Certificate

Standard **ISO 9001:2015**

Certificate Registr. No. **01 100 1634770**

Certificate Holder:

Industrial Technology Development Institute (DOST)
DOST Compound, Gen. Santos Ave., Bicutan, Taguig City, Philippines

Scope: Provision of Research and Development services, Technical and Training services in the areas of chemicals, energy, environment, biotechnology, food processing, material science and packaging technology

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2023-10-29 until 2026-10-28. First certification 2020

2023-11-15

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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01 100 1634770

Audit Report as per

ISO 9001:2015

for

Industrial Technology Development Institute (DOST)
DOST Compound, Gen. Santos Ave.,
Bicutan,
Taguig City
Philippines

Audit Report

Client	Standard	Certification Number	Audit Type
Industrial Technology Development Institute (DOST)	ISO 9001:2015	01 100 1634770	Recertification Audit

Contents

Audit Report

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Client	Standard	Certification Number	Audit Type
Industrial Technology Development Institute (DOST)	ISO 9001:2015	01 100 1634770	Recertification Audit

Client's representative Ms. Dr. Annabelle DIANA L. IGNACIO, Ph.D.

Audit (team) leader Jean Laguitao

Audit team Cecilia Ignacio (Auditor), John Francis Faustorilla (Auditor)

Audit date 2023-08-17 - 2023-08-18

1. Audit result

Management system effectiveness was verified by an appropriately selected audit team. This applies in particular to the compliance of workflows with standard requirements and descriptions in the management system documentation. The audit objectives as mentioned in the audit plan, the special features of the organization's business activities, the applicable statutory and regulatory requirements set forth in other generally applicable documents were also take into account. This was done by means of a sampling approach, by conducting interviews and reviewing the appropriate documentation. Audit findings and recommendations regarding opportunities for improvement have been set forth in section 4 of this report.

Nonconformities from last audit	There were no nonconformities revealed during last audit.
Nonconformities current audit	The current audit revealed the following nonconformities: Major nonconformities: 0 Minor nonconformities: 1 Nonconformity due date: 2023-09-19 For details, please refer to the nonconformity report.
Re-Audit	A re-audit is not required. In case the current audit did reveal nonconformities please refer to the nonconformity report for more details.
Stage 1 Audit	There have been no significant changes to the management system, the organization or the context in which the management system is operating.

The organization has established and maintains an effective system to ensure compliance with its policy and objectives. The audit team confirms in line with the audit targets and the review of the system over the period of the certification and complaints received from users of the certification that the organization's management system complies with, adequately maintains and implements the requirements of the standard.

Recommendations:

● Award of new certificates

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2.   Scope

2.1   Description of the organization

The Industrial Technology Development Institute or ITDI is one of the research and development institutes (RDIs) under the Department of Science and Technology (DOST), the main government agency responsible for managing science and technology in the Philippines.

ITDI is the flagship agency of the DOST, generating a large pool of technologies while providing technical services to industry. Its mandates are:

• Undertake applied research and development to generate new knowledge, technologies, and innovation in the field of industrial manufacturing, mineral processing and energy

· Conduct knowledge translation or technology transfer and commercialization.

· Provide technical services, test and analyses, and metrology to ensure international traceability of the national units of measure.

However, The National Metrology Division (NMD) and Standards & Testing Division (STD) are excluded in the scope of the certification. These two divisions are ISO 17025 accredited.

2.2   Scope of certification

Standard	Scope of certification
ISO 9001:2015	Provision of Research and Development services, Technical and Training services in the areas of chemicals, energy, environment, biotechnology, food processing, material science and packaging technology

The organization has no shift operation.

The audit has not been carried out in the context of a multi-site certification.

The audit was done on-site and didn't include any remote auditing activities.

Locations audited during the audit are marked accordingly within below table. The following sites and their scopes are included in the scope of certification:

Certificate No.	Name/Address of site	Employees	Scope of certification	Audited
01 100 1634770	Industrial Technology Development Institute (DOST) DOST Compound, Gen. Santos Ave., Bicutan, Taguig City Philippines	222	Provision of Research and Development services, Technical and Training services in the areas of chemicals, energy, environment, biotechnology, food processing, material science and packaging technology	X

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3.   Changes in the management system / Contract review

The following major changes have been implemented in the management system and the management system documentation since the last audit:

- Fuel Cell R&D and Testing Laboratory launched on July 6, 2023
- rewording of scope of the quality management system based on the actual services verified during the audit.

The implementation of these changes in the existing management system and the management system documentation was verified within the framework of the audit. The order details which form the basis of the audit (incl. number of employees, scope and sites) reflect the actual situation in the organization.

The description of the scope in the certificate doesn't appropriately reflect the scope of the management system in the following points:

due to rewording of the scope of quality management system to be more specific to the actual services verified during the audit.

During the audit changes to the original audit plan were made. The changes are documented in the audit plan and were agreed with the customer on site.

4.   Audit findings

The audit findings related to the audited standard are listed in the Annex to this report. In view of the sampling approach applied to the audit, weaknesses and nonconformities may still exist which have not been identified during the audit.

No.	Department / Process / Location	Positive findings
1	Admin / - / -	The donation of the office equipment for the Bulihan Integrated National High, Carmona Cavite last Oct. 19, 2022 is noted.
2	PMISD / MIS / PMISD	Initiative to establish and implement the PMISD Technical Support Online Ticketing System effective Dec 1, 2022 is commendable.
3	FMD / - / Awards and Recognition	Hall of Fame awardee for AGAP Outstanding Accounting Office Award for the year 2021 given last Oct 19, 2022. Achieve unmodified opinion by COA for four consecutive years is commendable,
4	Management / - / -	The new facility Fuel Cell R&D and Testing Laboratory launched last July 6, 2023 is noted.
5	Packaging Technology Division / Continual improvement / Site 1	Simulation packaging testing laboratory newly built building started July 2022.

The following recommendations and opportunities for improvement were identified during the audit and are intended to contribute to the continuous improvement of the management system.

No.	Department / Process / Location	Recommendations and opportunities for improvement

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1	Management / Context of the Organization / -	Review the impact of AI regulations with its effect to the research projects, especially S&T adoption and technology transfer.
2	Chemical and Energy Division / Technical Services / -	Review automation of the technical services sheets for ease of report generation and real time data management. Ensure to populate the data sets to show the year on year trend for the technical services and research activities. Review to include the audit planning activities with PM-CED-08-01 Energy Audit Procedure.
3	Environment and Biotechnology Division / Research and Development / Technical Services / -	Ensure to harmonize the expected outputs of the division with the Circular Economy Program as part of the 2023 to 2028 Roadmap. Review to incorporate in the Operating Policies the compliance and reporting mechanism if the clients would need to report the concerns arising from the ETV Process. Review to standardize the procedures for the test plan determination with ETV, where possible. Review to include in the procedure the mandatory mechanism with the ETV processing (e.g., Sterility Test results being forwarded directly to ITDI- EBD). Review to directly secure accreditation of testing laboratories for ease of verifi-cation the validity of the test results. Review to orient referencing to align with APA 7th Edition format as appropriate when writing the Literature Cited portion of proposals. Review clearly declaring sources of methodology if they are coming from a source and not originally generated by the proponent. Review creating inventory of assets that are used for the methodology as they may need to be updated as part of the assurance of project reliability.
4	Management / - / -	The scope description of the quality management system define in the manual should be improved to clearly describe which processes/divisions are included in the QMS.
5	Internal Audit / - / -	Ensure audit for the Top Management is clearly planned and conducted covering the requirements of ISO cl 5.0, 6.0, 9.0, 10. Consider having overall assessment of the Internal Audit result confirming the conformance to the requirements and effectiveness of the management system.
6	TSD / Engineering-Maintenance / -	Consider to record the actual date of inspection and the identified problem consistently in the monitoring records of

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		Building Maintenance Inspection.
7	TSD / - / -	Ensure to document the risk treatment plan and target date of implementation for the identified medium high risk with treatment option is to mitigate for monitoring and evaluation.
8	PMISD / MIS / -	Ensure timely filing of the User Acceptance Test result for every new information systems implemented. Consider recording the actual date of preventive maintenance conducted for computers.
9	Human Resources / Training/Competency / -	Ensure Training evaluation effectiveness is consistently implemented according to the required timeline of the organization (e.g. Focus Group Discussion Training evaluation was conducted last May 8, 2023 instead of Jan 2023) Need to improve the accomplishment/monitoring of Training Report to ensure issues raised by the Trainee has the necessary disposition. (e.g., Item 4/Item#5- Dissemination and application of the learnings). Ensure Risk is properly assessed based on the current issues encountered. (e.g., Delay in the submission of IPCR). Likewise ensure actions are updated. (e,g., unable to achieve functional objective due to noninterest in the training) The actions on the Competency Based Human Resource Management System towards the achievement of the PRIME-HR Level II will be completed at the end of 2023. This will be checked on the next audit
10	Administrative / Property & Procurement / -	May need to review and update the Acceptation Criteria for the Suppliers Performance Evaluation other than the average rating results. Likewise, ensure to communicate the results of Supplier/Service Provider particularly those Supplier performing below performance on some criteria for necessary action.(e.g., Fast Laboratories, Nadec Metal Fabrication). Ensure also to consistently conduct the performance of Supplier Evaluation (e.g., Excellent General Services Inc.-Janitorial) Ensure objectives are consistently monitored at regular frequency for the appropriate actions. Also, ensure the monitoring metric is in accordance with the target. (e.g., Percentage against the number) Ensure Corrective Action process is properly implemented particularly on those non achieved objectives including the identification of root cause, timeline on the planned correction and corrective action and monitoring of status (e.g., Objective #2 90% newly acquired donated and transferred properties are accounted, labelled and recorded within 15 days.) This will be checked next audit.

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		Ensure risks are properly identified and accurately assessed in accordance with the documented guidelines
11	Management / Opportunity Management / -	Ensure that the opportunities procedure is managed accordingly as reflected in PM-ITDI 06-01 Risks and Opportunities effective 30 June 2021.
12	Risk Management / Risk Management Process / -	Review to manage the risk treatment actions as part of the Risk Treatment column, and manage accordingly with the actions taken.
13	Continual Improvement / Continual Improvement Process / Site 1	Review adopting a hype cycle approach for the technology management as-pects of RnD projects across research units.
14	PMISD / Research and Development / Operational control / Site 1	Review having terminal reports run for similarity checks and AI checks.
15	Food Processing Division / Operational Control / Site 1	Ensure to align the in-text citation with the references listed in the terminal report. Ensure objectives are traceable to the parts of the terminal report (e.g., RDR-FPD-2022-05 Objective 3). Ensure to standardize protocols being provided with technical services (e.g., lethality monitoring system, vertical retort).
16	Material Science Division / Technical Services / Site 1	Review to manage the diffractogram file name to include the request reference number for better sample traceability.

5.   Dates

Due date for the next audit   2024-08-19

Agreed date for the next audit   2024-08-19

Audit release date   2023-11-14

<table>
<tr><td>2023-09-15</td><td>Jean R. Laguitao</td></tr>
<tr><td>Signature date</td><td>Signature audit (team) leader</td></tr>
</table>

All information gained during the audit will be treated with strict confidentiality by the audit team and the certification body.

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Annex ISO 9001:2015

Item	Audit result
Context of the organization	The organization has determined internal and external issues related to the following subject areas: Political Variables · National and international policies and relationships · Harmonized results-based performance management system as a directive from DBM through DAP-AO 25 · Align PPAs along the thrusts and legislative agenda of the new administration: 8-Point Economic Agenda · MC No. 1, s. 2022, Declaring Vacant certain Positions in the Departments: Continuity of Non-CESO Officials · Appointment of new DOST Secretary · Prioritization of government based on the fiscal space Economic Variables · National and international economic agenda of the new administration · Globalization; Global innovation index · Competitiveness amidst technological innovations · Public good, participation in economic groups · Road map of other government agencies · Emerging viruses / Continuing alert levels in the country Social Variables · Foresight of other stakeholders and how to align with them · Sustainability of the current standing of the institute and relationships with stakeholders · Create avenues for potential scientists · Physical spaces, social distancing · Emerging viruses / Continuing alert levels in the country · Changing needs and requirements of customers Technological Variables · Focus on innovation, including green innovation technologies, artificial intelligence, industry 4.0 · Setting up of new laboratories as indicated in the roadmap · Emerging viruses / Continuing alert levels in the country · Changing needs and requirements of customers Internal · Implementation of Strategic Plan 2021-2025 · Implementation of ISSP 2020 – 2022 · Alternative Work Arrangements · Emerging viruses / Continuing alert levels in the country Reference: Management Review MOM dated 16 August 2022 The organization has identified interested parties and the requirements of these parties. Examples for such parties are: · External Providers – Timely delivery and Payment Schedule

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Annex ISO 9001:2015

Item	Audit result
	· Customer – Efficient services / R&D · Stakeholders (DOST, DENR, DOE, BFAD, DTI, Academe, Industry, ISTA, FDA, DOST Regional Offices) – ITDI Plans and Programs/ Performance reports, Financial Reports, Technologies for transfer /services, project proposals / MOA, Accomplishment Reports · CSC – Reports, HR Management · DBM- Budget Proposal, Financial Reports, On time Payment · COA – Project accomplished reports, Financial Reports · Employees – remuneration, training and development
Policy and objectives	Top management has declared its quality policy binding and implemented. The quality policy is appropriate and provides a framework for the respective quality objectives. It commits all employees to pursue continuous quality system improvement. The quality objectives are measurable and are controlled, communicated and updated regularly. Key quality objectives include: Chemical and Energy / Environment and Biotechnology / Food Processing Divisions: • To implement 90% of approved projects for implementation based on agreed duration • To submit terminal report two months after project completion • To implement 90% of the approved projects/contract technical services/assistance based on agreed schedule with Very Satisfactory customer rating • To undertake 90% of the approved technology transfer activities based on schedule with Very Satisfactory customer rating Packaging Technology Division: • To implement on schedule 90% of the approved R&D projects and activities • To submit terminal report two months after project completion • To provide 90% of the request for packaging services with Very Satisfactory Customer rating. Technological Services Division: • To design and validate one new and acceptable training program within the year. • To conduct 100% of the approved number of training programs for the year with a Very Satisfactory rating • To implement 100% of the approved requests for technical assistance / technology transfer in the Regions based on agreed schedules / duration within the year with a Very Satisfactory rating • To provide 100% relevant information to customers and stakeholders, both internally and externally in all forms (print and non-print, media/press conference, exhibits, techno fora) at the right time • To prepare techno-economic studies (Market/industry profile, FS/BOP and techno-packages) of identified mature/commerciable technologies within the prescribed period • To develop business development strategies for marketing and promotion of identified technologies / new services within the prescribed period • To provide engineering related services in support of ITDI activities such as R&D, technical services, maintenance and repair of physical facilities/buildings and technology transfer within prescribed time with a Very Satisfactory rating

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Annex ISO 9001:2015

Item	Audit result
	Reference: Functional Objectives (Rev. 02, Effectivity Date: 04 January 2021)
Process control incl. outsourced processes	The processes available in the organization have been identified and documented. Process workflows and interactions have been described and appropriately controlled. The processes are evaluated at regular intervals by means of key performance indicators. Key processes within the scope of product realization include: Research and Development · Chemical and Energy Division 　- Industrial Chemical Section 　- Energy Section (with laboratories/energy audit) 　- Pharmaceutical Section 　- Process Development Section · Environment and Biotechnology Division 　- Industrial Fermentation Technology Section 　- Cleaner Production Section 　- Waste Management Section 　- Microbial Treatment Section · Food Processing Division 　- Product Development 　- Food Engineering 　- Food Safety · Material Science Division ·　Packaging Technology Processes 　- Label Design Development Technical Services · Technological Services Division 　-　Facilitating Regional Cooperation and Training 　-　Planning and Scheduling of Regular / Funded Technology Transfer 　-　Implementation of Technical and other Regional Intervention 　-　Planning and Scheduling of Regular Training Program 　-　Implementation of Training 　-　Design and Development of New Training Program 　-　Technology Transfer / Commercialization of ITDI Matured Technologies 　-　Creation and Production of Social Marketing Collaterals 　-　Preventive Maintenance 　-　Corrective Maintenance · Administrative and Support Services 　- Administrative Services Division 　- Finance & Management Division 　- Planning and Management Information Systems Division

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Annex ISO 9001:2015

Item	Audit result
	The organization has no outsourced processes. · Calibration · Repair and preventive maintenance · Test and analyses · Fabrication · Construction · Vehicle repair and maintenance
Risk-based thinking	The requirements for risk-based thinking are being realized in the organization as follows: Risk-based thinking has been applied for the following processes: · Chemical and Energy Division · Environment and Biotechnology Division · Food Processing Division · Procurement · ADMIN - HR · Material Science · Technical Service · Packaging Technology · Procurement · Maintenance Examples of risks and opportunities of processes identified are: · Lack of market study of newly generated technologies to ensure effective transfer and commercialization · Uncertainty in the accuracy/reliability of result/s of measuring equipment due to delay in calibration · Unexpected equipment breakdown during the implementation · Delay in the delivery of goods & services due to sudden change of specification/brand or model/price escalation/phase-out model by the external provider · Employees are not given opportunity to attend L&D due to (1) limited fund allotment for training within the year, (2) conduct of coaching and mentoring, and self-learning is not recorded/documented · In the event of limited budget, the risk or failure to file for IP protection and papers published as target milestone will result to low rating of the overall divisional performance · Drawbacks on storing and safekeeping of in-house collections that resulted to decentralized library holdings due to the closure of the physical library · Unavailability of manpower to carry-out R&D activities and technical services due to unexpected leave of absence due to COVID, study leave, resignation and other related issues. · Delay in the delivery of goods & services due to sudden change of specification / brand or model / price/ escalation / phase-out model by the external provider

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Item	Audit result
	Examples of measures taken to react on identified risks are: · Conduct market survey, technology pitching and focus group discussion · Outsource calibration services. Ensure availability of funds for scheduled calibration · Come-up with the list of the after-sale services for different equipment purchased; Ensure availability of funds for repair · Transfer the risk to end-user; change of project milestone · Conduct institutional training; conduct of Echo Training/Seminar; Coaching and mentoring; Use of Coaching Form; Implementation of the Self Learning Form/Tool. · Submission of patent draft to TSD and technical paper to Publication Committee · Digitalization of library holdings of ITDI In-house collections. Referral to STII Library. Currently working on KM project that aims to revitalize then memorabilia and former library as a platform to retain and sustain all knowledge holdings. · Request for project extension · Change of project milestone. Transfer the risk to the end-user Examples of risks and opportunities concerning the context of the organization are: Opportunities: · Change in political leadership allows refocusing institute direction · New government policies that would help guide direction for R&D and technical Services · International and local partnership for collaborative R&D · Additional avenue to promote ITDI and its services · Energy & Environment Integration Risks: · Climate changes & Other calamities · Other institutions compete with available funding · Change in political leadership could disrupt on-going activities and change strategic direction · Declining Budget allocation · Ageing population (21% of manpower are nearing mandatory retirement age) Concerning risk based thinking the following tools are used: · SWOT, PEST Analysis · Risk assessment criteria and matrix is established as a guide to determine the risk level. The risk level is equal to the probability multiply by the impact. Total rating of 1 to 3 is considered as low risk, 4 to 6 as medium risk and 7 to 9 as high risk. All high risk must be placed in the program and fully funded. · Customized Risk Register (qualitative-type) · Customize Action Plan (register) · Management review minutes of the meeting
Customer-related and other requirements	The organization analyses and evaluates customer requirements and/or enquiries and any documented, assumed, statutory and regulatory requirements within the

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Annex ISO 9001:2015

Item	Audit result
	scope of a production and feasibility study performed in a team.The person who prepared the offer reviews the contract to ensure its compliance with the offer and documents this compliance in an order confirmation. The same procedure applies to amendments. The following process requirements significantly affect product or service quality: · Competency of the people · Provision of resources · Monitoring and evaluation of project · Technology Transfer · Timeliness and accuracy of the service report Key regulatory, statutory and customer-related requirements include: · E.O. No. 128, S.1987 · R.A. No. 8293 (Intellectual Property Code of the Philippines) · R.A. No. 9184 (Government Procurement Reform Act of 2003) · R.A. No. 9470 (National Archives of the Philippines Act of 2007) · Civil Service Commission (CSC) Issuances · R.A. No. 6713 (Code of Conduct and Ethical Standards for Public Officials and Employees) · R.A. No. 9485 (Anti-Red Tape Act of 2007) · E.O. No. 605, S.2007 · E.O. No. 265, S.2000 / NCC M.C. No. 2003-02 · COA Cir. No. 2001-04 (NGAS) · E.O. No. 43, S.2011 / A.O. No. 25, S.2011 / E.O. No. 80, S.2012 / CSC M.C. No.6,S.2012 (SPMS) · R.A. No. 10173 (Data Privacy Act of 2012) · E.O. No. 2, S.2016 (Freedom of Information) · E.O. No. 605, S.2007 (GQMS) · AO 25 IATF M.C. No. 2017-1 / AO 25 IATF M.C. No. 2017-2 · DICT – Government Website Template Design (GWTD) Guideline · A.O. No. 39, S.2103 · E.O. No. 47, S.2011 · Other relevant statutory, regulatory, legal and contractual requirements with regards to Environmental, Technology Transfers, Occupational Safety & Health, etc. · Standard References – compliance with the standards in test, evaluation and analysis as to the Philippine National Standards, ASTM, Internal Standards, AOAC, JIS, EU, BAM, FDA
Customer satisfaction and complaints	The organization maintains documented and effective procedures governing the handling of information, data analyses, improvement actions and responses to customer feedback. The overall agency rating of ITDI for Y2022 in the service quality dimensions is "Outstanding" and the overall agency client satisfaction score is 4.75. Below are the details of client satisfaction evaluation result Service Quality Dimension. External Customer. Internal Customer 1. Responsiveness . 4.72 4.73 2. Reliability. 4.73 4.75

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Item	Audit result
	3. Access and Facilities. 4.65 4.78 4. Communication. 4.76 4.75 5. Costs. 4.69 4.83 6. Integrity. 4.77 4.78 7. Assurance. 4.76 4.78 8. Outcome. 4.75 4.78 Overall. 4.73. 4.77 Average SQD - 4.75 The customer complaint handling process is in place. There is none customer complaint since Jan 2023 as verified during the audit.
Internal audit and management review	The organization measures the implementation, maintenance and effectiveness of the management system by means of annually scheduled system audits. The organization reliably carries out these audits. Internal audit date: June 7 to July 18, 2023 Audit Result: 1 NC, 18 OFIs and 13 Observations Internal Audit Report was issued for 1 NC and corrective action is still ongoing as verified during the audit. Top management reviews the organization's management system at regular intervals and in line with the requirements to ensure its continuous suitability, adequacy and effectiveness. The management review was carried out in accordance with the requirements and was effective. Date of last management review: 2023-08-03
Use of certificate and logo	The organization uses the logo and the certificate (e.g. on business cards, company brochures, websites etc.) in compliance with the requirements.

Standard Clause	4.1	4.2	4.3	4.4	5.1	5.2	5.3	6.1	6.2	6.3		
Rating *	1	1	1	1	1	1	1	1	1	1		
Minor nonconformity	0	0	0	0	0	0	0	0	0	0		
Major nonconformity	0	0	0	0	0	0	0	0	0	0		
Standard Clause	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	8.6	8.7
Rating *	1	1	1	1	1	1	1	1	1	3	1	1
Minor nonconformity	0	0	0	0	0	0	0	0	0	1	0	0
Major nonconformity	0	0	0	0	0	0	0	0	0	0	0	0
Standard Clause	9.1	9.2	9.3	10.1	10.2	10.3						
Rating *	1	1	1	1	1	1						
Minor nonconformity	0	0	0	0	0	0						
Major nonconformity	0	0	0	0	0	0						

* Rating: 1 = conforming

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2 = not audited in this audit

3 = nonconformity (see nonconformity report)

4 = not applicable

Certificate

Standard **ISO 9001:2015**

Certificate Registr. No. **01 100 1634770**

Certificate Holder:

DOST - Industrial Technology Development Institute
DOST Compound, Gen. Santos Ave.,
Bicutan, Taguig City, Philippines

Scope:

Generation and transfer of innovative technologies and provisions of scientific and technological services in the fields of biotechnology, chemicals and minerals, environment, foods processing, fuels and energy, materials science and packaging.

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity:

The certificate is valid from 2020-10-29 until 2023-10-28.
First certification 2020

2020-10-29

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CERTIFICATE 01 100 1634770

Audit Report as per

ISO 9001:2015

for

DOST – Industrial Technology Development Institute

DOST Compound, Gen. Santos Ave., Bicutan, Taguig City, Philippines

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Audit Leader	:	Ms. Sandee Edrada (acting LA for monitoring)
Audit Team	:	Mr. Lionell Aala, Ms. Michelle Pestanas, Ms. Grace Balobalo – Monitoring Auditor
Client's representative	:	Ms. Zorayda Ang - QMR
Audit Date	:	August 19, 2021

1 Audit result

Management system effectiveness was verified on site by means of random sampling by an appropriately selected audit team. This applies in particular to the compliance of workflows with standard requirements and the descriptions in management system documentation. The audit objectives as mentioned in the audit plan, the special features of the organization's business activities, the applicable statutory and regulatory requirements and the requirements set forth in other generally applicable documents were also taken into account. This was done by means of a sampling approach, by conducting interviews and reviewing the appropriate documentation. Audit findings and recommendations regarding opportunities for improvement have been set forth in Sections 4 of this report.

☐	The last audit revealed nonconformities which have been demonstrably corrected. The corrections and corrective actions taken in this respect have been verified.
☐	A stage 1 audit was performed and the organization found ready for certification. Identified weaknesses, if any, have been eliminated and the respective corrective action verified.
X	The current audit revealed 0 major nonconformities and 0 minor nonconformities.
☐	The major nonconformities (No. x) with individual standard elements require a re-audit to verify the effectiveness of the corrections and corrective actions (probable date:.ddmmyyyy)
X	The organization has established and maintains an effective system to ensure compliance with its policy and objectives. The audit team confirms in line with the audit targets that the organization's management system complies with, adequately maintains and implements the requirements of the stand-

The auditor therefore recommends (provided nonconformity response has been approved):

☐	Award of the new certificates.
X	Maintenance of the existing certification.
☐	Inclusion of the changes (see Section 3) in the scope of application of existing certifications
☐	Maintenance or issue of the certificates only after successful completion of a re-audit.

2 Scope

2.1 Description of the organization

The Industrial Technology Development Institute or ITDI is one of the research and development institutes (RDIs) under the Department of Science and Technology (DOST), the main government agency responsible for managing science and technology in the Philippines.

ITDI is the flagship agency of the DOST, generating a large pool of technologies while providing technical services to industry. Its mandates are:

- Undertake applied research and development to generate new knowledge, technologies, and innovation in the field of industrial manufacturing, mineral processing and energy

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- Conduct knowledge translation or technology transfer and commercialization.
- Provide technical services, test and analyses, and metrology to ensure international traceability of the national units of measure.

However, The National Metrology Division (NMD) and Standards & Testing Division (STD) are excluded in the scope of the certification. These two divisions are ISO 17025 accredited.

2.2   Scope of certification

Scope of certification:	Generation and Transfer of innovative technologies and provision of scientific and technological services in the fields of biotechnology, Chemical and Materials, Environment, Food Processing, Fuel And Energy, Material Science and Packaging
ISO 9001 standard requirements which are not applicable:	NA
Reasons for non-applicability:	NA

ITDI operates with the following Work Schedule/Alternative Work Arrangement during COVID-19 period:

3x per week – 2 days wfh; 4x per week – 1 day wfh; 5 days office; 5 days office, next week 5 days wfh etc.
Flexible time: 7am-4pm, 8am – 5pm Monday-Friday

The following sites and their scopes are included in the scope of certification:

Site No. (CN ext.)	Sites included in cert. Name/address of site	No. of emp.	Scope and processes	Standard	Audited
01	DOST – Industrial technology Development Institute DOST Compound Gen. Santos Ave., Bicutan, Taguig City, Philippines	216	Generation and Transfer of innovative technologies and provision of scientific and technological services in the fields of biotechnology, Chemical and Materials, Environment, Food Processing, Fuel And Energy, Material Science and Packaging	ISO 9001	X

3 Changes in the management system / Contract review

No major changes have been made to the management system and the management system documentation since the last audit. The order details which form the basis of the audit (including number of employees, scope and sites) reflect the actual situation in the organization. However, the following were implemented to ensure continuity of service during the COVID-19 Lockdowns:

- Enhancement of IT Infrastructure specifically to address the WFH employees and customer Information System Strategic Plan as approved by The Department of Information and Communications Technology (DICT).
- Appointment of New Director R&D, Ms. Marie Montessa, May 2021
- Appointment of New Deputy Director Admin and TSD, August 12, 2021
- Manpower decreased from 239 to 216

The implementation of these changes in the existing management system and the management system documentation was verified within the framework of the audit.

The description of the scope in the certificate appropriately reflects the scope of the management system.

The audit plan was not changed during the audit.

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4 Audit findings

The audit findings related to the audited standard are listed in the Annexes to this report (see. Annex ISO 9001).

All information gained during the audit will be treated with strict confidentiality by the auditor and the certification body. In view of the sampling approach applied to the audit, weaknesses and nonconformities may still exist which have not been identified during the audit.

No.	Unit/Department Site	Positive findings
1	Top Management	Enhancement of the IT infrastructure, development of systems to address WFH Setup and to address the concerns of the customers are noteworthy.
2	General	Customer (e-payment) internally developed by IT Employees and adapted by the regional offices of the DOST is noteworthy.
3	General	Recipient of 2020 DOST International Publication Award for "Functionalized Carbon-based Quantum Dots: Optical Characterization and Potential Application as Bio-fluorophore" received last 01 December 2020.
4	Finance Management Division	Received Unqualified Opinion from COA dated June 26, 2021. Achievement of 102.92% for collection as of Q2 2021 is noteworthy.
5	Management / Planning	First Strategic Plan covering a five years (Year 2021 – 2025) planning which may also serve as guide on business / operational direction is commendable.
6	Technical Service Division	Continuous efforts exerted for free trainings / webinars which might also serve as tool for livelihood and ideas is commendable.

The following recommendations and opportunities for improvement provided by the auditor are intended to contribute to the continuous improvement of the management system.

No.	Unit/Department Site	Recommendations and opportunities for improvement
1	Food Processing Division	May consider including customer satisfaction survey for other applicable projects. Current practice, objectives related for customer satisfaction in limited to contract projects.
2	Material Science Division	May need to include the expiration of reagents in the Inventory of Chemicals. Relevant to Risk and Opportunities Identification and Evaluation Sheet – Delayed submission of terminal report after project completion (Medium Risk), consider including actions related to request and approval of time extension in the Risk Treatment Plan. Need to review relevant information that should be declared/input in the Record Maintenance and Daily User's Logbook.

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3	Finance Management Division	May need to determine or set indicators for simple, complex and highly technical transactions in relevance to ARTA requirement for disbursement issuance objective. On a macro view perspective, consider documenting and monitoring the achievement of Budget Utilization for External Funded projects.
4	Administrative Division - HR	May review the Individual Assessment Form in relevance to manner of assessing the Degree of Work Importance and Current Skills Level to be able to provide a consistent and objective evaluation. Implementation of Coaching Form will be check next visit. Ongoing establishing tool/form to be use for Self Learning activities as part of intervention to address competency gap, this will be further check next audit.
5	CED, EBD & PTD	Risk Management Ensure to review the usage of ROIES and check uniformity throughout the organization
6	Documented Information	Ensure that documented information will be uploaded in the database for easy retrieval especially during audit. Ensure to update Project Monitoring Sheet, Input information on deviations, root cause and actions taken as this is part of project records.
7	Chemical Handling	Ensure the Chemical Handling and Inventory. In CED, the date acquired/delivered and expiration dates were not recorded while in PTD, expired chemicals are stored on a separate rack with proper label together with Chemicals in Use As mentioned by the representative of the Chemical Inventory Team, Guidelines are already created and waiting for approval. Implementation will be checked on the next audit.
8	Internal Audit	Last audit conducted was June 23 to July 6, 2021. Ensure IQA report is carried out as planned. This will be checked next visit. Previous internal audit findings status is monitored per Division IQA report. Consider to have an overall status monitoring or reflect in the overall report or at least Management Review the status.
9	Admin- Procurement	Due to COVID 19 and quarantine restrictions, there were several delayed deliveries were encountered. May consider to analyze and put into report the effect of delayed deliveries on the operations.

5 Dates

Due Date for the next audit   2022-08-19

Agreed date for the next audit   2022-08-19

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19 August 2021

_____

Date

Sandee B. Edrada

Sandee B. Edrada

Audit Leader / Auditor(s)

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Annex ISO 9001:2015

Item	Audit result
Context of the organization	The organization has determined internal and external issues related to the following subject areas (Note: subject areas can be legal requirements, co-operations, competition, community etc.) Political Variables • National and international policies and relationships • Implementation of ARTA • Harmonized results-based performance management system as a directive from DBM through DAP-AO 25 Economic Variables • National and international economic agenda of the country • Globalization; Global innovation index • Competitiveness amidst technological innovations • Public good, participation in economic groups • Road map of other government agencies • COVID-19 Pandemic Social Variables • Philippine customer demographics • Social media as a mode of communication • Cultural Lifestyle • Addressing the needs of vulnerable groups • Digital inequality relative to access to internet • Physical Spaces, social distancing Technological Variables • Focus on innovation, including green innovation technologies, artificial intelligence, industry 4.0 • Setting up of new laboratories as indicated in the roadmap • Digitization of processes • Cyber security Internal • Implementation of ITDI Road Map and Divisional Road Map • Implementation of ISSP 2020 – 2022 • Alternative Work Arrangements • COVID-19 Pandemic

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Item	Audit result
	The organization has identified interested parties and the requirements of these parties. Examples for such parties are: • External Providers – Timely delivery and Payment Schedule • Customer – Efficient services / R&D • Stakeholders (DOST, DENR, DOE, BFAD, DTI, Academe, Industry, ISTA, FDA, DOST Regional Offices) – ITDI Plans and Programs/ Performance reports, Financial Reports, Technologies for transfer /services, project proposals / MOA, Accomplishment Reports • CSC – Reports, HR Management • DBM- Budget Proposal, Financial Reports, On time Payment • COA – Project accomplished reports, Financial Reports • Employees – remuneration, training and development
Policy / objectives	Top Management has declared its quality policy binding and implemented. The quality policy is appropriate and provides a framework for the respective quality objectives. It commits all employees to pursue continuous quality system improvement. The quality objectives are measurable and are controlled, communicated and updated regularly. Key quality objectives include: - To complete and disseminate 90% of targeted R&D activities to meet the needs of local industries to become globally competitive (Actual: 77%, Unmet target was due to the pandemic, project durations were extended up to the following year) - To deliver 90% of targeted technical services according to mutually agreed terms and conditions and existing applicable regulatory and statutory requirements (Actual: 100%) - To attain at least a very satisfactory customer satisfaction rating for the year through the continual improvement of QMS (Actual: 4.72 Excellent)

Process control including outsourced processes	The processes available in the organization have been identified and documented. Process workflows and interactions have been described and appropriately controlled. The processes are evaluated at regular intervals by means of key performance indicators.
	Key processes within the scope of product realization include:
	
	R&D and Technical Services
	• Chemical and Energy Division
	   - Industrial Chemical Section
	   - Energy Section (with laboratories)
	   - Pharmaceutical Section
	   - Process Development Section
	• Environment and Biotechnology Division
	   - Industrial Fermentation Technology Section
	   - Cleaner Production Section
	   - Waste Management Section
	   - Microbial Treatment Section
	• Packaging Technology Processes
	   - Label Design Development

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Item	Audit result

	• Food Processing Division
	   - Product Development
	   - Food Engineering
	   - Food Safety
	• Material Science Division
	• Technological Services Division
	• Administrative and Support Services
	   - Administrative Services Division
	   - Finance & Management Division
	   - Planning and Management Information Systems Division
	
	The following processes have been outsourced and are appropriately reviewed and controlled:
	• Calibration
	• Repair and preventive maintenance
	• Test and analyses
	• Fabrication
	• Construction
	• Vehicle repair and maintenance

Risk-based thinking	The requirements for risk-based thinking are being realized in the organization as follows:
	
	Risk-based thinking has been applied for the following **processes**:
	R&D and Technical Services
	• Chemical and Energy Division
	   - Industrial Chemical Section
	   - Energy Section (with laboratories)
	   - Pharmaceutical Section
	   - Process Development Section
	• Environment and Biotechnology Division
	   - Industrial Fermentation Technology Section
	   - Cleaner Production Section
	   - Waste Management Section
	   - Microbial Treatment Section
	• Packaging Technology Processes
	   - Label Design Development
	• Food Processing Division
	   - Product Development
	   - Food Engineering
	   - Food Safety
	• Material Science Division
	• Technological Services Division
	• Administrative and Support Services
	   - Administrative Services Division

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Item	Audit result
	- Finance Management Division
	- Planning and Management Information Systems Division

Examples of **risks and opportunities** of processes identified are:

- Safety of staff and equipment is compromised since some EBD buildings are on top of seismic fault
- Unavailability of upgraded facilities
- Delays in the implementation of projects and technical services due to unexpected equipment breakdown
- Delayed/Suspension in R&D activities and services due to pandemic and other disaster.
- Overload of duties due to unexpected special assignments from DOST & ITDI officials
- Delay in the delivery of equipment, materials due to procurement issues
- Delayed submission of terminal report after project completion

Examples of **measures** taken to react on identified risks are:

- Staff relocation and building renovation
- Modernize equipment and facilities
- Conduct regular maintenance and calibration
- Procurement of spare parts
- Skeletal workforce due to lockdowns.
- Online Transactions
- Conduct R&D activities during work from home
- Assign additional staff to assist in the implementation of project activities
- Early procurement activities
- Consistent checking and follow up of documents

Examples of risks and opportunities concerning the **context** of the organization are:

Opportunities:

- Change in political leadership allows refocusing institute direction
- New government policies that would help guide direction for R&D and technical Services
- International and local partnership for collaborative R&D
- Additional avenue to promote ITDI and its services
- Energy & Environment Integration

Risks:

- Climate changes & Other calamities
- Other institutions compete with available funding
- Change in political leadership could disrupt on-going activates and change strategic direction

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	Concerning risk based thinking the following **tools** are used: • SWOT, PEST Analysis • Risk assessment criteria and matrix is established as a guide to determine the risk level. The risk level is equal to the probability multiply by the impact. Total rating of 1 to 3 is considered as low risk, 4 to 6 as medium risk and 7-9 as high risk. All high risk must be placed in the program and fully funded. • Customized Risk Register (qualitative-type) • Customize Action Plan (register) Management review minutes of the meeting
Customer-related and other requirements	The organization analyses and evaluates customer requirements and/or enquiries and any documented, assumed, statutory and regulatory requirements within the scope of a production and feasibility study performed in a team. The person who prepared the offer reviews the contract to ensure its compliance with the offer and documents this compliance in an order confirmation. The same procedure applies to amendments. The following process requirements significantly affect product or service quality: • Competency of the people • Provision of resources • Monitoring and evaluation of project • Technology Transfer • Timeliness and accuracy of the service report Key regulatory, statutory and customer-related requirements include: • E.O. No. 128, S.1987 • R.A. No. 8293 (Intellectual Property Code of the Philippines) • R.A. No. 9184 (Government Procurement Reform Act of 2003) • R.A. No. 9470 (National Archives of the Philippines Act of 2007) • Civil Service Commission (CSC) Issuances • R.A. No. 6713 (Code of Conduct and Ethical Standards for Public Officials and Employees) • R.A. No. 9485 (Anti-Red Tape Act of 2007) • E.O. No. 605, S.2007 • E.O. No. 265, S.2000 / NCC M.C. No. 2003-02 • COA Cir. No. 2001-04 (NGAS) • E.O. No. 43, S.2011 / A.O. No. 25, S.2011 / E.O. No. 80, S.2012 / CSC M.C. No. 6,S.2012 (SPMS) • R.A. No. 10173 (Data Privacy Act of 2012) • E.O. No. 2, S.2016 (Freedom of Information) • E.O. No. 605, S.2007 (GQMS) • AO 25 IATF M.C. No. 2017-1 / AO 25 IATF M.C. No. 2017-2 • DICT – Government Website Template Design (GWTD) Guideline • A.O. No. 39, S.2103 • E.O. No. 47, S.2011

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	• Other relevant statutory, regulatory, legal and contractual requirements with regards to Environmental, Technology Transfers, Occupational Safety & Health, etc. • Standard References – compliance with the standards in test, evaluation and analysis as to the Philippine National Standards, ASTM, Internal Standards, AOAC, JIS, EU, BAM, FDA
Customer satisfaction and complaints	The organization maintains documented and effective procedures governing the handling of information, data analyses, improvement actions and responses to customer feedback. The Customer Satisfaction Survey Report 2020 was reviewed, verified and summarized below, based on the revised CSSF, *Service Quality Dimensions No. of Respondents: 1,389 Quality of Service – 4.73 Frontline Staff – 4.81 Technical Staff – 4.78 Promptness – 4.63 Premises – 4.66 Average for All *SQD – 4.72 Adjectival Rating - Excellent
Internal audit and management review	The organization measures the implementation, maintenance and effectiveness of the management system by means of annually scheduled system audits. The organization reliably carries out these audits. The records of the latest Internal Audit Cycle held from June 23 to July 06, 2021 with Observation – 45, OFI – 62 and NC – 0 were reviewed and verified. Top management reviews the organization's management system at regular intervals and in line with the requirements to ensure its continuous suitability, adequacy and effectiveness. The management review was carried out in accordance with the requirements and was effective Date of last management review: 16.07.2021
Use of certificate and logo	The organization uses the logo and the certificate (e.g. on business cards, company brochures, websites etc.) in compliance with the requirements.

Chapter of standard	4.1	4.2	4.3	4.4	5.1	5.2	5.3	6.1	6.2	6.3		
Rating *	1	1	1	1	1	1	1	1	1	1		
No. of nonconformity	0	0	0	0	0	0	0	0	0	0		
Chapter of standard	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	8.6	8.7
Rating *	1	1	1	1	1	1	1	1	1	1	1	1
No. of nonconformity	0	0	0	0	0	0	0	0	0	0	0	0
Chapter of standard	9.1	9.2	9.3	10.1	10.2	10.3						
Rating *	1	1	1	1	1	1						
No. of nonconformity	0	0	0	0	0	0						

* Rating: 1 = conforming

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2 = not audited in this audit

3 = nonconformity (see nonconformity report)

4 = not applicable