










Greenhouse Gas Emissions Report 2025

ESPEC CORP.

ESPEC CORP. has obtained third-party assurance from Deloitte Tohmatsu Sustainability Co., Ltd. for the figures marked with  of the environmental performance data for the FY2024 (From April 1, 2024 to March 31, 2025).

Scopes/Categories		FY2024 Actual (t-CO ₂ e)
SCOPE1		 3,768
SCOPE2	Market-based	 5,563
	Location-based	 14,351
SCOPE3		1,283,101
1	Purchased goods and services	 103,340
2	Capital goods	7,962
3	Fuel- and energy-related activities (Excluding SCOPE 1-2)	2,408
4	Upstream transportation and distribution	1,964
5	Waste generated in operations	369
6	Business travel	948
7	Employee commuting	1,898
8	Upstream leased assets	—
9	Downstream transportation and distribution	503
10	Processing of sold products	—
11	Use of sold products	 1,118,220
12	End-of-life treatment of sold products	 45,490
13	Downstream leased assets	—
14	Franchises	—
15	Investments	—
SCOPE 1, 2, 3 Total		1,292,432
SCOPE 2 is calculated using the market-base.		

* As each item is calculated by rounding, the total may not match the sum of the individual items.

Reporting boundary

ESPEC CORP. and 12 consolidated subsidiaries (as of the end of March 2025). Exceptions are noted individually in the "Accounting methodology."

Accounting methodology

The calculation of GHG emissions for ESPEC CORP. and its subsidiaries (excluding ESPEC NORTH AMERICA, INC.) is based on the "Greenhouse Gas Emissions Calculating and Reporting Manual (Ver. 6.0)"(Ministry of the Environment and Ministry of Economy, Trade and Industry, Government of Japan (MOE and METI)) and "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver.2.7)"(MOE and METI). The calculation of GHG emissions for ESPEC NORTH AMERICA, INC. is based on the "Simplified Guide to Greenhouse Gas Management for Organizations" "EPA Scope 3 Inventory Guidance"(United States Environmental Protection Agency (EPA)). The specific calculation methods for each Scope are as follows. Emission factors and other information are provided outside the table.

SCOPE1	<p>Scope 1 was calculated as the sum of [1] and [2] below.</p> <p>[1] CO₂ emissions from fuel use.</p> <p>[2] Fluorinated gases (hereafter "F-gases") emissions leaked from manufacturing processes and owned facilities*¹.</p> <p>*1: 1) Leakage of F-gases due to operation of facilities owned by ESPEC CORP. and its subsidiaries in Japan (hereafter "Japanese Group Companies"). 2)Leakage of F-gases due to operation and disposal of test equipment owned by Group companies outside of Japan (Leakages of F-gases due to disposal of test equipment were calculated for countries with underdeveloped F-gases recovery and destruction systems).</p>
SCOPE2	<p>CO₂ emissions from electricity use.</p> <p>[Japanese Group Companies] Market-based: Adjusted Emission Factors by Electric Utility. Location-based: National Average Factors for General electricity transmission and distribution utility</p> <p>[Group companies outside of Japan (excluding ESPEC NORTH AMERICA, INC.)] Market-based, Location-based: Emissions Factors published by the IEA</p> <p>[ESPEC NORTH AMERICA, INC.] Market-based: Emission Factors by Electric Utility. Location-based: GHG Emission Factors Hub</p>

SCOPE3	
Category 1	Calculated by the raw materials, parts, etc. procured amount for manufacturing. Calculated based on the item-wise procurement ratio of ESPEC CORP. for group companies that cannot obtain procurement amounts by item. Calculated based on their respective procurement amounts for the fiscal year (calendar year) for ESPEC TEST EQUIPMENT (GUANGDONG) CO., LTD. and SHANGHAI ESPEC ENVIRONMENTAL EQUIPMENT CORP.
Category 2	Calculated based on the fixed assets cost amount.
Category 3	Calculated using energy consumption. Calculated based on the "Emission intensity per unit of electricity and heat consumption" and "LCI Database IDEA ver. 2.3" for ESPEC CORP. and its subsidiaries (excluding ESPEC NORTH AMERICA, INC.).
Category 4	Calculated using the fuel efficiency method for transportation in Japan where ESPEC CORP. is the consigner. Transportation where the consigners are customers was calculated at Category 9. Calculated using the distance travelled by means of transport for ESPEC NORTH AMERICA, INC. Other Group companies are excluded.
Category 5	Calculated based on the weight of waste generated from their business operations. COSMOPIA HIGHTECH CORP. and ESPEC ENVIRONMENTAL EQUIPMENT (SHANGHAI) CO., LTD. are excluded.
Category 6	Calculated based on the business travel cost. For companies which business travel cost data by means of transport is not available, calculated based on the number of employees using "Emission intensity per employee".
Category 7	Calculated based on commuting cost. For companies which commuting cost data by means of transport is not available, calculated based on the number of employees and the number of working days using the "emissions intensity per number of employees and working days"
Category 9	Calculated only for ESPEC CORP., using the fuel efficiency method for transportation in Japan where the customer is the consigner. Transportation where the consigner was ESPEC CORP. was calculated at Category 4.
Category 11	Calculated based on the energy consumption of the sold products in use at customer sites, using the following formula. $\text{Number of units sold} \times \text{Power consumption of representative models (kWh)}^{\ast 1} \text{ by product group} \times 24 \text{ hours} \times 365 \text{ days} \times \text{Operating years}^{\ast 2} \times \text{Operating rate}^{\ast 2} \times \text{CO}_2 \text{ emission factor of electricity}^{\ast 3}.$ <p>^{*1}: For group companies which power consumption data for representative models by product group are not available, calculations for all sold products are based on the results by product category from ESPEC CORP.</p> <p>^{*2}: Operating years and operating rate were assumed to be 7 years and 80% based on the "Design for Environment Guidelines (7th Edition)" established by ESPEC CORP.</p> <p>^{*3}: The emission factor by destination region (national average factor for Japan and IEA country-specific factor for other countries. Destination regions are divided into the Americas, Europe, China, Korea, and Asia (excluding Japan, China, and Korea), and IEA country-specific coefficients are used for each. For the Americas, Europe, and Asia, the country-specific factors for the U.S., Germany, and Thailand are used, respectively.) was used for Japanese Group Companies, and the IEA country-specific factor or EPA GHG Emission Factors Hub of the country where the company is located was used for Group companies outside of Japan, assuming the company's located country as destination country for the sold products.</p> Calculated based on the number of units sold during the fiscal year (calendar year) for SHANGHAI ESPEC ENVIRONMENTAL EQUIPMENT CORP.
Category 12	Calculated as the sum of [1] and [2] below. [1] Assuming that the number of units discarded from the market is the same as the number of units sold during the fiscal year. Calculated based on the weight of the equipment, using the material composition ratio of the equipment, and dividing it by type and disposal method. ESPEC CORP.'s special products for which detailed specification information is not collected are excluded from the calculation. For group companies where weight data on the material composition ratio of the equipment and dividing it by type and disposal method are not available, calculated for all products sold based on the results of ESPEC CORP.'s calculation for each product group. [2] Calculated the F-gases leakage amount released into the atmosphere at the time of product disposal for countries with underdeveloped F-gases recovery and destruction systems. For Group companies outside Japan, calculated assuming that the country where it is located as the destination country for the sold products. Calculated based on the number of units sold during the fiscal year (calendar year) for SHANGHAI ESPEC ENVIRONMENTAL EQUIPMENT CORP.

▼Emission factors and other information

- List of Calculation Methods and Emission Coefficients in the Calculation, Reporting, and Publication System (Updated on December 12, 2023 (Revised on January 16, 2024) (MOE and METI)
- the Global Warming Potentials (GWPs) of the "Sixth Assessment Report" (Intergovernmental Panel on Climate Change (IPCC))
- List of Emission Factors by Electric Utility (for submission in 2025) (MOE and METI)
- Emissions Factors 2024 (the International Energy Agency's (IEA)) for 2022
- Emission Intensity Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains (Ver. 3.5) (MOE)
- LCI Database IDEA Ver.2.3 (National Institute of Advanced Industrial Science and Technology and Japan Environmental Management Association for Industry, Japan)
- GHG Emission Factors Hub(2025)(United States Environmental Protection Agency (EPA))
- Emission factors by electric power suppliers contracted by ESPEC NORTH AMERICA, INC.
- Supply Chain Greenhouse Gas Emission Factors v1.3.0 (EPA)


(TRANSLATION)

Independent Practitioner's Assurance Report

July 23, 2025

Mr. Satoshi Arata,
Representative Director and President,
ESPEC CORP.

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Representative Director
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We have undertaken a limited assurance engagement of the Greenhouse gas emissions information indicated with  for the fiscal year from April 1, 2024 to March 31, 2025 (the "GHG Emissions Information") included in the "Greenhouse Gas Emissions Report 2025" (the "Report") of ESPEC CORP. (the "Company").

The Company's Responsibility

The Company is responsible for the preparation of the GHG Emissions Information in accordance with the calculation and reporting criteria adopted by the Company (Reporting boundary and Accounting methodology included in the Report). Greenhouse gas quantification is subject to inherent uncertainty for reasons such as incomplete scientific knowledge used to determine emissions factors and numerical data needed to combine emissions of different gases.

Our Independence and Quality Management

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. We apply International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements*, and accordingly maintain a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the GHG Emissions Information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements ("ISAE") 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board ("IAASB"), ISAE 3410, *Assurance Engagements on Greenhouse Gas Statements*, issued by the IAASB and the *Practical Guideline for the Assurance of Sustainability Information*, issued by the Japanese Association of Assurance Organizations for Sustainability Information.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. These procedures also included the following:

- Evaluating whether the Company's methods for estimates are appropriate and had been consistently applied. However, our procedures did not include testing the data on which the estimates are based or reperforming the estimates.
- Undertaking site visits to assess the completeness of the data, data collection methods, source data and relevant assumptions applicable to the sites.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the GHG Emissions Information is not prepared, in all material respects, in accordance with the calculation and reporting criteria adopted by the Company.

The above represents a translation, for convenience only, of the original Independent Practitioner's Assurance report issued in the Japanese language.