
- LightCycler® 480 Thermal Block Cycler Unit 384 Silver

Temperature control	Peltier-based heating and cooling
Temperature range	+37 to +99°C +20°C starting temperature to perform specific Melting Curve analysis if required
Heating rate	96-well block: 4.4°C/s 384-well block: 4.8°C/s
Cooling rate	96-well block: 2.2°C/s 384-well block: 2.5°C/s

6 Specifications of the Multiwell Plate Barcode Reader

The multiwell plate barcode reader is an integral part of the block cycler unit. It is used for automated identification and identifier (ID) tracking of PCR multiwell plates. During plate loading, the linear barcode present on the LightCycler® 480 Multiwell Plates is scanned.

Supported barcode types	▶ Code 39 (250 — 500 µm; Code with Checkdigit, min. code length = 2) ▶ Code 2 of 5 (250 — 500 µm; Code with Check-digit, min. code length = 2) ▶ Code 128 (250 — 500 µm; min. code length = 2)
Maximum label size	68.0 × 6.5 mm

7 Specifications of a Handheld Barcode Reader

You can purchase a handheld barcode reader for the LightCycler® 480 Instrument as an optional accessory which is connected to the control unit via a USB interface. Please contact your local Roche Service representative.

Additional information to improve the reading performance of a barcode application.

Recommendations for printing quality measurement for successful barcode reading:

A) Roche recommendations for visible inspection of printed barcodes

- The printing should be of good contrast (dark black on white background).
- The background should be solid white (no transparency, no patterns, no color), non-reflecting material.
- Check for sharp edges and clear lines of the barcode bars (no fringed lines).
- Quiet zone of the barcode must be respected (white space on the left/right of the bars).
- When scratching on the barcodes with the fingers or fingernails, the printed barcodes should hold and not smear, even if body oil, disinfectants, or other fluids are used; notice any wrinkles.

B) Standardized barcode quality measurement using a barcode verifier

Different barcode verifiers are available, allowing a standardized barcode quality measurement according to ISO/IEC 15416 standard which corresponds with the former US standard ANSI X3, 182-1990.

Roche recommends ISO/IEC grade 3.5 to 4.0 (ANSI A) or ISO/IEC grade 2.5 to <3.5 (ANSI B) for reliable barcode reading.