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Prequalification Team Inspection services
WHO PUBLIC INSPECTION REPORT
(WHOPIR)
DESK REVIEW
In Vitro Diagnostic Product Manufacturer

Part 1	**General information**
Manufacturers information	
Name and address of manufacturer	Meril Diagnostics Pvt. Ltd *Second Floor, D1-D3, Meril Park, Survey No 135/2/B & 174/2, Muktanand Marg, Chala, Vapi, 396191, India*
Desk assessment details	
Dates of inspection	15-17 June 2020
Type of inspection	Desk Assessment
Products covered by this desk assessment	• PQDx 0294-074-One Step test for Malaria Pf/Pv Ag MERISCREEN Malaria Pf/Pv Ag (WHO Status – Prequalified) • PQDx 0330-074-00 One Step test for Malaria Pf Pan Ag MERISCREEN Malaria Pf/Pan Ag (WHO Status – Under review) • PQDx 0470-074-00 One Step test for Malaria Pf HRP-II Ag MERISCREEN Malaria Pf HRP-II Ag (WHO Status – Screening) • PQDx 0464-073-00 MERISCREEN HIV 1-2 WB (WHO Status – Pre-submission Prioritised)
List of documents submitted	• Quality Manual including staff organogram.pdf • List of Quality Procedures.pdf • ia QP for Customer complaint.pdf • ib QP for Medical Device Vigilance System.pdf • ii QP for Control of Non-conforming product.pdf • iii QP for Risk Management.pdf • iv QP for Purchase.pdf • va QP for Design & Development.pdf • vb SOP_Change control.pdf • vi SOP for design change.pdf • List of changes to product or process - MERISCREEN Malaria Pf Pv Ag.pdf • 1 20 01 30 CR-2020-0001 Report Change_accepted.pdf • 2 20 03 24 CR-2020-0016 Report Change_Accepted.pdf

	• List of changes to product or process - MERISCREEN Malaria Pf Pan Ag.pdf • List of changes to product or process - MERISCREEN Malaria Pf HRP-II Ag.pdf • List of changes to product or process - Change in Labelling - Copy.pdf • Summary of Audit Reports.pdf • 1.1 ISO 13485 Audit Report 18 to 19-01-2016.pdf • 1.2 Non conformance clearance letter-PA2.pdf • 2.1 ISO 13485 Recertification Audit.pdf • 2.2 Non conformance clearance letter.pdf • 3.1 BGMP audit report.pdf • 3.2 BGMP approval.pdf • 4.1 D-INS-0187 Meril Inspection Report.pdf • 4.2.1 (D-INS-0187) CAP acceptance letter_Draft.pdf • 4.2.2 WHO review Meril Diagnostic Close Out_Record.doc • 5.1 ISO 13485 Periodic Audit Report_2017.pdf • 5.2 Non conformance clearance letter_2017.pdf • 6 PCBC CE Certification audit report May 2018.pdf • 6.1 Meril Audit CAPA - 03-07-2018.pdf • 7 Ukraine Audit Report 2018.pdf (not available in English) • 8. 1 ISO transition Audit report.pdf • 8.2 NC clearance letter.pdf • 9.1 Change Approval audit Report.pdf • 9.2 CAPA Plan.xlsx • 9.3 Conditionally accepeted.pdf • 9.4 Conditionally approved CAP.xlsx • 10 Ukraine Surveillance Audit report D.pdf • 11.1 PCBC Audit Report October 2019.pdf • 11.2 Nonconformity CAPA card 01_MDS.pdf • 11.3 Nonconformity CAPA NC card 02_MDS.pdf • 11.4 Nonconformity CAPA NC card 03_MDS.pdf • 11.6 CAPA Plan for Audit observations.pdf • 12.1 ISO 13485 2016 Periodic Audit Report.pdf • 12.2 Non conformance clearance letter.pdf • 0 Meril_Diagnostics_unannounced_audit Report.pdf • 1 Nonconformity 1 and CAPA Plan.pdf • 2 Nonconformity 2 and CAPA plan.pdf • QMS Certificate - ISO 13485 2016 Certificate.pdf • Name and contact details of responsible person.pdf • Full Address of Manufacturing facility.pdf • Site Floor Plan.pdf • Mfg Steps with location Malaria Pf Pv Ag Editted.pdf • Mfg Steps with location Malaria Pf Pan Ag.pdf

	• Mfg Steps with location Malaria Pf HRP-II Ag (2) (1).pdf • Manufacturing Steps with location HIV RDT Editted.pdf • Site floor plan and description of mfg steps.pdf • Flow Chart - MERISCREEN Malaria Pf-Pv Ag.pdf • Flow Chart for MERISCREEN Malaria Pf Pan Ag.pdf • Flow chart - MERISCREEN Malaria Pf HRP-II Ag.pdf • Flow Chart for MERISCREEN HIV 1-2 WB.pdf • List of critical RM Pf Pv Ag.pdf • List of critical RM Pf Pan Ag (3).pdf • List of critical RM Pf HRP-II Ag.pdf • List of critical RM HIV 1-2 WB.pdf • List of outsourced process.pdf • 1 NABL Certificate - ISO-IEC 17025-2005.pdf • 2 Scope of accreditation.pdf • Quality Agreement.pdf • 0 Covering Letter.pdf Additional documents received 29 June 2020 • WHO_Desk assessment Query response.pdf • 1. Quality Manual including staff organogram.pdf • 2. QP Installation & Service.pdf • 1. QP Customer complaint.pdf • 2. PMS of IVD_WHO ~~d~~ guideline.pdf • 1. QP Medical device vigilance system.pdf • 2. QP Post market surveillance system.pdf • QP Internal Quality Audit.pdf Additional documents submitted 7 July 2020 • 1. WHO_Desk assessment Query response.pdf • 2. PRO_7.2_003_05MDVS.PDF • 3. PRO_8 2_003_05Customer complaint.pdf • 3.1 Format PRO_8.2_003_F10.pdf	
Any documents missing?	No	
Part 2	**Summary of inspection evidence considered (from most recent to last)**	
DNV GL Presafe AS, Norway	Dates of inspection:	30-31 December 2019
	Type of inspection:	Periodic audit ISO13485:2016/NSEN ISO 13485:2016
	Products covered:	Biochemistry, Haematology and Immunology Reagents, POCT devices, In-Vitro Analyzers Merilisa HCV MERISCREEN HIV 1-2 WB MERISCREEN HCV MERISCREEN HBsAg

Polish Centre for Testing and Certification Notified Body No. 1434	Dates of inspection:	14-17 October 2019
	Type of inspection:	CE Certification and Surveillance Audit
	Products covered:	**Surveillance Audit:** Merilisa HCV MERISCREEN HBsAg MERISCREEN HCV MERISCREEN HIV 1-2 WB **CE Certification Audit:** Merilisa HBsAg Merilisa HIV 1-2 Gen 3 Merilisa HIV Gen 4
Part 3	**Summary of the last WHO inspection**	
Date and conclusion of most recent WHO inspection	WHO last inspected the site 27-29 September 2017. At the time of the inspection, the site was found to be compliant and met all requirements of ISO 13485:2003 and WHO. The site was not inspected against ISO 13485:2016. At the time of inspection, the manufacturer was working towards meeting all ISO 13485:2016 requirements.	
Brief description of the manufacturing activities	Meril Diagnostics Pvt. Ltd were responsible for the full production of the products listed	
Areas inspected during the last WHO inspection	Design and Development Quality management system Management responsibility Purchasing Production and Service Controls Preservation Measurement, analysis and improvement Adverse Events and Advisory Notices Reporting WHO pre-qualification-specific requirements	
Out of scope and restrictions (last WHO inspection)	None identified	
WHO product(s) covered by the last WHO inspection	• PQDx 0330-074-00 One Step Rapid for Malaria Pf Pan Ag MERISCREEN Malaria Pf Pan Ag • PQDx 0331-074-00 MERISCREEN Malarai pLDH Ag • PQDx 0294-074-00 MERISCREEN Malaria Pf/Pv Ag	
Additional product(s) to be covered by this desk assessment	• PQDx 0470-074-00 One Step test for Malaria Pf HRP-II Ag MERISCREEN Malaria Pf HRP-II Ag (WHO Status – Screening) • PQDx 0464-073-00 MERISCREEN HIV 1-2 WB (WHO Status – Pre-submission Prioritised)	

General information about the company and site	Meril Diagnostic Pvt. Ltd was incorporated in year 2011. Meril Diagnostic facility is situated at Chala, Vapi, Gujarat, 150 kilometers North of Mumbai at Vapi. Meril Diagnostics supports a wide portfolio of diagnostic products which include a range of analyzers, reagents for clinical biochemistry, haematology, immunology (ELISA & CLIA), rapids, critical care, diabetes management, coagulation and lab consumables. Meril Diagnostics' quality management system is certified in accordance with ISO 13485:2016 /NS-EN ISO 13485 2016 and ISO 9001:2015 meeting various international regulatory requirements e.g. European Nations, US FDA, Directive 98/79/EC In vitro Diagnostic Medical Devices, Resolution RDC Number 16, dated March 28th, 2013 (Brazil), 21 CFR 820, Cabinet of Minister of Ukraine resolution No. 754 of 2 October 2013 including WHO and GHTF guidance documents. Meril Diagnostics has been licensed by the Indian FDA for manufacture and sale of in-vitro diagnostic devices.
Abbreviations	**Meaning**
CoA	Certificate of analysis
IQ	Installation qualification
IVD	In vitro device
MR	Management Review
MSDS	Material safety data sheet
NC	Non-conformities
PPE	Personal Protective Equipment
OOS	Out-of-specifications test result
OQ	Operational qualification
PM	Preventive maintenance
PQ	PQ Performance qualification
PW	PW Purified water
QA	Quality assurance
QC	Quality control
QMS	Quality management system
QRM	Quality risk management
RA	Risk assessment
RCA	Root cause analysis
SOP	Standard operating procedure

Part 4	Brief summary of the findings and comments

1. Quality Manual:

The Quality Management Manual (QMM, Rev. No.: 07 Dated 14/3/2020) was provided. The manufacture had a well-documented, effective quality management system that was set out according to ISO 13485:2016.

The manufacture had reasonable justification within the manual of what clauses were excluded.

The quality system documentation structure was outlined in section 4.2.1 of the manual and composed of 4 levels of documentation.

There was reference within the manual of responsibilities and commitment of top management. Quality objectives and policy were well established and measurable. There was a well-established risk management procedure that included product realization and monitoring. All aspects of the standard were reviewed at management review meetings including required inputs and outputs. Under section 4.1.4 of the manual there was reference to the manufacturer ensuring the quality management system was in accordance with International standards and applicable regulatory requirements, including the evaluation for their impact on the medical devices produced under this quality management system.

2. List of current quality management procedures:

A list of quality management procedures was provided with effective date within the last three years in accordance with the documented review period.

3. Standard operating procedures for:

i. Compliant handling and vigilance:

Complaint handling was addressed in Quality Procedure for Handling of Customer Complaint (Document No.: PRO/8.2/003 – 04). All complaints received were directed to the Customer Support desk team for resolution. If the complaint cannot be resolved it would then be directed to Quality Assurance head for further investigation and the complaint was registered within the system. The investigation then involves review of

- Lot history
- Control samples
- Complaint history records
- Analysis of returned sample

An incident evaluation, evaluation of cause of the defect and corrective and preventive action would be completed by the manufacturing team in conjunction with Quality Control and Quality Assurance.

The procedure references requirements for reporting Field Safety Corrective Notices to both WHO and the relevant NRA.

The documented titled Post- Market Surveillance of in Vitro Diagnostics guideline was reviewed. Quality procedure for Medical Device Vigilance System (PRO/7.2/003, Rev.04) referenced WHO guideline, “Reporting timeline for complaints”.

The procedure for Medical Device Vigilance System (Document No.:PR0/7.2/003-03) was reviewed. Within this procedure the manufacture describes the requirements and process that was followed for the reporting and evaluation of Incidents/Adverse Events, Advisory Notice and Field Safety Corrective Actions (FSCA) or Product Recall of any product manufactured and/or distributed by Meril in Europe, Brazil and other countries outside Europe.

Overall, the reviewed SOPs cover the required steps and seems to provide a reliable foundation for complaint handling.

ii. Control of nonconforming goods/processes:

The Quality Procedure for Control of Non-Conforming Product (Document No.: PRO/8.3/002-02) was provided. This procedure describes that inspection occurs at initial incoming, in process and final product inspection stages. There was a mechanism in place for the labelling, removal and segregation of non-conforming product. It was then the responsibility of the Quality Assurance team to investigate further. There was provision within this procedure for a cross-functional team to be established to investigate and perform root cause analysis. There was provision to rework the product depending on the nature of the non-conforming problem identified. This was to be determined by the Quality Assurance head.

The reviewed SOP seems to provide a reliable foundation for the handling of non-conforming products.

iii. Risk management:

The manufacturer has a well-established process in place for risk management that followed ISO 14971:2007 and EN ISO 14971:2012 requirements that was documented in the procedure titled Quality Procedure for Risk Management (Document No.: PRO/7.1/001-01).

Appropriate investigations to determine root cause were included in the procedure, including planning and analysis of the risk. Estimation of severity and harm was well defined.

The reviewed SOP seems to provide a reliable foundation for Risk management.

iv. Supplier evaluation and control, verification of purchased product:

In Quality Procedure for Purchase (Document No.: PRO/7.4/001-04), Meril Diagnostics has a well-defined process for evaluation and control of supplier including the process for supplier approval. The supplier quality agreements were clearly defined within this document with the provision for site inspections as well as regular desk reviews of the supplier. Periodic evaluation of the supplier to be performed annually. Within this procedure there were requirements for the retention period of device history records of 12 months post product expiry.

Overall, the reviewed SOP seems to provide a reliable foundation for the evaluation and control of suppliers.

v. Design and Development:

The manufacturer had a documented procedure titled Quality Procedure for Design and Development (Document No.: PRO/7.3/001-03) that defined the process for design and development. The procedure incorporated the full life cycle of the product from new design to design changes and ensuring that design meet customer requirements. Risk management was incorporated at each stage of the process with verification and validation included. Responsibilities were clearly defined within the procedure and approval at each stage from top management was required.

Overall, the reviewed SOPs cover the required steps and seems to provide a reliable foundation for design and development.

vi. Internal Audits:

"Quality procedure for Internal Quality audit" (PRO/8.2/001, Rev.05) was provided and reviewed. The procedure seems to provide a reliable foundation for internal audit process meeting the requirements of ISO 13485:2016.

4. List of changes to the product and processes (since prequalification submission to WHO and since the last external certification for this desk assessment):

None identified during this desk assessment.

5. Audit report of the most recent full regulatory audit and all subsequent surveillance audits:

A copy of the Quality Management System certificate was provided.
The certificate was issued by DNV GL PRESAFE AS
Certificate number: 248933-2017-AQ-IND-NA-PS Rev. 1.0
Valid until 16 February 2022

The scope of the accreditation:

Design, Development, Manufacture, Storage and Distribution of In-vitro diagnostic Biochemistry, Haematology, Immunology and POCT-Strips, Reagents & kits. Design, Development, Manufacture, Storage, Distribution, Installation and Servicing of in vitro diagnostic analyzers. Purchase for resale of ELISA processors, Coagulation Analyzers and POCT devices.

Part 5	Conclusion – Inspection outcome

Based on the previous WHO inspections and on the MDSAP evidence received and reviewed, it is considered that a desk assessment is acceptable in lieu of a WHO onsite inspection. The site ***Meril Diagnostics Pvt. Ltd.,*** located at ***Second Floor, D1-D3, Meril Park, Survey No. 135/2/B & 174/2, Muktanand Marg, Chala, Vapi-396191, Gujarat, India*** is considered to be operating at an acceptable level of compliance with ISO 13485: 2016 and WHO *Information for Manufacturers on Prequalification Inspection Procedures for the Sites of Manufacture of Diagnostics* (PQDx_014).

This WHOPIR will remain valid for 3 years, provided that the outcome of any inspection conducted during this period is positive.

Part 6	List of Standards and Guidelines referenced in the inspection report

1. WHO Information for Manufacturers on Prequalification Inspection Procedures for the Sites of Manufacture of Diagnostics (PQDx_014). (https://www.who.int/diagnostics_laboratory/evaluations/en/)
2. ISO 13485:2016 Medical devices - Quality management systems - Requirements for regulatory purposes
3. ISO 9001:2015 Quality management systems – Requirements
4. WHO Post-market surveillance of in vitro diagnostics 2015 (ISBN 978 92 4 150921 3)
5. Medical devices - Application of risk management to medical devices - ISO14971:2007
6. GHTF/SG3/N19:2012 “Quality management system – Medical devices - Nonconformity Grading System for Regulatory Purposes and Information Exchange”
7. GHTF/SG4/(99)28 'Guidelines for Regulatory Auditing of Quality Systems of Medical Device Manufacturers - Part 1: General Requirements
8. GHTF/SG4/N30R20:2006 'Guidelines for Regulatory Auditing of Quality Systems of Medical Device Manufacturers - Part 2: Regulatory Auditing Strategy
9. GHTF/SG4(pd1)/N33R16:2007 'Guidelines for Regulatory Auditing of Quality Systems of Medical Device Manufacturers - Part 3: Regulatory Audit Reports ISO 13485:2016, Commitments to WHO PQ.