

Independent Validation Opinion

DNV Business Assurance Korea Ltd. (hereafter referred to as "DNV") has been commissioned by CJ CheilJedang Corporation (hereafter referred to as "the Company") to perform an independent third-party validation of the product carbon footprint(PCF) methodology for BIO biodegradable material Polyhydroxyalkanoates (hereafter referred to as "PHA") products manufactured at the Company's Indonesia (Pasuruan) site.

Scope of Validation

The validation was performed on the PCF methodology established by the Company based on the "Environmental Impact Assessment (Life Cycle Assessment) report for BIO biodegradable material PHA products" (hereafter referred to as the "LCA report") prepared by the Company and consists of the following criteria:

- Functional Unit: 1 kg of product (Amorphous PHA (hereafter referred to as "aPHA"))
- Process: PHA production process
- System Boundary: Cradle-to-Gate
- Impact Category: Global Warming Potential
- Impact Assessment Methodology: IPCC 2021 GWP100
- Others: The uptake effect of biogenic carbon from biomass-based feedstock used as raw material was taken into account in the environmental impact assessment.

Validation Criteria

The PCF methodology for the Company's BIO biodegradable material PHA products has been established in accordance with the principles and requirements of 'ISO 14040:2006/Amd 1:2020', 'ISO 14044:2006/Amd 2:2020', and 'ISO 14067:2018'. The validation of the PCF methodology was performed in accordance with the principles and requirements of ISO 14064-3:2019 (Part 3: Specification with guidance for the verification and validation of greenhouse gas statements). DNV assessed the PCF calculated in accordance with the LCA report by referring to the principles and requirements of the 'Mass balance approach' as defined in 'ISO 22095:2020 (Chain of Custody - General terminology and models)', as well as 'The Product Carbon Footprint Guideline for the Chemical Industry' published by Together for Sustainability. DNV verified simulation data based on the PHA innovative process recipe and the 2026 business plan (including production, raw material, energy and utility consumption, and waste generation) to assess the inputs (collection and processing of activity data), conversion (environmental impact calculation processes), and outputs (environmental impact assessment results).

Limitations

The scope of the validation is limited, as it was performed through the assessment of inputs and outputs provided and demonstrated by the Company, using a limited sampling approach. DNV does not guarantee reliability if any material changes to the Company's PCF methodology occur after the validation.

In addition, as the mass balance approach is based on modeling and assumptions, there is inherent uncertainty in the environmental impact results. This validation does not include a quantitative assessment of such uncertainties.

Conclusions

DNV assessed the PCF methodology established by the Company based on the "LCA report" in accordance with the above criteria, covering data input, conversion, and output. Based on the work undertaken, nothing has come to our attention to indicate that the assumptions, methodologies, or limitations applied in establishing the PCF methodology have material errors.

DNV represents "unmodified" opinion on the PCF methodology and its results.

Product	Result	Unit
aPHA	0.93	kg CO ₂ eq./kg

09 June 2026
Seoul, Korea

Responsibilities of the Directors of CJ CheilJedang and DNV

The Directors of the Company have sole responsibility for the preparation of the Company's LCA report. Our opinion represents our independent opinion and is intended to inform all related stakeholders.

DNV was not involved in the preparation of any statements or data included in the Company's LCA report by the Company except for this validation opinion.

DNV's assurance engagement is based on the assumption that the data and information provided by the Company to us as part of our review have been provided in good faith. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Independent Validation Opinion.

Competence and Independence

DNV's established policies and procedures are designed to ensure that DNV, its personnel and, where applicable, others are subject to independence requirements (including personnel of other entities of DNV) and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of GHG assurance professionals.

DNV applies its own management standards and compliance policies for quality control, which are based on the principles enclosed within ISO/IEC 17029:2019 - Conformity Assessment Requirements for validation and verification bodies and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

DNV - Business Assurance

DNV Business Assurance Korea Ltd. is part of DNV Group, a global provider of certification, verification, assessment and training services, assisting customers to achieve sustainable business performance.

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