World Health Organization

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WHO Prequalification Team - Inspection services

WHO PUBLIC INSPECTION REPORT (WHOPIR)

In vitro Diagnostic product

Inspected site/s	
Name of Organization	Qiagen Shenzhen Co. Ltd.
Address/es of inspected manufacturing site/s	2F-6F, No.18, JinHui Road, JinSha Community, KengZi Street, PingShan District, ShenZhen, GuangDong Province China
Inspection details	
Start of inspection	11/11/2024
Inspection duration (in inspector days)	6
Type of inspection	Re-inspection
Introduction	
Brief description of manufacturing activities conducted at the site/s inspected	Design and development, production, warehousing, and distribution of in vitro diagnostic tests.
General information about the organization	Qiagen Shenzhen was acquired by QIAGEN in 2005. Offices and manufacturing areas were spread over 5 floors. Product range included pathogen diagnosis assays, “Human ID”, and capillary electrophoresis and other consumables.
Brief report of inspection activities undertaken – Scope and limitations	
Areas inspected	As detailed below, the areas inspected were sampled from the areas of activities performed on site that were relevant to the products in scope. The sampling was performed using a risk-based approach considering, for example, the impact of the area inspected on the product, as well as past inspection findings.
Products in scope	0085-028-00 CareHPV Test – Prequalified
Criteria	• All applicable clauses of ISO 13485:2016 • WHO PQ requirements • Organization’s own requirements
Objective(s)	Verify continued compliance to the inspection criteria.
Limitations	The occasional need for interpretation and the need for translation of documents somewhat slowed down the inspection process.
Out of scope	Any processes or activities not related to the products in scope were considered out of scope of this inspection.

Abbreviations	Meaning
CAPA	Corrective and Preventive Action
CoA	Certificate of analysis
IQ	Installation qualification
IVD	In vitro device
MR	Management review
MRM	Management review meeting
MSDS	Material safety data sheet
NC	Non-conformity
PPE	Personal protective equipment
OOS	Out-of-specifications test result
OQ	Operational qualification
PM	Preventive maintenance
PMS	Post Market Surveillance
PQ	Performance qualification
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

Summary of the findings and comments

4 Quality management system

4.2 Documentation requirements

4.2.4 Control of documents

Documents required by the quality management system were controlled. Records were a special type of document and were controlled according to the requirements given in Clause 4.2.5., with the exceptions of the nonconformities identified. These were satisfactorily addressed through a CAPA process.

The nonconformities identified were successfully resolved through a CAPA process.

4.2.5 Control of records

Records were maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system.

The organization did document procedures to define the controls needed for the identification, storage, security and integrity, retrieval, retention time and disposition of records.

Records did remain legible, readily identifiable and retrievable, with the exceptions of the nonconformities identified. These were satisfactorily addressed through a CAPA process. Changes to a record did remain identifiable.

The nonconformities identified were successfully resolved through a CAPA process.

5 Management responsibility

5.1 Management commitment

Top management did provide evidence of its commitment to the development and implementation of the quality management system and maintenance of its effectiveness by:

a) communicating to the organization the importance of meeting customer as well as applicable regulatory requirements;

b) establishing the quality policy;

c) ensuring that quality objectives were established;

d) conducting management reviews;

e) ensuring the availability of resources.

5.3 Quality policy

Top management did ensure that the quality policy:

a) was applicable to the purpose of the organization;

b) included a commitment to comply with requirements and to maintain the effectiveness of the quality management system;

c) provides a framework for establishing and reviewing quality objectives;

d) was communicated and understood within the organization;

5.4 Planning

5.4.1 Quality objectives

Top management did ensure that quality objectives, including those needed to meet applicable regulatory requirements and requirements for product, were established at relevant functions and levels within the organization. The quality objectives were measurable and consistent with the quality policy.

5.5 Responsibility, authority and communication

5.5.1 Responsibility and authority

Top management did ensure that responsibilities and authorities were defined, documented and communicated within the organization.

Top management did document the interrelation of all personnel who manage, perform and verify work affecting quality and did ensure the independence and authority necessary to perform these tasks.

5.5.2 Management representative

Top management did appoint a member of management who, irrespective of other responsibilities, had responsibility and authority that included:

a) ensuring that processes needed for the quality management system were documented;

b) reporting to top management on the effectiveness of the quality management system and any need for improvement;

c) ensuring the promotion of awareness of applicable regulatory requirements and quality management system requirements throughout the organization.

5.6 Management review

5.6.1 General

The organization did document procedures for management review. Top management did review the organization's quality management system at documented planned intervals to ensure its continuing suitability, adequacy and effectiveness. The review did include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.
Records from management reviews were maintained.

6 Resource management

6.1 Provision of resources

The organization did determine and provide the resources needed to:

a) implement the quality management system and to maintain its effectiveness;
b) meet applicable regulatory and customer requirements.

6.2 Human resources

Personnel performing work affecting product quality were competent on the basis of appropriate education, training, skills and experience.
The organization did document the process(es) for establishing competence, providing needed training, and ensuring awareness of personnel.
The organization did:

a) determine the necessary competence for personnel performing work affecting product quality;
b) provide training or take other actions to achieve or maintain the necessary competence;
c) evaluate the effectiveness of the actions taken;
d) maintain appropriate records of education, training, skills and experience.

6.3 Infrastructure

The organization did document requirements for the maintenance activities, including the interval of performing the maintenance activities, when such maintenance activities, or lack thereof, could affect product quality. As appropriate, the requirements did apply to equipment used in production, the control of the work environment and monitoring and measurement.
Records of such maintenance were maintained.
The nonconformities identified were successfully resolved through a CAPA process.

6.4 Work environment and contamination control

6.4.1 Work environment

The organization did document the requirements for the work environment needed to achieve conformity to product requirements.
If the conditions for the work environment could have an adverse effect on product quality, the organization did document the requirements for the work environment and the procedures to monitor and control the work environment.

7 Product realization

7.1 Planning of product realization

The organization did plan and develop the processes needed for product realization. Planning of product realization were consistent with the requirements of the other processes of the quality management system.
The organization did document one or more processes for risk management in product realization. Records of risk management activities were maintained.
The nonconformities identified were successfully resolved through a CAPA process.

7.4 Purchasing

7.4.1 Purchasing process

The organization did document procedures to ensure that purchased product conforms to specified purchasing information.
The organization did establish criteria for the evaluation and selection of suppliers.
The nonconformities identified were successfully resolved through a CAPA process.

7.4.2 Purchasing information

Purchasing information did include, as applicable, a written agreement that the supplier notify the organization of changes in the purchased product prior to implementation of any changes that affect the ability of the purchased product to meet specified purchase requirements.

7.4.3 Verification of purchased product

The organization did establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchasing requirements. The extent of verification activities were proportionate to the risks associated with the purchased product.
Records of the verification were maintained.

7.5 Production and service provision

7.5.1 Control of production and service provision

Production and service provision were planned, carried out, monitored and controlled to ensure that product conforms to specification. As appropriate, production controls did include but were not limited to:

a) documentation of procedures and methods for the control of production;
b) qualification of infrastructure;
c) implementation of monitoring and measurement of process parameters and product characteristics;
d) availability and use of monitoring and measuring equipment;
e) implementation of defined operations for labelling and packaging;
f) implementation of product release, delivery and post-delivery activities.

The nonconformities identified were successfully resolved through a CAPA process.

7.5.6 Validation of processes for production and service provision

The organization did validate any processes for production and service provision where the resulting output cannot be or was not verified by subsequent monitoring or measurement and, as a consequence, deficiencies became apparent only after the product was in use or the service had been delivered.
Validation did demonstrate the ability of these processes to achieve planned results consistently.
Records of the results and conclusion of validation and necessary actions were maintained.
The nonconformities identified were successfully resolved through a CAPA process.

7.5.11 Preservation of product

The organization did document procedures for preserving the conformity of product to requirements during processing, storage, handling, and distribution. Preservation did apply to the constituent parts of a medical device.

The organization did protect product from alteration, contamination or damage when exposed to expected conditions and hazards during processing, storage, handling, and distribution.
The nonconformities identified were successfully resolved through a CAPA process.

7.6 Control of monitoring and measuring equipment

The organization did determine the monitoring and measurement to be undertaken and the monitoring and measuring equipment needed to provide evidence of conformity of product to determined requirements.
The organization did document procedures to ensure that monitoring and measurement could be carried out and were carried out in a manner that was consistent with the monitoring and measurement requirements.
The organization did perform calibration or verification in accordance with documented procedures.
Records of the results of calibration and verification were maintained.

8 Measurement, analysis and improvement

8.2 Monitoring and measurement

8.2.1 Feedback

As one of the measurements of the effectiveness of the quality management system, the organization did gather and monitor information relating to whether the organization has met customer requirements. The methods for obtaining and using this information were documented.
The organization did document procedures for the feedback process.

8.2.2 Complaint handling

The organization did document procedures for timely complaint handling in accordance with applicable regulatory requirements.
These procedures did include at a minimum requirements and responsibilities for:

a) receiving and recording information;
b) evaluating information to determine if the feedback constitutes a complaint;
c) investigating complaints;
d) determining the need to report the information to the appropriate regulatory authorities;
e) handling of complaint-related product;

f) determining the need to initiate corrections or corrective actions.

Complaint handling records were maintained.

The nonconformities identified were successfully resolved through a CAPA process.

8.2.4 Internal audit

The organization did conduct internal audits at planned intervals to determine whether the quality management system:

a) conformed to planned and documented arrangements, requirements of the Standard, quality management system requirements established by the organization, and applicable regulatory requirements;

b) was effectively implemented and maintained.

The organization did document a procedure to describe the responsibilities and requirements for planning and conducting audits and recording and reporting audit results.

An audit program were planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, interval and methods were defined and recorded. The selection of auditors and conduct of audits did ensure objectivity and impartiality of the audit process. Auditors did not audit their own work.

Records of the audits and their results, including identification of the processes and areas audited and the conclusions, were maintained.

8.2.6 Monitoring and measurement of product

The organization did monitor and measure the characteristics of the product to verify that product requirements had been met. This were carried out at applicable stages of the product realization process in accordance with the planned and documented arrangements and documented procedures.

Evidence of conformity to the acceptance criteria were maintained. The identity of the person authorizing release of product were recorded. As appropriate, records did identify the test equipment used to perform measurement activities.

8.3 Control of nonconforming product

8.3.1 General

The organization did document a procedure to define the controls and related responsibilities and authorities for the identification, documentation, segregation, evaluation and disposition of nonconforming product.

The evaluation of nonconformity did include a determination of the need for an investigation and notification of any external party responsible for the nonconformity.

Records of the nature of the nonconformities and any subsequent action taken, including the evaluation, any investigation and the rationale for decisions were maintained.

8.5 Improvement

8.5.2 Corrective action

The organization did take action to eliminate the cause of nonconformities in order to prevent recurrence

The organization did document a procedure to define requirements for:

a) reviewing nonconformities (including complaints);

b) determining the causes of nonconformities;

c) evaluating the need for action to ensure that nonconformities did not recur;
d) planning and documenting action needed and implementing such action, including, as appropriate, updating documentation;
e) verifying that the corrective action did not adversely affect the ability to meet applicable regulatory requirements or the safety and performance of the medical device;
f) reviewing the effectiveness of corrective action taken.

Records of the results of any investigation and of action taken were maintained.

Conclusion – Inspection outcome

Based on the areas inspected, the people met, and the documents reviewed, and considering the findings of the inspection, including the observations listed in the Inspection Report the company, ***Qiagen Shenzhen Co. Ltd.*** located at ***2F-6F, No.18, JinHui Road, JinSha Community, KengZi Street, PingShan District, ShenZhen, GuangDong Province, China*** was considered to be operating at an acceptable level of compliance with ISO 13485:2016 and WHO *Information for Manufacturers on Pre-qualification Inspection Procedures for the Sites of Manufacture of Diagnostics* (PQDx_014).

All the non-compliances observed during the inspection that were listed in the full report were addressed by the organization to a satisfactory level prior to the publication of the WHOPIR.

This WHOPIR will remain valid for 3 years, provided the outcome of any WHO pre-qualification inspection or other audit from regulatory authorities that WHO relies on conducted during this period provides evidence of current compliance with the audit criteria.

List of WHO 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. WHO Post-market surveillance of in vitro diagnostics 2020 (ISBN 978 92 4 001532 6)
4. Medical devices - Application of risk management to medical devices - ISO14971:2019
5. GHTF/SG3/N19:2012 “Quality management system – Medical devices - Nonconformity Grading System for Regulatory Purposes and Information Exchange”
6. GHTF/SG4/(99)28 'Guidelines for Regulatory Auditing of Quality Systems of Medical Device Manufacturers - Part 1: General Requirements
7. GHTF/SG4/N30R20:2006 'Guidelines for Regulatory Auditing of Quality Systems of Medical Device Manufacturers - Part 2: Regulatory Auditing Strategy
8. 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.