

2024

Anhui Huaheng Biotechnology Co.,Ltd.

**ENVIRONMENTAL, SOCIAL AND
GOVERNANCE REPORT**



CONTENTS

About this Report	01
Chairwoman's Message	03
About AHB	05
ESG Development Strategy	11

Appendix 1-Laws and Regulations	87
Appendix 2-ESG Key Performance Indicators	89
Appendix 3-Content Index	96
Appendix 4-Feedback Form	102

01 Responsible Governance Strengthen the Foundation of the Enterprise

Strengthen Regulated Governance	19
Enhance Compliance Code	21
Adhere to Business Ethics	23

02 Green Operation Promote Low-carbon Transformation

Implement Climate Action	29
Optimize Resource Recycling	39
Protect Ecological Balance	47

03 Craftsmanship Products Create Outstanding Quality

Ensure Product Safety	51
Prioritize Sustainable Products	57
Promote Research and Innovation	61

04 Humanistic Care Create a Better Life

Gather Enterprising Talents	69
Foster Collaborative Success with Partners	80
Contribute to Social Welfare	85



About this Report

Report Introduction



This report is the second publicly released Environmental, Social and Governance (ESG) Report of Anhui Huaheng Biotechnology Co., Ltd. (Stock Code: 688639.SH) (hereinafter referred to as "AHB", "the Company", or "we"). This report aims to disclose our strategic vision, initiatives, and performance in environmental, social and governance areas for 2024 to our stakeholders.

Reporting Scope



This report covers Anhui Huaheng Biotechnology Co., Ltd. and its subsidiaries, and the scope of the report is consistent with that of our Annual Report. The time range is from January 1, 2024 to December 31, 2024, and the release cycle is once a year, which is consistent with the fiscal year.

Reporting Standards



This report is prepared in accordance with the "SSE Listed Company Self-Regulation Guidance No.14—Sustainable Development Report (Trial)", and refers to the "SSE STAR Market Listed Company Self-Regulation Guidelines No.13—Sustainable Development Reports Guideline" and the "GRI Standard for Sustainability Reporting" issued by the Global Sustainability Standards Board, among other relevant documents.

Data Sources



The content, data, and cases disclosed in this report are sourced from internal company documents, original internal ledgers, publicly available website information, and third-party review reports. Some economic performance data come from our 2024 Annual Report and have been organized, edited, and reviewed by the Company's ESG Report preparation team. Unless otherwise specified, the currency unit used in this report is RMB.

Board Statement



The Board undertakes to supervise the contents of this report and ensure that there are no false records or misleading statements. The Board has reviewed and approved this report and guaranteed the authenticity, accuracy and completeness of the contents of this report.

Obtain this Report



Stakeholders can view and download this report on the official website of AHB (www.huahengbio.com). This report is available in both Chinese and English for readers to refer to. In case of any ambiguity or inconsistency due to language, the Chinese version shall prevail.

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Chairwoman's Message

Dear friends,

Time surges forward, and the striving never ceases. Looking back from the new starting point of 2025, the employees of AHB have anchored their direction in the tide of the times with the tenacity to "Do difficult but right things," and grown towards the sun in the turbulent currents of change with the resilience to "take root downward." This year, we have solidified our foundation through responsible governance, illuminated the future with green operations, defined excellence with craftsmanship, and warmed hearts with humanistic care.

Strengthening corporate foundations through responsible governance, ensuring every step is taken more steadily. AHB always believes that the vitality of a company stems from a sense of reverence and commitment to responsibility. In 2024, we continued to refine our governance practices. This year, our governance system has been further upgraded, and we have received an A rating for information disclosure from the Shanghai Stock Exchange for two consecutive years, making trust become the cornerstone for AHB to maintain a high level. The compliance gene is deeply embedded, with all employees signing the "Sunshine Commitment," maintaining a zero-tolerance attitude towards safeguarding industry integrity. We are further solidifying our foundation because we understand that the higher we grow, the deeper we must root ourselves.

Promoting a low-carbon transformation through green operations, ensuring every gram of product maintains its ecological temperature. Synthetic biology is the answer to the green revolution, and the employees of AHB are the solvers, continuously writing answers to the low-carbon challenge with hardcore technology. This year, we have made further breakthroughs in our zero-carbon landscape, implementing rooftop photovoltaic power generation at our Changfeng and Qinhuangdao bases, continuously improving our green electricity self-sufficiency rate. The carbon footprint of valine and alanine products has been continuously optimized, earning us the BASF Product Carbon Footprint Pioneer Award. While the industry is still discussing emission reduction targets, we have already harnessed the "magic" of biological manufacturing to harmoniously integrate lucidwaters and lushmountains with economic prosperity.

Creating outstanding products with a craftsman's spirit, ensuring customer value is embedded in every detail. Customer-centricity is not just a slogan, it is a belief deeply ingrained in the DNA of AHB employees. In 2024, we responded to expectations with unparalleled craftsmanship. Our technological moat widened further as we successfully broke through the research and application of new technologies such as succinic acid, and 1,3-propanediol, driving product advancement through technological innovation and defining new global quality standards with advanced processes. From the laboratory to the production line, from molecular structure to the customer satisfaction, the employees of AHB achieved "millimeter-level pursuit" to enable customers to make "kilometer-level leaps."

Creating a better life with humanistic care, ensuring strivers to grow alongside the times. Talent is AHB's most precious "active cell." In 2024, we let the "Spirit of Strivers" shine with warm light. The culture of striving is passed down together; we implemented the "Stellar Plan" for new graduates, enabling young dreams to sprout and flourish, sharing profits and bonuses with all employees, making every drop of sweat sparkle with value; Customer value re-creation, we focused on every detail and promptly responding to customer needs; Promoting win-win cooperation in the industrial chain, we provided training and empowerment to suppliers, promoting the common success of our partners in the industry.

Looking back at 2024, the sleepless lights in those laboratories, the pulsating data on production lines, and the satisfied smiles of our customers together weave the totem of AHB's employee's struggle. We deeply understand that the vast universe of synthetic biology does not lie in chasing market trends but in the meticulous cultivation over a decade. In 2025, let's continue to be "gardeners of industrial ecosystems," with responsibility as our soil, innovation as our light, and hard work as our nourishment, allowing the seeds of green technology to grow into the power that changes the world!

Chairwoman of AHB

About AHB

Company Profile

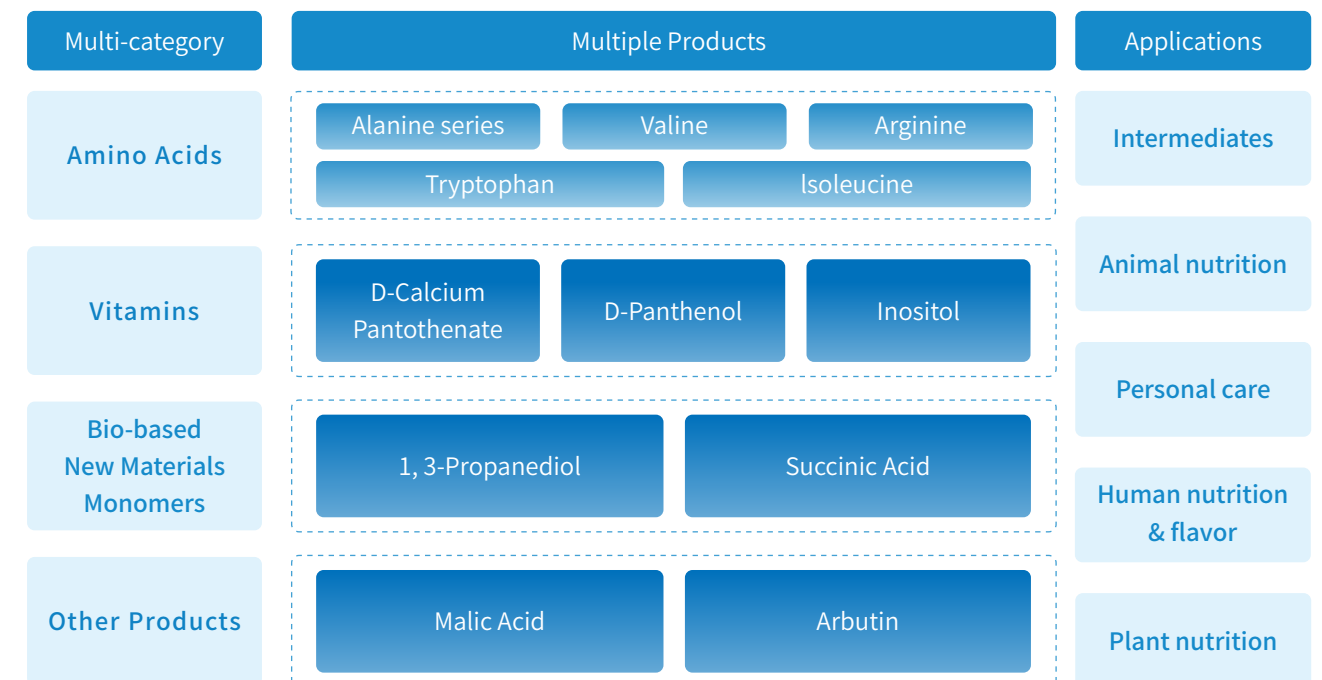
Anhui Huaheng Biotechnology Co., Ltd. is a high-tech enterprise centered on synthetic biology, dedicated to green technological innovation and the creation of green value. Until now, the Company's main products include amino acid series (alanine series, L-valine, isoleucine, tryptophan, arginine, etc.), vitamin series (D-calcium pantothenate, D-panthenol, inositol), bio-based new material monomers (1,3-propanediol, succinic acid), and other products (malic acid, arbutin). These products can be widely applied in intermediates, animal nutrition, personal care, human nutrition & flavor, plant nutrition, and many other fields. After years of innovative development, AHB has become a global leader in the manufacturing of bio-based products.

AHB upholds the concept of green environmental protection, developing cutting-edge synthetic biology technology. We have successfully undertaken the National Development and Reform Commission's Biotechnology Industry Demonstration Project in China and won the title of Champion in Manufacturing by the Ministry of Industry and Information Technology. Currently, the Company owns the Huaheng Synthetic Biology Research Institute, which possesses sustainable innovation capabilities, as well as four major production bases in Changfeng, Qinhuangdao, Bayannur, and Chifeng, all known for high-quality delivery capabilities.



Main Business and Products

As a global leader in bio-manufacturing, AHB continues to make efforts in synthetic biology innovation and research and development, and has gradually formed a business layout of amino acids, vitamins, bio-based new material monomers and other products.



Development Strategy



Development History

2005

AHB was established

2007

Undertake innovation projects funded by the Ministry of Science and Technology

2009

Selected as a technical research achievement of Anhui Academy of Sciences

2011

Qinhuangdao Huaheng was established

The world's first L-alanine anaerobic fermentation technology

2013

Complete the joint-stock reform

2016

Provincial postdoctoral workstation unit

2018

The process of D-calcium pantothenate esterase was broken through and industrialized

2020

Bayannur Huaheng was established

Qinhuangdao Huaheng won the National Green Factory

2022

Huaheng Central Research Institute and Hangzhou Research Institute were established

Chifeng Huaheng was established

Forbes China Top 50 Innovative Companies

2024

Led the establishment of Hefei Synthetic Biology Innovation Institute

Led the establishment of Bio-based Polyester Textile Industry Alliance

Establish a joint Laboratory for Bio-based Chemical Fiber

2006

Awarded as High-tech Enterprise in Anhui Province

Awarded as Top Private Science and Technology Enterprise in Anhui Province

2008

Breakthrough of DL-alanine transaminase process

Awarded as the first batch of national high-tech enterprises in Anhui Province

2010

Undertake the National Development and Reform Commission's microbial demonstration project

2012

Undertake the "863 Program" of the Ministry of Science and Technology

Strategic cooperation with BASF

2015

Hefei Huaheng was established

Won the China Patent Excellence Award

2017

Huaheng Research Institute was founded and started construction

2019

L-alanine won the manufacturing single champion product

National Intellectual Property Excellent Enterprise

2021

Listed on the Science and Technology Innovation Board of Shanghai Stock Exchange (stock code: 688639)

Establish an academician workstation with Zhejiang University of Technology

2023

AHB won the National Green Factory

National Enterprise Technology Center

Honor and Certification

In 2024, AHB actively improved in four dimensions: environment, labor and human rights, business ethics and sustainable procurement, and won the bronze medal in Ecovadis rating.



Qualifications



ISO 14001 Environmental Management System Certification



ISO 50001 Energy Management System Certification



ISO 9001 Quality Management System Certification



ISO 22000 Food Safety Management System Certification



ISO 45001 Occupational Health and Safety Management System Certification



ISO 27001 Information Security Management System Certification



GB/T 29490-2023 Intellectual Property Compliance Management System Certification



China National Accreditation Service for Conformity Assessment (CNAS) Laboratory Accreditation Certificate

Awards



National Green Supply Chain Management Demonstration Enterprise



National Demonstration Enterprise of Green Design of Industrial Products



National Intellectual Property Demonstration Enterprise



Top 100 Innovative Enterprises in Anhui Province



Anhui Province Export Brand Enterprises



Anhui Patent Gold Award (bio-fermentation L-valine)



Hefei Microbial Manufacturing and Food Application Technology Innovation Center



Hefei Manufacturing Service Enterprises



Recommended Catalogue of Green and Low-carbon Advanced Technologies and Products in Industrial Field (bio-fermentation L-alanine)



Top 100 ESG Listed Companies in China



Leading Industrial Carbon Peak Enterprises in China



Grade A in Information Disclosure of SSE



China Listed Companies Association 2024 Excellent Practice Cases of Sustainable Development of Listed Companies



Annual Growth Enterprises in A-share Listed Companies



Top 50 Chinese Listed Companies with New Quality Productivity



Anhui Province Extraordinary Employer of the Year by Liepin



Annual Outstanding Value Award of the Guangdong-Hong Kong-Macao Greater Bay Area Listed Companies Federation ESG100



China Securities Journal "New Quality Enterprise Golden Bull Award"

ESG Development Strategy

AHB regards ESG management as a core strategy, deeply integrating the concept of sustainable development into every aspect of our operations. The Company establishes a robust ESG governance framework, formulates clear sustainability strategies, and actively communicates and collaborates with all stakeholders, continuously optimizes the management and analysis of key issues, promoting the systematic and standardized implementation of ESG work.

With our practical measures in energy conservation, carbon reduction and clean production, AHB was selected as an excellent practice case of sustainable development of listed companies in 2024 by China Listed Companies Association.



ESG Management System

AHB has established a comprehensive three-tier ESG governance structure, comprising the Board of Directors, the Strategy and ESG Committee, and the ESG Working Group, ensuring that the concept of sustainable development permeates all company operations. Through this clear division of labor, the roles and responsibilities of the Board and the Strategy and ESG Committee in researching and formulating the Company's ESG strategy, identifying key issues, managing ESG risks and opportunities, ESG performance management, and capital market ratings have been strengthened, further enhancing corporate governance and sustainable development management.

ESG Governance Structure	ESG Related Functions
Board of Directors	As the highest decision-making body of ESG management, the Board of Directors is responsible for formulating the overall strategic direction of ESG, supervising the implementation progress of ESG work, and ensuring the deep integration of sustainable development concept with the Company's long-term development goals.
Strategy and ESG Committee	The Strategy and ESG Committee, under the leadership of the Board of Directors, is responsible for researching and formulating the Company's ESG strategic plan, identifying ESG topics relevant to business operations, and assessing ESG risks and opportunities. Additionally, the committee oversees the development of the ESG performance management system, promotes the close integration of ESG goals with business operations, and monitors the implementation of ESG policies to ensure that strategies are effectively implemented.
ESG Working Group	The ESG Working Group is the executive layer of the ESG strategy, responsible for implementing decisions made by the Board and the Strategy and ESG Committee. The main functions of the working group include: conducting daily ESG management, coordinating various departments to advance ESG projects, collecting and analyzing ESG data, preparing ESG reports, and communicating ESG progress with internal and external stakeholders. Additionally, the working group is tasked with tracking the latest developments in the ESG field, proposing improvement suggestions, and driving continuous optimization of the Company's sustainability efforts.

ESG Strategic Planning

AHB is committed to the ESG strategy of "green source reborn, carbon recycling for the future," aiming to promote resource recycling and regeneration through green innovation in synthetic biology, thereby supporting global sustainable development. Biosynthesis technology is not only a critical pathway to replace traditional chemical routes but also an essential force in achieving carbon reduction goals. We hope that breakthroughs in green technology will set industry benchmarks and contribute to the sustainable development of our planet.

AHB's ESG strategy closely aligns with the United Nations Sustainable Development Goals (SDGs). It revolves around four pillars: "G-Responsibility Governance," "E-Green Operation," "S-Craftsmanship Products," and "S-Humanistic Care." Starting from within the company, it gradually extends to partners, communities, and society at large, showcasing AHB's grand vision of driving industry transformation through green technology and co-creating a better future. Through continuous innovation and responsible practices, AHB not only provides customers with higher quality products but also injects more green energy into Earth's sustainable development. Together with global partners, we are moving toward a brighter future.



Stakeholder Communication

AHB values the expectations and needs of stakeholders, committed to establishing systematic and regular communication mechanisms. The Company maintains close ties with regulatory bodies, shareholders, employees, customers, partners, and industry associations. Through various means, we widely collect and carefully listen to opinions from all parties. At the same time, AHB continuously optimizes communication channels, deeply understands the impact of our operations on stakeholders, and pays attention to the challenges posed by ESG risks, enhancing trust among all parties and jointly promoting the realization of sustainable development goals.

Stakeholders	Expectations and Demands	Communication Channels and Mechanisms
 Government and Regulatory Agencies	<ul style="list-style-type: none"> Compliance Pay taxes according to law Anti-corruption 	<ul style="list-style-type: none"> Supervision and inspection Meeting exchange Open consultation
 Shareholders and Investors	<ul style="list-style-type: none"> Protection of shareholders' equity Good corporate governance Increase return on investment High quality information disclosure Risk management Business ethics 	<ul style="list-style-type: none"> Information disclosure announcement General meeting of stockholders Daily phone and email communication Exchange on the Shanghai e-interactive platform Performance presentation Investor research
 Employees	<ul style="list-style-type: none"> Employee rights protection Employee compensation and benefits Employee health and safety Staff training and development 	<ul style="list-style-type: none"> Worker's congress Staff training Performance evaluation Set up a complaint and feedback mechanism

Stakeholders	Expectations and Demands	Communication Channels and Mechanisms
 Customers	<ul style="list-style-type: none"> Product quality and safety Sustainable product Quality service Information security and privacy protection 	<ul style="list-style-type: none"> Customer visits and communication Customer satisfaction survey Exhibition customer communication Industry communication and discussion activities
 Suppliers and Partners	<ul style="list-style-type: none"> Sustainable supply chain Product quality and safety Intellectual property protection Business ethics 	<ul style="list-style-type: none"> Supplier selection and evaluation Supplier communication Strategic cooperation Research visits
 Industry Associations	<ul style="list-style-type: none"> Product development and innovation Industry development 	<ul style="list-style-type: none"> Industry communication On-the-spot investigation
 Community	<ul style="list-style-type: none"> Public welfare charity Community development Environmental protection 	<ul style="list-style-type: none"> Public welfare activities Community visits Employee volunteer service
 Universities and Research Institutes	<ul style="list-style-type: none"> Scientific research and innovation Talent cultivation 	<ul style="list-style-type: none"> Cooperation between school and enterprise Academic research

Assessment of Dual-material Topics

AHB uses a dual-material topic assessment method in ESG management practice to scientifically and systematically identify and prioritize the most critical ESG topics for the Company and stakeholders. We collected opinions and suggestions from the Company's management, ESG working groups, and various stakeholders through surveys. The assessment is conducted from two dimensions: impact importance (i.e., the impact on environment and society) and financial importance (i.e., the impact on the company's financial performance).

We identified the material topics of our company for 2024 through the following process:



Identification

Based on the comprehensive reference of relevant international standards and disclosure frameworks (GRI, SDGs), capital market rating agencies (Ecovadis, CDP, MSCI), Shanghai Stock Exchange, requirements of major customers, performance of peers and business development of AHB, 25 ESG topics most closely related to the Company's operation were identified.



Research

We invite internal and external stakeholders to assess the importance of issues through questionnaires. The research includes Company management, ESG working groups, employees, customers, suppliers or partners, etc.



Ordering

Priority is ranked by quantified evaluation from two dimensions of impact importance and financial importance.



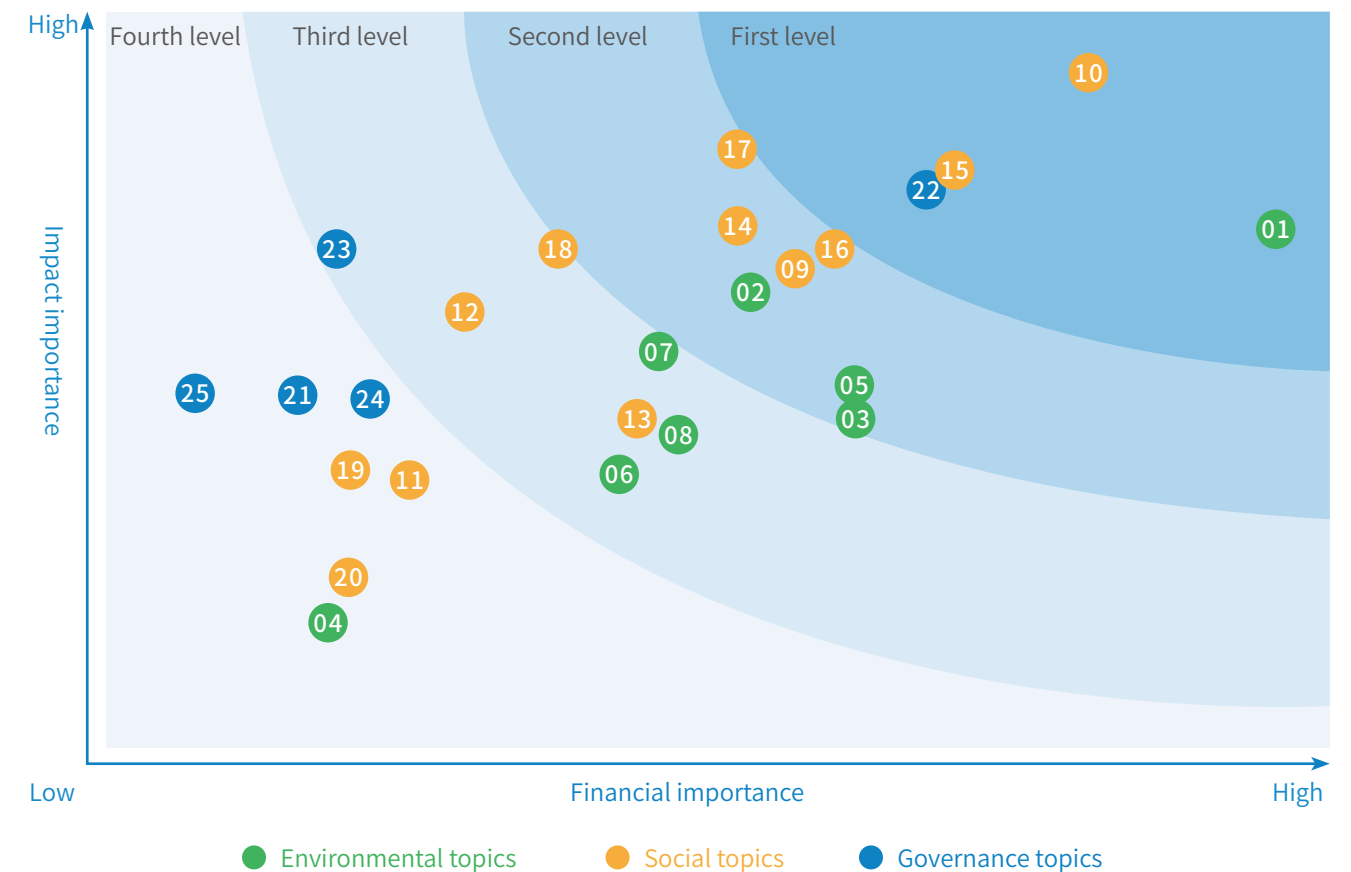
Review

The Management of the Company reviews the topic evaluation process and the ranking results.



Confirmation

After review, the Board and The Management of the Company confirm the results of the dual-material topic for the current year.



First level	Second level	Third level	Fourth level
10 Employee health and safety	16 Research and innovation	07 Circular economy	24 Data privacy and security
01 Climate change and greenhouse gas emissions	17 Intellectual property protection	18 Customer service	11 Diversity, inclusion, and equality
15 Product quality and safety	09 Human rights and labor rights management	13 Training and talent development	21 Corporate governance
22 Compliance and risk management	14 Chemical safety management	08 Clean technology opportunities	19 Responsible marketing
	02 Energy management	12 Employee compensation and benefits	20 Social contribution
	05 Waste management	06 Sustainable supply chain	25 Investor rights protection
	03 Water resource management	23 Business ethics and anti-corruption	04 Biodiversity conservation



01

Responsible Governance Strengthen the Foundation of the Enterprise

Strengthen Regulated Governance	19
Enhance Compliance Code	21
Adhere to Business Ethics	23



Strengthen Regulated Governance

Governance Structure

AHB has always adhered to the compliance operation standards, taking the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, the *Code for the Governance of Listed Companies* and other laws and regulations as the guidelines, benchmarking the latest policy guidance of the China Securities Regulatory Commission and the Shanghai Stock Exchange, and continuously deepening the reform of the governance system.

The Company scientifically defines the boundaries of authority and responsibility between the General Meeting of Shareholders, the Board of Directors, the Supervisory Committee, and the Management Team, constructing a collaborative mechanism that integrates decision-making, execution, and oversight. Through institutionalized checks and balances, we ensure both the scientific nature and transparency of major decisions while continuously unleashing operational vitality. This lays a solid institutional foundation for safeguarding shareholder rights and practicing sustainable development.

In order to optimize the corporate governance mechanism, we will adjust governance structure as soon as possible in accordance with the relevant provisions of the *Company Law of the People's Republic of China*, the China Securities Regulatory Commission, and the State Administration of Financial Supervision on not setting up a supervisory board.



Governance System

AHB continues to improve the management system, and has formulated various corporate governance systems including the Rules of Procedure for General Meeting of Shareholders, the Rules of Procedure for Board of Directors and the Rules of Procedure for Supervisory Committee to ensure the standardized operation of the Company.

In order to realize the sustainable development of AHB, we continue to improve the corporate governance structure and clarify management responsibilities. During the reporting period, the General Meeting of Shareholders, the Board of Directors, the Supervisory Committee and the Management have clear rights and responsibilities, each performing its own duties, fulfilling its responsibilities, checking each other and coordinating with each other.

General Meeting of Shareholders

The highest decision-making body, which makes decisions on the appointment of directors and supervisors, refinancing, major foreign investment, related party transactions, etc. The convening, proposal, holding, voting and resolution of the General Meeting of Shareholders are witnessed by lawyers on site, and legal opinions on legality and compliance are issued.

Board of Directors

Strengthening strategic decision-making and risk management functions. In 2024, the Board consists of nine members, including six non-independent directors (one of whom is the chairwoman) and three independent directors. The Board has established three specialized committees: Strategy and ESG Committee, Nomination, Remuneration, and Evaluation Committee, and Audit Committee. The Board is accountable to the shareholders' meeting and is responsible for deciding on the Company's business plans and investment strategies, as well as implementing resolutions passed by the General Meeting of Shareholders.

Supervisory Committee

Implementing independent supervision and focus on efficient operation of management. In 2024, the Supervisory Committee is composed of three members, including two shareholder representatives and one employee representative. The Supervisory Committee supervises the Company's legal operation and the performance of duties by directors and senior managers.

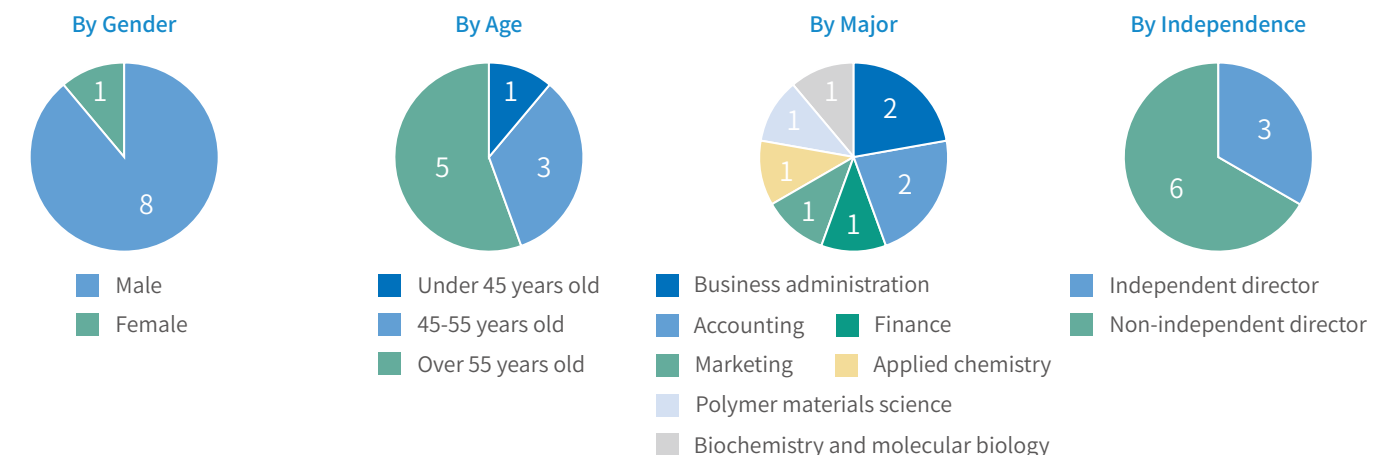
Key performance indicators

During the reporting period, the convening of the General Meeting of Shareholders, Board of Directors, and Supervisory Committee is summarized as follows:

General Meeting of Shareholders 3 times	Board of Directors 9 times	Supervisory Committee 7 times
Proposals Deliberated 14 items	Proposals Deliberated 47 items	Proposals Deliberated 20 items

Diversified Governance

AHB attaches great importance to the independence and diversification of the Board of Directors, and continues to improve the Independent Director Work System. At the same time, we pay attention to the diversity of background (such as gender, age, profession, etc.) in the nomination of directors. The board members all have rich industry experience, covering biochemistry, materials science, business administration, finance and other fields.



Enhance Compliance Code

Compliance and Risk Control

AHB has established a comprehensive risk management system, formulating regulations such as the Risk and Opportunity Response Control Procedures, Internal and External Environment Analysis Management Procedures, and Internal Audit Management Standards to standardize the Company's risk management processes. We manage internal and external risks related to our business activities through internal audits and risk assessments, implementing appropriate procedures and control measures to ensure effective risk management. On this basis, the Company also incorporates risk management indicators into individual performance evaluations to ensure the effectiveness of risk management efforts.

The Board and specialized committees are responsible for supervising and managing risks. Among them, the Audit Committee is tasked with regularly reviewing internal control policies, audit policies, and their effectiveness, as well as evaluating the work of external auditing firms. The Legal Audit Department is responsible for identifying and analyzing compliance risks in operations, implementing preventive measures against these risks, and swiftly addressing any compliance issues reported internally or externally.

Risk management procedures

In order to help us identify, assess and manage risks that may adversely affect the Company's sustainable development goals and operations, we have developed a risk management process.

Risk identification



The Company shall have insights and analysis of risks related to macro external environment, segment, industry, technology, law and other fields, and identify potential risks that may affect the Company's medium- and long-term development according to the expectations or needs of stakeholders.



Risk assessment



An assessment is conducted to determine the level of identified risks.



Risk monitoring and reporting



Potential compliance risks are identified in a timely manner through monitoring and early warning, and reported to the relevant responsible personnel in a timely manner.



Risk response and control



The risk owner is designated to formulate a work plan and take effective measures to respond to the risk in a timely manner to reduce the adverse impact.



Internal control

In accordance with the provisions of the enterprise internal control standard system, AHB establishes and improves the internal control and effectively implements it, evaluates its effectiveness, and ensures that the operation and management are legal and compliant, assets are safe, and financial reports and related information are true and complete.

The Company strictly adheres to the requirements of laws and regulations such as the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, and the *Accounting Law of the People's Republic of China*, as well as relevant rules from the China Securities Regulatory Commission and the Shanghai Stock Exchange. Based on the *Basic Standards for Enterprise Internal Control* and its accompanying guidelines, and in light of the actual development of the Company, we conduct timely evaluations, updates, and improvements to our internal control system. This not only enhances the efficiency of corporate management and decision-making but also ensures the legality and compliance of business operations and asset security, effectively promoting the implementation of our strategic development plans.

The Company's internal control covers the main aspects of business management. This year, we focused on supervising and evaluating high-risk areas such as sales collection processes, procurement payment processes, project management processes, information system management processes, and production management processes. There are no significant deficiencies that could impact the Company's operations and development. The units and businesses included in the evaluation scope also have no major omissions; the Company's internal control system is well-established and reasonable, with effective implementation.

Data Privacy and Security

Information security is one of the key challenges currently faced by the Company. Potential risks include data breaches, cyber attacks, and technical vulnerabilities, which can lead to the leakage of sensitive information, system failures, or data theft, causing significant losses for both the Company and our customers. To address these challenges, in 2024, we focused on optimizing security systems, upgrading technology, and providing comprehensive security training for all employees, thereby enhancing overall information security protection capabilities.

System and certification

AHB has formulated a series of policies and regulations to ensure information security based on laws, regulations, and international standards such as the *ISO/IEC27001 Information Security Management System Certification*. These include, but are not limited to the Information Security Management Standards, which standardize the information security management framework from both management and technical perspectives, laying a solid foundation for information security work. In 2024, Changfeng, Qinhuangdao, and Bayannur bases successfully passed the *ISO/IEC27001 Information Security Management System Certification* audit, and in 2025, Chifeng base will undergo an information security management system certification audit.

Information security management measures



Information security system optimization

In 2024, AHB introduced an information security inspection mechanism. Regularly delving into business processes, system architecture, and network infrastructure, using a combination of automated detection tools and manual verification to accurately identify potential security vulnerabilities, configuration discrepancies, and abnormal operations. After forming a list of issues, immediate corrective actions are taken, followed by ongoing monitoring and re-inspection to achieve dynamic zeroing of information security risks.



Information security technology updates

AHB has introduced cutting-edge network access control systems to strengthen the cyber security defense. We optimized firewall rules to intelligently identify and block highly concealed advanced persistent threats, malware propagation, and other complex attacks, effectively resisting external network risks. We continuously improved data leakage prevention technology to effectively block illegal data exfiltration routes, further reducing the risk of data breaches. We established a bastion host system to effectively prevent remote login brute force threats.



Information security knowledge training

AHB requires every new employee to attend an information security training course during their onboarding to enhance their awareness of information security protection. Information security culture is integrated into daily operations, such as incorporating information security knowledge dissemination into training materials for projects like SAP. Through four sessions of information security knowledge presentations in different training scenarios, comprehensive coverage is achieved from employee onboarding to regular business training.

Adhere to Business Ethics

Adhering to the core values of "sincerity, integrity, and unity between knowledge and action," AHB strictly abides by business ethics and complies with the laws and regulations of the countries where we operate. We enhance our corporate ethical awareness and partners' compliance consciousness through stringent business ethics standards and internal oversight mechanisms, thereby comprehensively strengthening business ethics and anti-corruption management levels.



Anti-corruption and Anti-bribery

AHB strictly adheres to laws and regulations such as the *Company Law of the People's Republic of China* and the *Anti-Unfair Competition Law of the People's Republic of China*, and has updated documents including the Employee Business Conduct Rules, Complaint and Reporting Management Standards, and Integrity Management System, covering all employees and external partners. The Company requires everyone to comply with the laws and regulations of their respective countries and regions, prohibiting any illegal activities. Based on the standards and requirements of the *ISO37001 Anti-Bribery Management System*, we continuously improve our institutional framework.

Anti-corruption measures

Periodic review

The Audit Committee periodically reviews the implementation of systems and norms and provides policy guidance. The review is conducted at least quarterly.

Employee commitment and training

AHB provides all employees with the Rules of Business Conduct for Employees and the Commitment Letter for Cleanliness for Employees, requiring all employees to be familiar with the relevant contents. In April 2024, the Human Resources Center organized all employees to sign the Commitment Letter for Cleanliness for Employees, and 100% of the employees completed the signing.

Anti-corruption risk position assessment

The Legal Audit Department led the 2024 annual corruption risk position assessment, including procurement, sales, production, research and development, finance, engineering, human resources, audit high-risk positions, with subsequent validation review. The overall corruption risk is controllable, and medium-high risk has corresponding systems and control measures.

Anti-corruption training

In May 2024, AHB conducted a comprehensive integrity culture training and integrity promotion exam for all employees. The aim was to enhance employees' understanding and recognition of integrity culture and strengthen their ability to resist negative trends at work. This training and examination covered the headquarters, Qinhuangdao Fengrui, and four production bases, with a total of 1,262 participants.

Anti-corruption campaign

AHB conducts anti-corruption poster campaigns and produces integrity videos during major holidays, accumulated watching of over a thousand people. We also set up integrity promotional boards and notice boards at construction sites to comprehensively enhance employees' awareness of anti-corruption. We plan to expand the scope of integrity promotion, establish an accountability mechanism for significant internal responsibility accidents, and create effective deterrence.



Cleanliness notice board of Bayannur Base Phase III project

Complaint handling and investigation

AHB advocates for the joint supervision of integrity construction by employees, customers, suppliers, and other stakeholders. The Company has established a complaint mechanism, strictly adhering to the Complaint and Reporting Management Standards to ensure that complaints are handled legally, objectively, and independently. The Company firmly combats bribery, embezzlement, collusion, disclosure of confidential information, and non-compete restrictions. Complaints can be submitted through various channels such as phone calls, emails, and letters. During the investigation process, non-investigation team members must not access complaint materials or investigation documents to ensure the confidentiality of informants. All complaints are uniformly received and investigated by the Legal Audit Department. Violations will be dealt with according to regulations, and cases suspected of criminal activity will be referred to judicial authorities. For verified complaints, we may offer rewards to informants as appropriate.

Reporting channels



Tel:
0551-65388639



Email:
ahb@ehuaheng.com

Key performance indicators

Timeliness rate of
complaint acceptance

100 %

Business ethics and anti-
corruption reporting

0 cases

Litigation cases of corruption
and embezzlement

0 cases



Anti-Unfair Competition

AHB strictly adheres to laws and regulations such as the *Anti-Unfair Competition Law of the People's Republic of China*, formulating and updating the Employee Business Conduct Rules. We rigorously prohibit false advertising, monopolistic practices, and infringement of trade secrets, among other unfair competitive behaviors. We also comply with applicable specific integrity rules in the countries, regions, industries, or relevant organizations where we operate. We require all employees to uphold high standards of integrity, treating others sincerely and conducting business ethically. Employees must not engage directly or indirectly in, encourage, support, tolerate, or otherwise participate in any fraudulent, deceptive, or other dishonest means of conducting business, defrauding money or personal gain for the purpose of obtaining unjust or improper benefits. Furthermore, they must not harm the legitimate rights and interests of any company or individual through any illegal means.

Such acts include, but are not limited to:

- Illegal fraud, and other deceptive business practices against AHB and our business partners that result in financial or other losses to any person or entity;



- Fraud committed against any other third party.





02

Green Operation Promote Low-carbon Transformation

Implement Climate Action	29
Optimize Resource Recycling	39
Protect Ecological Balance	47



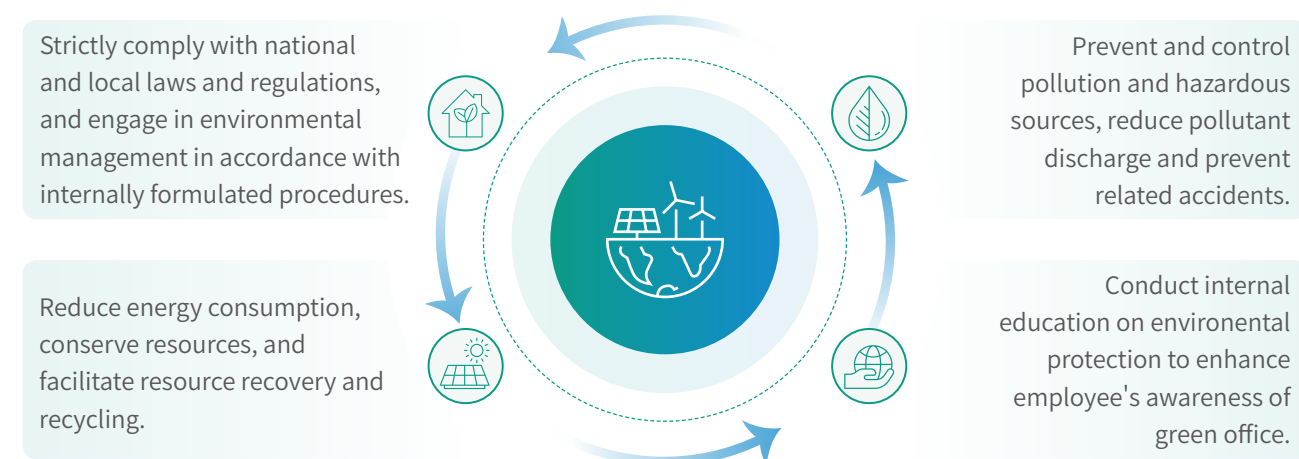
Implement Climate Action

Environmental Management

AHB practices sustainable development throughout the whole value chain, and has set the strategic goal of Triple Zero (Zero carbon emission, Zero waste, Zero petrochemical resource) as the framework. It is committed to accelerating and implementing the process of zero carbon production technology, circular economy and renewable energy related projects, and promoting the industry to move towards a recyclable, integrated and sustainable future.



◆◆ Environmental protection policy



Environmental Strategic Goal

Contents



Zero carbon emission

- **Zero carbon supply:** Establish a data management platform for digital and intelligent supply chain, integrate green procurement into the process of raw material and equipment procurement, and require all supply chain partners to meet ISO26000 standards in the next step, and provide guidance to promote continuous improvement.
- **Zero carbon factory:** By 2024, two bases had been recognized as National Green Factory. In the future, we will continue to optimize the underlying biotechnology and process, and we are committed to reducing carbon dioxide emissions during operation.
- **Zero carbon logistics:** Integrate electric logistics trucks, electric forklifts and electric ships into the whole process of logistics system from raw material purchase to product delivery, and plan to increase the construction of green logistics infrastructure, and finally achieve a development mode of net zero carbon emission.



Zero waste

- **Circular economy:** By recycling and fermenting yeast liquid, fermented biomass, etc., it can be transformed into efficient green fertilizer products and reused in the growth of renewable raw materials such as corn. In the future, we will strive to achieve 100% recycling.
- **Sustainable water resources:** Innovate and develop water-saving technologies such as wastewater evaporation, condensate reuse, reclaimed water reuse and fermentation circulating water reuse, implement sustainable water resource management in all related production bases, and the recycling rate of process wastewater reaches more than 90%.
- **Lean production:** Since 2023, WCM (world-class manufacturing) has been implemented in all production bases to build a world-class smart factory and move towards the goal of zero accidents, zero failures, zero short stops, zero complaints and zero defects.
- **Recyclable materials:** In cooperation with sustainable packaging solutions companies, we will increase the proportion of green packaging materials that can be reused or degraded year by year, and recycle and utilize the packaging of each customer's order.



Zero petrochemical resource

- **Renewable raw materials:** AHB's products are all made from renewable resources such as corn, and it has set a grand goal of producing more than 50% of its products from non-grain carbon source renewable raw materials.
- **Green electricity:** Green electricity trading has been carried out in Qinhuangdao base and Bayannur base. Since 2022, rooftop photovoltaic power generation construction projects have been gradually launched in each base. In the future, solar energy, wind energy and other green power sources will be fully introduced to achieve green electricity supply.
- **Biomass fuel:** The Qinhuangdao base takes the lead in fully replacing petrochemical fuel with biomass fuel, including heating and gas supply. In the future, the use of biomass fuel will be promoted in all bases.

Environmental management system

The Company attaches great importance to environmental management, so as to set up the EHS Center (Environmental Health and Safety Center) to systematically manage the Company's environmental, health and safety affairs to ensure that the Company's operations comply with relevant laws and regulations, safeguard the health and safety of employees, reduce environmental risks, and enhance the Company's sustainable development capabilities and social image.

AHB continues to deepen the construction of environmental management systems, actively responding to the requirements of the "14th Five-Year Plan for Industrial Green Development," and strictly adhering to national environmental protection laws and regulations. Based on the Company's actual situation, a series of internal management systems have been formulated and improved. In 2024, the EHS Center released a series of management systems, including the EHS Accident and Incident Management Procedure, Solid Waste Management System, and Contractor Management Procedure, to comprehensively enhance management standards and control EHS-related risks.

Environmental management system

- Wastewater Management System
- Water Conservation Management System
- Energy Management Standard
- Measures for the Implementation of Energy and Resource Conservation
- Quality/Environmental/Occupational Health and Safety/Food/Feed Safety Management Handbook
- Quality/Environment/Occupational Health and Safety/Food Safety/Feed Safety/Halal Assurance Management Procedure Document
- Solid Waste Management System
- EHS Accident and Incident Management Procedure
- Contractor Management Procedure



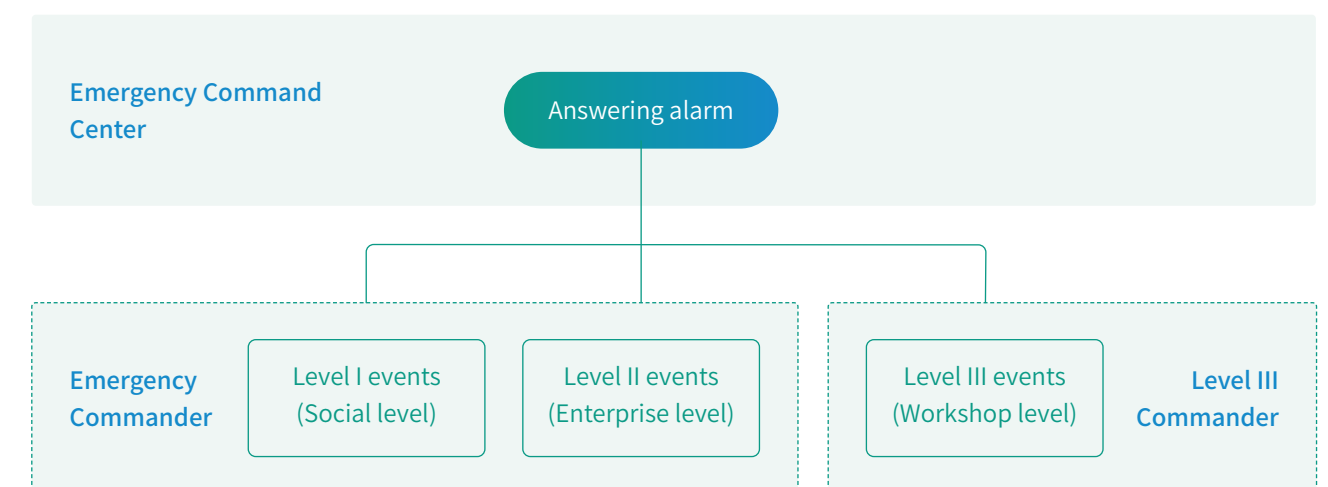
The Company has implemented the Environmental Factor Identification and Evaluation Management Procedure, identifying, evaluating, and controlling significant environmental factors from three categories: production processes, office operations, and auxiliary processes. This reduces the environmental impact and potential risks associated with the Company's operations. We have systematically advanced the reporting of environmental assessment information, data, and materials, fully implemented measures for waste and wastewater treatment, completed the environmental impact assessment of the base project, and timely filed relevant documents including the environmental impact assessment report, approval, and environmental protection acceptance.

As of the end of the reporting period, four production bases of the Company had all passed the *ISO14001 Environmental Management System Standard Certification*, and the total investment in environmental protection reached 48.79 million RMB in 2024, covering many fields such as process optimization, technology and equipment upgrading, energy equipment monitoring system construction, transportation cleaning transformation and power structure optimization.

Environmental emergency management

AHB, in accordance with the *Measures for the Filing and Administration of Emergency Response Plans for Sudden Environmental Incidents of Enterprises and Public Institutions (Trial)*, the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on Responding to Emergencies*, and relevant local environmental regulations, and in combination with the Company's actual situation, has revised and improved the Emergency Response Plan for Sudden Environmental Incidents. With environmental protection at the core, we have formulated specific emergency response plans targeting sudden environmental incidents such as hazardous chemical leaks, liquid material leaks, natural gas leaks, especially methanol storage tank leaks.

To ensure the effective implementation of emergency plans, the Company has established a comprehensive emergency system, setting up an emergency leadership group and office to ensure that personnel can respond quickly and efficiently carry out rescue and post-incident work. In the event of a sudden environmental incident, the Company will immediately entrust professional testing agencies for emergency monitoring to promptly investigate the cause of the accident. At the same time, we will swiftly activate the environmental recovery plan, formulate and implement a recovery strategy to minimize the impact on the environment and ensure the safety of the Company and surrounding communities.



At the same time, we have established close ties with surrounding enterprises to promote the connection between enterprise emergency plans and those of surrounding enterprises, forming a more perfect joint prevention and control mechanism.

We have implemented a training and drill mechanism for all staff, and set up a reward and punishment system to encourage employees to actively participate in emergency management. By simulating various environmental emergencies, we test the feasibility of the plan and the ability of employees to respond, which effectively improves the coordination and response speed of employees in emergency situations.



Safety and environmental protection emergency drill at Qinhuangdao Base

In 2024, through continuous improvement of environmental protection and emergency management mechanism for environmental emergencies, the Company successfully achieved the goal of zero environmental accidents throughout the year. The specific environmental management goals and their achievement status are as follows:

Environmental Management Objectives	Indicator	Achievement Status in 2024
Major environmental accidents	0	Achieved
Waste water discharge rate up to standard	100%	Achieved
Exhaust emission rate up to standard	100%	Achieved
Noise emission rate up to standard	100%	Achieved
Solid waste compliance disposal rate	100%	Achieved

Climate Change and Greenhouse Gas Emissions

Climate change is one of the major challenges facing the world today. AHB deeply understands the multifaceted impacts of climate change on the environment, society, and economy, as well as the risks it may pose to business operations. To proactively address climate-related risks and align with the national "dual carbon" goals, we have implemented a series of measures to reduce carbon emissions. These efforts cover governance, strategy, risk management, and objectives, providing a comprehensive disclosure of the climate-related risks and opportunities the Company faces.

Governance

The ESG working group at AHB is responsible for identifying climate-related risks and incorporating them into the board agenda to ensure that the Board and the Management effectively monitor the potential impacts and opportunities of climate-related risks.

Strategy

We have systematically conducted assessments of risks and opportunities related to climate change, and developed corresponding response measures for potential impacts. Meanwhile, we have established a digital management system for carbon accounting, achieving efficient management and precise analysis of carbon data. We are committed to reducing carbon emissions, improving energy efficiency, and vigorously promoting the use of clean energy to mitigate and adapt to the impacts of climate change. Additionally, we identified four high carbon emission links and formulated a carbon reduction path for the next 3-5 years, clarifying directions and goals for the Company's low-carbon transition. Furthermore, we work closely with all stakeholders to jointly address the challenges of climate change, actively develop and promote more environmentally friendly products, advocate for resource recycling and reuse, and contribute to achieving sustainable development.

Risk management

Category	Level	Potential Financial Impacts	Actions Taken
Physical risks			
Acute	<ul style="list-style-type: none"> Frequent occurrence of extreme weather events (such as hurricanes, floods, etc.) may affect the construction and operation of the Company's projects to some extent 	<ul style="list-style-type: none"> Business and supply chain disruptions can lead to lower earnings 	<ul style="list-style-type: none"> Develop special inspection system and emergency plan for natural disasters to deal with unforeseen weather conditions and protect corporate property from the impact of climate change
Chronic	<ul style="list-style-type: none"> Chronic risks such as global warming and rising sea levels may cause damage to equipment and facilities at the Company's base 	<ul style="list-style-type: none"> Extreme weather events may increase the safety risk and transportation costs of material transportation 	<ul style="list-style-type: none"> Develop a post-disaster recovery plan to ensure that operations can be restored in a short period of time and the impact is minimized
Transformation risks			
Policies and regulations	<ul style="list-style-type: none"> Changes in domestic and foreign climate change policies may result in additional costs for the Company to ensure compliance 	<ul style="list-style-type: none"> The adoption of new technologies to adjust daily operations may result in increased operating costs and resources required 	<ul style="list-style-type: none"> Implement energy saving measures and use energy saving equipment to reduce carbon emissions in daily operations and adapt to higher environmental requirements

Category	Level	Potential Financial Impacts	Actions Taken
Market	<ul style="list-style-type: none"> Consumer preferences and needs are constantly changing 	<ul style="list-style-type: none"> The market has higher requirements for products, and the Company may face more competitive pressure 	<ul style="list-style-type: none"> Adhere to the Company's sustainable development concept, optimize the level of production technology, in order to provide better quality products to meet the needs of the market and consumers
Technology	<ul style="list-style-type: none"> The update and iteration of emerging technologies may result in the Company investing more costs in research and development and training professionals 	<ul style="list-style-type: none"> More resources are needed for the low-carbon transition (such as the use of low-carbon energy and technology, and the purchase of low-carbon equipment) 	<ul style="list-style-type: none"> Optimize the technical update of production bases, and vigorously develop existing green and clean biological manufacturing processes to replace traditional processes with high energy consumption and high pollution
Reputation	<ul style="list-style-type: none"> Failure by the Company to fulfill social responsibilities and take appropriate measures to manage the potential impacts of climate change may affect the evaluation of the Company by various stakeholders 	<ul style="list-style-type: none"> Reduced revenue due to reduced demand for goods/services 	<ul style="list-style-type: none"> Adhere to the Company's sustainable development concept, we conduct social responsibility training within the Company and take appropriate measures to manage the impact of climate change in a timely manner
Opportunities			
Energy sources	<ul style="list-style-type: none"> In the medium to long term, improving energy efficiency can lead to direct cost savings for operations and contribute to limiting global carbon emissions 	<ul style="list-style-type: none"> Reduce operating costs and achieve cost reduction and efficiency improvement 	<ul style="list-style-type: none"> Take measures to optimize equipment and processes, reduce energy waste, and promote employee participation in energy conservation actions Promote the use of green electricity
Products and services	<ul style="list-style-type: none"> Innovation and development of low-carbon products and services can improve market competitiveness, such as customers prefer more environmentally friendly service providers or products, and investors tend to concentrate on investing in green enterprise 	<ul style="list-style-type: none"> Increase revenue by meeting customer demand for low emission products and services 	<ul style="list-style-type: none"> Promote the innovation and upgrading of "synthetic biology and animal nutrition" Accelerate the low-carbon transition and actively participate in low-carbon construction Reduce packaging materials and use biodegradable materials

Indicators: The greenhouse gas emissions generated by the Company's business operations include direct emissions (Scope 1) from fixed combustion, mobile combustion, industrial emissions, and unorganized emissions, indirect emissions (Scope 2) from purchased electricity and steam. In 2024, we invited external institutions to conduct a systematic carbon inventory, identified multiple carbon emission sources, and newly included the Chifeng base in the statistical scope, resulting in a significant increase in carbon emissions this year compared to the disclosed data of the previous year.

Indicators Related to GHG Emissions	Unit	Amount
Scope 1	tCO ₂ e	246,405.26
Scope 2	tCO ₂ e	163,932.41
Total GHG emissions	tCO ₂ e	410,337.67
GHG emission intensity	tCO ₂ e/million RMB revenue	188.41

With our outstanding practice in green and low-carbon transformation, AHB has been awarded the title of "leader" in China's industrial carbon peak in 2024.



Case | EHS Center conducted special training on "Climate Change and Our Actions"

In 2024, EHS Center conducted a special training on "Climate Change and Our Action" and released a comprehensive action plan for all staff. This training systematically constructed a low-carbon development awareness system for AHB, focusing on analyzing the emission reduction path in the field of biomanufacturing, and advocating for all employees to practice green office, promoting the deep integration of corporate carbon neutrality goals and emission reduction innovation practices. The overall coverage rate of this training reached 88%.



Energy Management

AHB's four bases have all obtained *ISO 50001 Energy Management System Certification*, and have passed third-party certification, energy audits, and internal evaluations, continuously monitoring and assessing energy consumption to ensure the effectiveness of energy management measures. To standardize and optimize energy use, AHB has established energy management systems such as the Energy Conservation and Resource Utilization Implementation Management Measures and the Energy Management Standards. Each production base actively implements energy-saving and emission-reduction measures, contributing to a reduction in overall carbon footprint and promoting environmental sustainability.

AHB has set a green electricity target, and carried out green electricity trading in Qinhuangdao base and Bayannur base. Since 2022, we have gradually started rooftop photovoltaic power generation construction projects in each base. In the future, we will fully introduce solar energy, wind energy and other green energy to achieve 100% green electricity supply.

◆ Energy saving measures in Changfeng base

- Improve the separation and concentration process to reduce the use of steam;
- Optimize equipment such as compressors in the workshop;
- Continue to carry out the variable frequency control optimization project of water pump to further help the base improve energy efficiency;
- Implement photovoltaic power generation and biogas boiler projects to provide clean electricity and efficient utilization of biogas resources for the production base;
- Replace all diesel forklifts with electric forklifts.

◆ Energy saving measures in Chifeng base

- Reasonable layout of the orientation and spacing of each building, the design of the building makes full use of natural ventilation and natural lighting to reduce building energy consumption;
- Reasonable design of power supply system to reduce power loss;
- Select motors, water pumps, transformers, fans, air compressors and other products and equipment that meet the national level I energy efficiency standards.

◆ Energy saving measures in Bayannur base

- The biogas from the sewage station is burned to provide calorific value for the boiler, and coal and steam are saved through biogas recovery and waste heat recovery projects;
- Introduce new energy electricity and reduce the use of coal;
- Replace the energy-saving motor.

◆ Energy saving measures in Qinhuangdao base

- The project of generating power from the residual heat of amino acid production will be launched, and we plan to realize the grid-connected supply of power generation by utilizing the residual heat and pressure of the third phase biomass boiler;
- Adopt high and low differential circulating fluidized bed boiler combustion technology to improve fuel efficiency and reduce cost;
- The distributed photovoltaic power generation project is carried out;
- Promote air compressor technical renovation projects.

Case | Rooftop photovoltaic power generation projects in Changfeng base and Qinhuangdao base

We have significantly reduced our reliance on traditional energy sources and minimized pollutant emissions by implementing rooftop solar photovoltaic power generation, water recycling systems, waste heat recovery systems, and biogas recovery systems, while optimizing production processes. Currently, the Changfeng base and Qinhuangdao base have completed photovoltaic installations.



Case | Digital energy management system of Chifeng base

In order to achieve the goal of energy saving and consumption reduction, Chifeng base has introduced a digital energy management system to monitor and analyze the energy consumption data of each production link in real time, so as to provide managers with accurate energy optimization scheme and ensure the efficient use of energy.

We have significantly reduced the impact of energy consumption on the environment through the use of green electricity, while also enhancing the Company's green competitiveness and injecting new momentum into sustainable development.

In 2024, a series of energy optimization projects such as energy-saving equipment use, biogas recovery and photovoltaic power generation achieved remarkable results.

Indicators Related to Energy Utilization	Unit	Amount
Direct energy		
Coal	tons	118,077.40
Natural gas	m ³	3,234,274.24
Liquefied petroleum gas	tons	1.23
Diesel	liters	135,263.55
Gasoline	liters	57,554.07
Biomass fuel	GJ	446,187.45

Indicators Related to Energy Utilization	Unit	Amount
Indirect energy		
Purchased electricity (non-renewable energy)	MWh	259,697.57
Purchased electricity (renewable energy)	MWh	163,146.90
The usage of green electricity generated and consumed by the company	MWh	208.82
Steam	GJ	80,073.83
Total consolidated energy consumption	tce	158,884.14
Consolidated energy intensity	tce / million RMB revenue	72.95

Note: The lower calorific value and equivalent standard coal coefficient of various energy sources in the consolidated energy consumption calculation formula are derived from *China Energy Statistical Yearbook* and *GB/T 2589-2020 General Rules for Comprehensive Energy Consumption Calculation*.

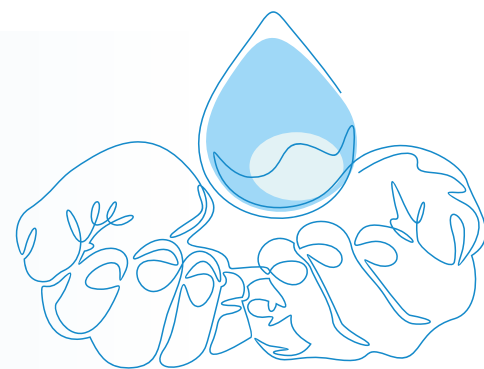
Optimize Resource Recycling

Water Resources Management

We actively promote water conservation and rational use, continuously improving the water resource management system. We have formulated the Water Conservation Management System, the Water Conservation Management Quota Reward and Punishment System, and the Workshop Water Use Management System. We implement total water use control and refine water use plans, breaking down water-saving goals and tasks to each department and workshop. At the same time, we establish a reward and punishment mechanism to encourage employees to participate in water conservation and management, striving to create a water-saving enterprise.

Water resources management objectives

The Company has innovatively developed water-saving technology such as wastewater evaporation, condensate reuse, reclaimed water reuse and fermentation circulating water reuse, aiming to implement sustainable water resource management in all relevant production bases, and the recycling rate of process wastewater reaches more than 90%.

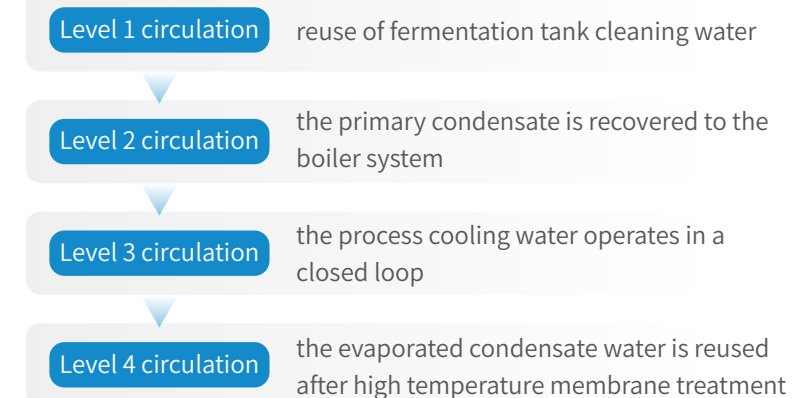


Water resources management initiatives

The water resources of AHB mainly come from municipal water supply, and the fresh water consumption in 2024 is 4,256.57 million liters. We continuously optimize the comprehensive management of water resources by formulating production process water system management regulations and promoting process transformation, effectively reducing and eliminating microbial and bacterial endotoxin contamination in the water production system, ensuring high-quality process water.

In 2024, with the core goal of improving water efficiency, we continued to promote a number of water-saving projects, including reclaimed water reuse, condensate water reuse, fermentation circulating water reuse, etc, achieving a water reuse rate of over 90% in the production process.

◆◆ "Four-level water cascade utilization" model



Production Base	Contents of the Project	Handling Capacity
Chifeng base	New MBR+UF+RO reclaimed water reuse system	6000m ³ /d
Qinhuangdao base	New high density +UF+RO reclaimed water reuse system	1500m ³ /d

Key performance indicators

Fresh water usage
4,256.57 million litres

Water usage intensity
1.95 million litres/million RMB revenue

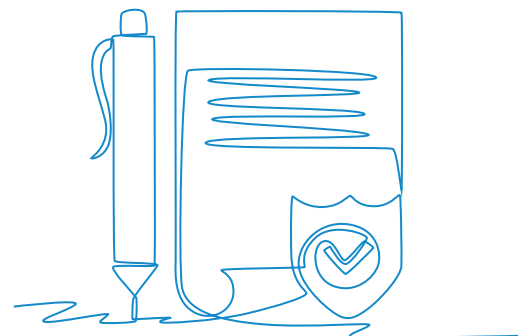


Pollutant Management

AHB continues to improve and revise pollutant management standards in accordance with environmental laws, regulations, and actual business conditions. It consistently strengthens control over pollutant emissions during operations and properly handles various emissions and solid wastes generated during production to ensure that wastewater, exhaust gas, solid waste, and noise meet emission standards. In 2024, the Company's exhaust gas, wastewater, and solid pollutant emission indicators were all controlled within local pollutant emission standards.

◆◆ Pollutant management system

《Wastewater Management System》
《Waste Gas Management System》
《Solid Waste Management System》
《Hazardous Chemicals Management System》



Solid Waste Management

AHB divides waste into general waste and hazardous waste, formulating different treatment methods and standards for each type. This ensures proper classification, transfer, and disposal of waste to ensure it is treated harmlessly and does not impact the environment. We have deployed a "Comprehensive Lifecycle Management Platform for Solid Waste" to achieve full lifecycle supervision of all types of solid waste generation, storage, transfer, and disposal.

◆◆ Waste management goals

Reduce the impact on the natural environment through reasonable waste disposal, material circulation and recycling.



◆◆ Practical measures



General
Waste

Mainly sludge, ash and other general industrial waste and household waste. The Company adopts strict treatment methods for general waste, and centralized treatment of household waste and general industrial solid waste, which is transferred and disposed by local environmental protection departments and qualified third parties, in accordance with the provisions of the Solid Waste Management System.



Hazardous
Waste

The Company, in accordance with the Solid Waste Management Standard and the Hazardous Chemicals Management System, strengthens internal management to prevent harmful waste from polluting the soil. All hazardous wastes, such as used engine oil, empty paint cans, laboratory waste liquids, and hazardous chemicals, are entrusted to qualified third parties for final disposal and are subject to supervision by local environmental protection authorities. To ensure that employees comply with relevant laws, regulations, and requirements of environmental protection departments regarding the handling of hazardous waste, we provide them with necessary training.

Key performance indicators

Indicators Related to General Waste	Unit	Amount
Total amount of general waste discharge	tons	58,993.40
General waste discharge intensity	tons/million RMB revenue	27.09
-Waste transferred from disposal (recycle)	tons	5,328.70
-Waste for direct disposal (incineration, with energy recovery)	tons	0
-Waste for direct disposal (incineration, without energy recovery)	tons	390.14
-Waste for direct disposal (landfill)	tons	18,719.61
-Waste for direct disposal (other operations)	tons	34,554.95

Indicators Related to Hazardous Waste	Unit	Amount
Total amount of hazardous waste discharge	tons	56.65
Hazardous waste discharge intensity	tons/million RMB revenue	0.03
-Waste transferred from disposal (recycle)	tons	0
-Waste for direct disposal (incineration, with energy recovery)	tons	0
-Waste for direct disposal (incineration, without energy recovery)	tons	56.65
-Waste for direct disposal (landfill)	tons	0
-Waste for direct disposal (other operations)	tons	0

Wastewater Management

AHB shall standardize the treatment of wastewater generated in the production and operation process in accordance with relevant regulations, and ensure that all production bases strictly comply with the laws, regulations and standards of wastewater discharge in the place where they operate.

Practical measures

Waste water monitoring



We have established waste water treatment stations in each production base, introduced real-time online monitoring system to monitor the waste water index, and equipped with abnormal alarm system to warn the waste water index exceeding the standard, so as to ensure the compliance of waste water discharge.

Wastewater treatment



We continuously optimize wastewater treatment processes through measures such as wastewater monitoring systems, data analysis, equipment upgrades, and technological improvements. Under the condition that all indicators of wastewater meet discharge standards, we reduce the dosage of chemical agents to prevent secondary pollution.

Source reduction



We continuously enhance our water resource management capabilities and increase the proportion of water recycling to reduce wastewater discharge. To protect water resources and minimize the environmental impact of wastewater discharge, we have comprehensively upgraded the water pollution prevention systems at all production bases. Each base has formulated targeted prevention measures based on its own production characteristics and environmental requirements, aiming to achieve refined management in source reduction, process control, and end-of-pipe treatment, ensuring efficient use of water resources and compliant wastewater discharge.



Case | Bayannur base sewage station capacity upgrading project

In 2024, the Bayannur base carried out the acceptance of sewage station capacity upgrading project, realizing the daily sewage treatment capacity of 4,400 m³. The sewage station treatment capacity has been improved, with a single tower treatment capacity of over 2,200 m³/d, which can meet the subsequent sewage treatment needs of existing projects and projects under construction.



Case | Qinhuangdao base sewage station upgrading

The Qinhuangdao base upgraded the existing sewage station, adding new wastewater treatment facilities such as regulating tank, IC reactor and anaerobic ammonium oxidation reactor, and the treatment capacity was increased from 2,100m³/d to 5,100m³/d.



Case | Chifeng base's new sewage station

The Chifeng base has newly built two sewage stations with a capacity of 4,000m³/d, using IC + anaerobic ammonium oxidation + A/O treatment process.



Key performance indicators

Indicators Related to Waste Water Discharge	Unit	Amount
Total wastewater discharge	million litres	3,623.61
Waste water discharge intensity	million litres / million RMB revenue	1.66
Chemical oxygen demand (COD)	tons	253.00
Total phosphorus (TP)	tons	63.38
Total nitrogen (TN)	tons	8.88
Ammonia nitrogen (NH ₃ -N)	tons	4.97

Waste Gas Management

Practical measures

Emission monitoring:

AHB implements strict control procedures for exhaust gas emissions to ensure that exhaust gas emissions comply with environmental regulations. The Company regularly hires third-party organizations to monitor the concentration of atmospheric emissions within the base area, verify the compliance of emissions, and help the Company timely understand the status of exhaust gas emissions, so as to adjust and optimize the production process and reduce the impact on the environment.

Exhaust gas treatment:

The Company also strengthens the supervision of boiler exhaust gas treatment facilities, using advanced environmental protection technology, to minimize the generation and emission of nitrogen oxides, sulfur oxides and particulate matter.

Case | Real-time odor monitoring system of Bayannur base

The Bayannur base has installed a real-time odor monitoring system outside the factory boundary to monitor the odor concentration of ammonia and hydrogen sulfide, wind speed and wind direction in real time. Through continuous monitoring, the system can analyze the emission concentration of pollution sources and warn the odor emission in real time.



Case | Qinhuangdao base exhaust gas treatment facility metering system

The Qinhuangdao base has invested in the construction of a metering system for waste gas treatment facilities to realize real-time monitoring of 44 monitoring points. The system collects and analyzes the electricity consumption data of production facilities and pollution prevention and control facilities to effectively prevent unauthorized shutdown of pollution prevention and control facilities and ensure long-term stable operation of the facilities.

Key performance indicators

Indicators related to Exhaust Gas Emission	Unit	Amount
Nitrogen oxides	tons	145.66
Sulfur oxides	tons	87.81
Particulate matter	tons	10.96

Chemical Safety Management

AHB has established and implemented the Chemical Management Standards, aiming to promote comprehensive management of chemical procurement, storage, distribution, and use in production sites, inspections, and tests. We particularly emphasize the usage norms for hazardous chemicals, clarifying regulations for procurement, daily management, maintenance, and use to ensure that the Company adheres to the highest safety standards in managing hazardous chemicals.

We have clarified the responsibilities of each department to more effectively implement chemical management regulations. The Materials Department is responsible for chemical procurement and storage, while the Production, Quality, and Technology Departments manage the daily use of chemicals. The Safety and Environmental Department oversees routine inspections and supervision. Clear division of responsibilities ensures that every step is professionally regulated, thus ensuring the effective management of chemicals.

Circular Economy

AHB constructs a green value chain that spans the entire lifecycle, from raw material selection to production and manufacturing, from product application to packaging and recycling. From field straw to final packaging, AHB redefines the boundaries of "cycling" with technology, giving every resource a new lease on life and making each consumption a kind act of giving back to the Earth.

Raw material end

Replace petrochemical dependence with renewable resources. Based on using corn as raw material, we innovatively adopt agricultural waste such as straw and corn cobs as raw materials to reduce the occupation of farmland and increase farmers' income. We develop the conversion path of "biomass - amino acid - high value material" to reduce crude oil consumption and improve resource utilization rate.

Production end

Resource and energy recycling. The Company implements water recycling projects such as reclaimed water reuse, condensate water reuse and fermentation circulating water reuse to reduce carbon dioxide emissions. The Company's factories are equipped with rooftop photovoltaic panels to increase the proportion of green electricity usage and achieve the production of green products with green energy.

Application end

Extension of full lifecycle value. Core products such as alanine and valine are biodegradable, and the Company applies them in areas like biopesticides and degradable plastics, helping customers reduce their product carbon footprint. In the future, we will collaborate with downstream companies to establish a "Biobased Materials Recycling Alliance," recycling and reusing waste materials to promote a closed-loop industry.

Consumer end

The Company adheres to the 5R principles in green packaging, promoting efficient resource utilization, environmentally friendly development, and customer value enhancement across all fronts. Through optimized management of packaging materials and production processes, we reduce packaging at the source. In collaboration with qualified third-party recycling organizations, we maximize the recovery or reuse of packaging materials to minimize waste and enhance resource sustainability, thereby reducing environmental burdens. We focus on the entire life cycle of products, optimizing every stage from design, production, and packaging to transportation, use, and disposal. Considering all aspects comprehensively, we ensure that product quality is maintained while minimizing the use of packaging materials to the greatest extent possible.

Protect Ecological Balance

Biodiversity Conservation

AHB believes that maintaining genetic diversity, species diversity and ecosystem diversity is not only a necessary condition for ecological balance, but also the key to achieve long-term prosperity of enterprises. We regularly hire third-party organizations to conduct environmental assessment and testing to ensure that the operation of enterprises is in harmony with the ecosystem and meets the requirements of ecological red line.

AHB signed a Cooperation Agreement on Wildlife Protection Public Welfare Activities with Hangjin Rear Banner Forestry and Grassland Bureau, focusing on the following work in the next three years:

Habitat restoration

We organize employees to carry out regular wetland garbage cleaning activities in Tushenze Wetland Park every year, covering the river and surrounding forest areas;

Species protection

The "Huaheng Wildlife Protection Studio" has been set up to provide temporary shelter for injured animals;

Scientific research support

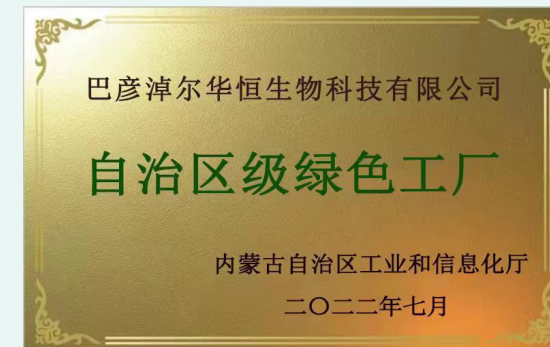
We purchase professional observation equipment, assist in the regional biodiversity background survey;

Public education

We hold "World Wildlife Day" and "Bird Week" every year to spread the concept of protection through exhibitions and popular science manuals.

Green Manufacturing

As of the end of the reporting period, the three production bases under AHB have been certified as green factories, among which Changfeng base and Qinhuangdao base have been certified as the National Green Factory, Bayannur base has been certified as the Autonomous Region Green Factory.



Green Office

In 2024, AHB regularly organized employees to participate in environmental protection activities, promoting environmental knowledge and striving to create a low-carbon, healthy, safe, and vibrant work environment for employees. Through a digital office platform, the Company helps corporate clients and employees achieve efficient collaboration, promotes online video conferencing, significantly reducing carbon emissions from offline meetings, while also lowering paper consumption, providing comprehensive support for employees' low-carbon working practices.



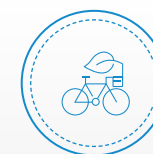
Save resources

- Practice the "Clean Plate Campaign"
- Do not offer disposable cutlery voluntarily
- Use water-saving faucets



Energy conservation

- The office building uses solar air conditioning
- Intelligent control of office temperature
- Use energy-saving LED lighting fixtures



Green travelling

- Provide shuttle buses to pick up and drop off employees to reduce carbon emissions from travel





03 Craftsmanship Products Create Outstanding Quality

Ensure Product Safety	51
Prioritize Sustainable Products	57
Promote Research and Innovation	61



Ensure Product Safety

In 2024, AHB established the Quality Center, showcasing our high regard for product quality and safety. As an innovative leader in synthetic biology, we view product quality as a lifeline. We have set up a standardized management team and a clear responsibility system, adhering to the principles of transparency, accountability, and continuous improvement. Our goal is to create long-term value for shareholders, employees, customers, and society.

Quality Management System

We strictly follow the domestic and foreign quality management laws and standards, combined with the Company's actual situation, established a sound quality, food and feed safety management system, and formulated detailed management norms to ensure that all regulations and requirements are clear and close to customer needs.

Domestic standards

- GB/T 19001-2016 Quality Management System
- GB/T 24001-2016 Environmental Management System Requirements and Usage Guide
- GB/T 45001-2020 Occupational Health and Safety Management System Requirements and Usage Guide
- ISO 22000:2018 Food Safety Management System Requirements



International standards

- BRC Global Standard for Food Safety Version 9.0
- FAMI-QS European Feed Additives and Pre-Mixtures Quality System Version 6.0
- EFCI GMP European Cosmetic Ingredients Good Manufacturing Practices
- KOSHER Certification
- HAS 23000 Halal Certification (MUI)
- COSMOS-standard Version 4.0 Natural Organic Certification



AHB strictly adheres to national and international standards, refining and implementing multiple product quality and safety management systems. These include the Food Safety Management Standards, Food and Feed Safety Protection Plan, Raw Material Acceptance Management Standards, Nonconforming Product Management Standards, and Product Release Management Standards. This ensures rigorous control at every stage from raw materials to finished products, providing customers with safe and reliable products while continuously optimizing and upgrading the Company's quality management system.

AHB has obtained certifications for quality and food safety management systems. The Company's products have received BRCGS Certification for food safety, EFCI GMP Certification for cosmetic ingredients, KOSHER Certification for Jewish use, HALAL Certification for halal products, BRC Certification for European standards, and FAMI-QS Certification for feed. Some of these products have also been awarded the National Industrial Product Production Certification, High-Tech Product Certificate, and National Key New Product Certification.

In addition, the Company's product quality has also been recognized by other international organizations, including CNAS Laboratory Certification, ISO 9001 Quality Management System Certification, ISO22000 Food Safety Management System, REACH Regulation Certification, COSMOS Natural Organic Certification.



Quality Management Process

The Company maintains strict control over product quality, from raw materials to production inspection, every step is carried out according to standards. Before production, equipment operators check the status of the equipment in accordance with the Equipment and Facilities Control Procedure to ensure it meets production requirements. During production, workshop supervisors monitor the entire process, strictly inspecting semi-finished and finished products based on the Product Monitoring and Measurement Control Procedure to ensure compliance. If any non-conforming products are found, we will handle them properly according to the Nonconforming Control Procedure, striving to provide customers with high-quality products.

- Establish raw material acceptance standards to ensure the quality and safety of raw materials;
- Ensure that the temperature and duration of storage and transportation of raw materials are appropriate;
- Auxiliary materials must comply with relevant national regulations and are permitted for use only after passing inspection.
- Aseptic conditions are required for biological processes;
- The chemical process requires the control of the feeding order, timing, temperature and pressure conditions of the reaction.
- The production supervisor is responsible for monitoring and measuring the quality of the product, and the relevant records are kept by the Quality Department;
- Samples must be taken from each batch of product in accordance with sampling management standards for testing and retention purposes.

Control of Raw and Auxiliary Materials

Process Control

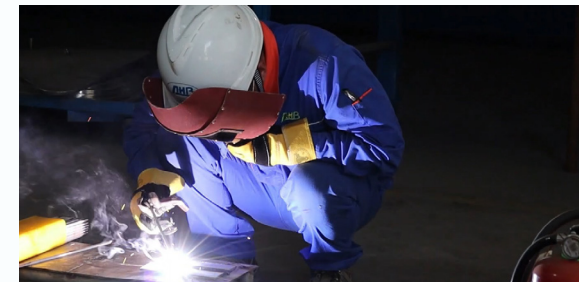
Product Inspection

Product Quality Training

In 2024, we continued to strengthen quality management training for personnel such as quality managers, physical and chemical testers, and microbiologists, maintaining an average of over 22 training hours per person. The content covers the use of professional equipment, product testing, and foreign matter management. Strict assessments are included in the training, and the results are recorded in the Training Implementation and Effect Evaluation Record. This ensures that every member can master key skills proficiently, safeguarding product quality.

Case | Bayannur Base Quality Month 2024

In order to actively respond to the Company's advocacy of "Quality Improvement Month" and "Lean Production", improve quality management awareness and production process quality control ability, Bayannur base carried out welding, sampling, testing, forklift competition in September 2024, popularize basic knowledge of quality and production process quality knowledge, and enhance the quality subject consciousness of all employees.



Highlights of the welding competition



Highlights of the sampling competition



Highlights of the testing competition



Highlights of the forklift competition

Case | "The Brain" knowledge competition in Changfeng Base

In January 2024, in order to promote the dissemination and implementation of WCM, 5S, quality, safety and environmental protection knowledge in Changfeng base, Changfeng Base adopted the form of "Substitute competition for examination" to encourage employees to improve their enthusiasm through motivation and competition, promote all employees to deeply understand and participate in the factory construction, and help Changfeng base to move forward towards the goal of becoming a world-class factory.



Case | Qinhuangdao base improvement team report review

At the end of May 2024, the Qinhuangdao base successfully held the closing audit meeting of the improvement team. The fault reduction team effectively reduced the fault time while increasing the output, and effectively improved the first-time qualification rate of β -alanine products, and both passed the audit.



Quality Risk Management

In 2024, we further refined our quality risk management system. Starting from the product design phase, we systematically identify and assess quality, health, and safety risks, develop tiered response measures to ensure risks are reduced to acceptable levels, and disclose them transparently through the Risk Management Report. At the same time, we enhance comprehensive communication with customers, accurately identify market demands and risks, promote customized R&D, and ensure providing higher-quality services and products to our clients.

Direct quality risk

- Product quality problems, resulting in the risk of return, scrap, rework and so on

Indirect quality risk

- In the process of using the product, if it damages other property rights or personal rights of customers, it shall bear civil compensation liability
- Problems caused by improper logistics, storage conditions and broken packages during product transportation

At the same time, we continue to strengthen the management of allergens, realize the whole process control through the Allergen Control and Management Procedure, eliminate cross-infection, and fully ensure the safety of products and the health of consumers and employees. At the same time, we clarify the division of responsibilities to ensure the effective implementation of management measures.

Department

Responsible Matters

Quality Center

Supervise the implementation of allergen control on production site, and develop a corresponding allergen list.

Materials Department

Responsible for the management, audit and evaluation of allergens from raw material suppliers.

Production Department

Responsible for the prevention and control of cross contact of allergens in production areas.

Business Department

Responsible for sales tracking and product recall of allergenic products.

Food Safety Team

Correctly evaluate the implementation effect of allergen management based on the Company's product allergen content test report, customer complaints or feedback from relevant departments and internal and external information.

Product Recall Management

AHB always prioritizes customer health and safety, strictly adhering to the Product Recall Management Standards to ensure that recall procedures comply with regulations and actual needs. If a product batch is found to be substandard or poses a safety hazard, we will promptly initiate the recall process, working together to fully control the relevant products and handle them according to the Nonconforming Product Control Procedures. Even when no actual recall is needed, we conduct annual simulation exercises to verify the timeliness of our procedures. Since 2024, the Company has not experienced any product recalls or customer health and safety incidents.

Division of responsibilities for product recall management

General Manager

- Approve withdrawal/recall procedures
- Provide necessary resources

Marketing Center

- Execute customer recall engagement procedures
- Arranging transportation of recalled products

HACCP Team

- Evaluate product quality
- Analyze and correct the causes of non-conformity
- Establish preventive measures

Key performance indicators

First-time qualification rate of the product

99.6 %

Food safety incidents

0 cases

Product recall/retract

0 pieces

Effective rate of critical control point (CCP)

monitoring **100** %

Responsible Marketing

The Company has established the Product Labeling and Traceability Management Standards, which clearly defines the types of product labels, usage methods, and management responsibilities. At each production stage, we meticulously record product and service information, including the product name, production date, batch number, quantity, and operators, to enable traceability of product quality when necessary.

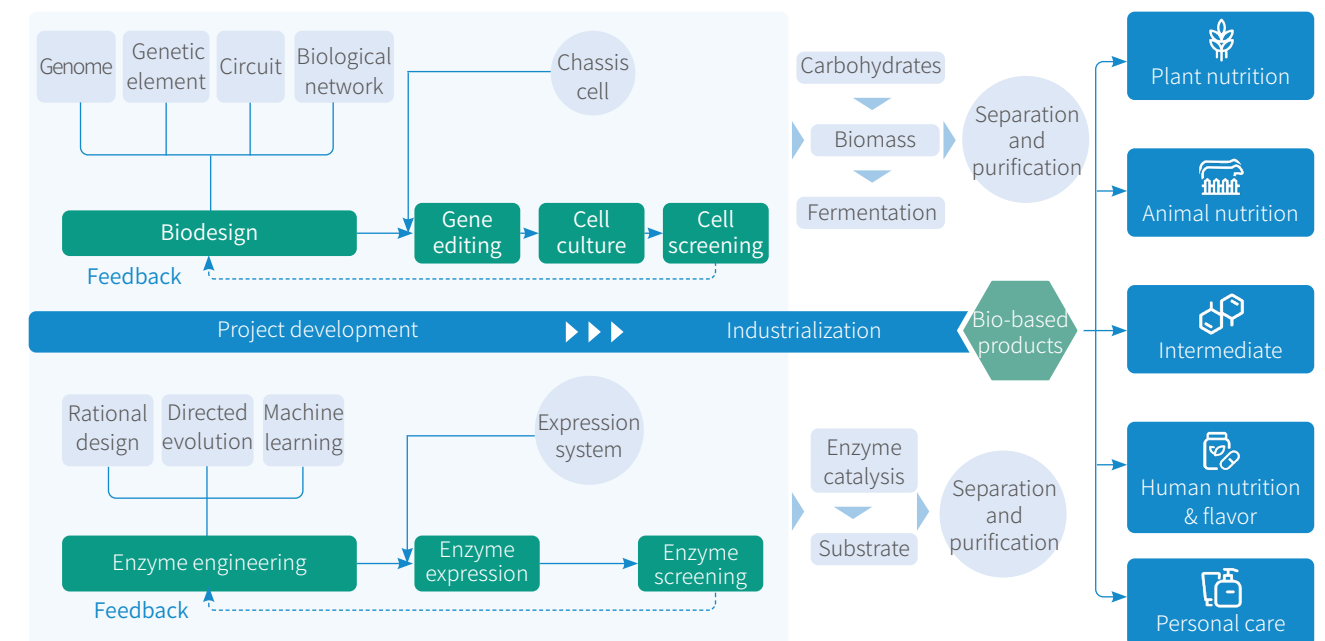
In addition, we manage the labeling of our products and services in detail to ensure that the labels are clear, consistent, and comply with relevant regulations and standards. The product name and number are printed on all finished packaging to ensure that each bag is numbered for management. The packaging also includes instructions for use, inspection stamps, and halal certification marks.

We conduct regular QA (Quality Assurance) inspection, discuss non-conformities, determine temporary corrective actions and preventive control measures, carry out rolling rectification follow-up, and track the effectiveness of the completion of measures.

Prioritize Sustainable Products

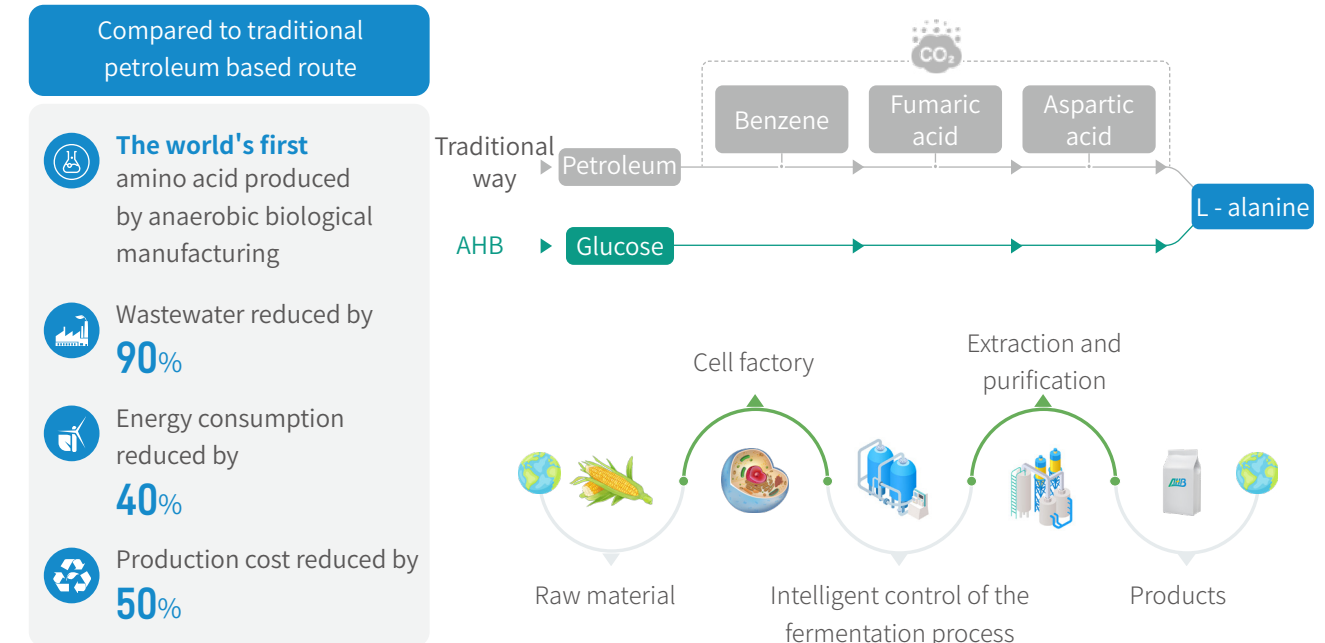
Clean Technology Opportunities

AHB Research Institute focuses on the fermentation process and enzyme process, and gradually promotes the Company's product layout in the field of synthetic biology, forming a cluster of core technologies related to synthetic biology technology.



Fermentation method

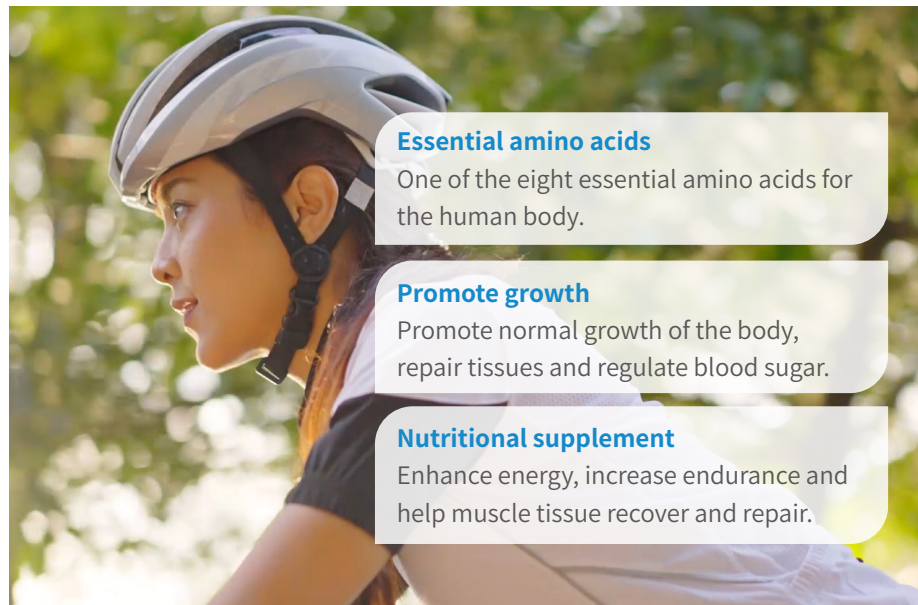
L-alanine: The anaerobic biological manufacturing technology of L-alanine by AHB has overturned the traditional aerobic fermentation production mode of amino acids. Compared with the traditional petroleum route that relies on non-renewable petrochemical raw materials, this technology not only reduces the consumption of fossil resources, but also achieves zero carbon dioxide emission in the anaerobic fermentation process, significantly reducing carbon emissions and environmental pollution.



L-valine: Compared to aerobic fermentation, AHB's anaerobic fermentation technology for L-valine achieves lower energy consumption, lower costs, and higher conversion rates, significantly enhancing production efficiency and economic benefits. At the same time, this technology reduces carbon dioxide emissions, minimizes environmental impact, promotes green manufacturing and sustainable development, bringing dual value of environmental protection and economic benefits to the industry and society.

Compared with the aerobic fermentation route

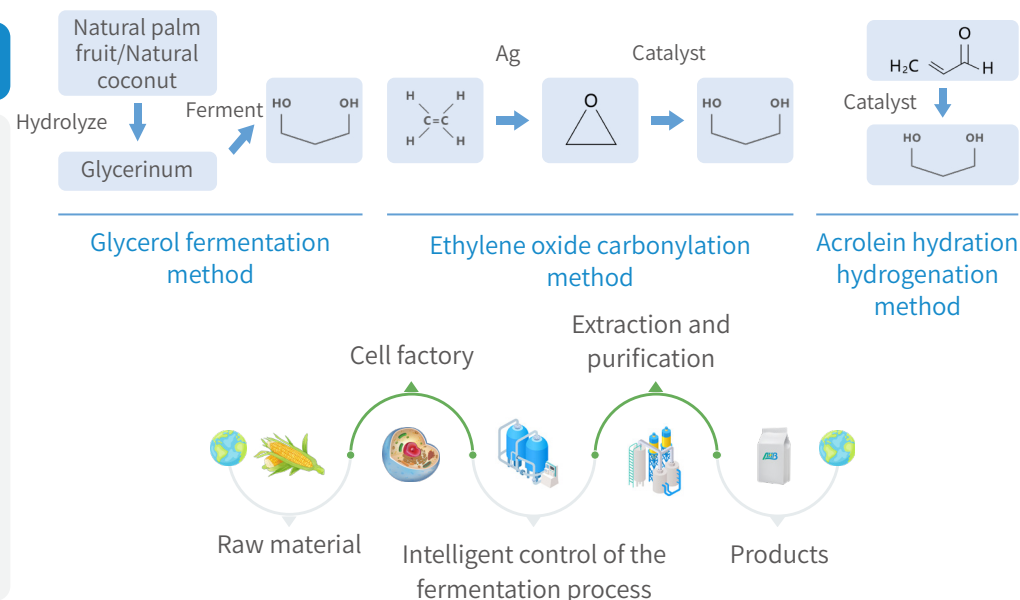
- The conversion rate of sugar and acid further increased
- Energy consumption significantly reduced
- The production cost significantly optimized



1,3-Pentanediol: Traditional chemical methods for synthesizing 1,3-pentanediol (PDO) mainly include the acrolein method and the ethylene oxide method. The former is complex and involves highly toxic, flammable, and explosive materials, while the latter requires high-temperature and high-pressure conditions, making it technically challenging and costly. In contrast, AHB has utilized synthetic biology to construct a microbial cell factory using glucose as the raw material. The fermentation process is mild, safe, and controllable, with a simple and efficient procedure. Additionally, the raw material price is stable, further controlling production costs.

Compared with other routes

- Renewable resources
- Stable raw material price
- Controllable production cost
- Natural organic certification



Enzymatic method

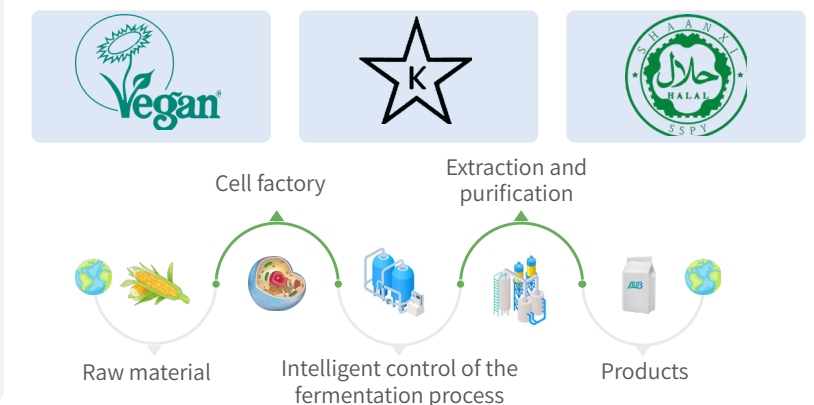
α -Arbutin: The enzymatic production process of α -Arbutin by AHB effectively addresses the common issues in traditional processes, such as low enzyme activity, high extraction and purification costs, and high impurity content in the product. This process offers significant technological advantages. Enzymatic production can achieve stable supply with greater capacity, making it more efficient and safer.

Product advantages

- The content is strictly controlled above 99.9%
- Hydroquinone can meet the undetected standard
- Technological breakthroughs make it less likely to form lumps
- Large production capacity and stable supply

α -arbutin: A highly effective and safe whitening active compound

It has passed the VEGAN, KOSHER and HALAL certifications



In the future, we will continue to optimize production paths in the following areas to reduce environmental pollution, improve resource efficiency and reduce carbon emissions:

Clean fuel substitution

- Continue to optimize the biogas recovery device of sewage station, replace the traditional coal-fired boiler with biogas boiler, and effectively reduce greenhouse gas emissions
- Optimize the pipeline design to realize the full recycling of waste heat and achieve energy saving and emission reduction

Energy optimization

- Optimize the material temperature control process, use preheated materials to reduce steam use, and realize energy saving
- Optimize the air-condition temperature and humidity control in the production workshop, eliminate backward equipment, and improve energy efficiency
- We will increase the proportion of electricity generated from biomass and photovoltaic energy

Process optimization

- Continuous chromatography process is adopted to reduce energy consumption
- High and low differential speed circulating fluidized bed boiler combustion technology is adopted

Water recycling

- The wastewater treatment plant is further treated to realize the recycling of water resources to the production system and reduce the cost of production water
- Optimize the production process, adopt the "Zero chemicals" scheme, and use circulating water as the fermentation formula water, which greatly reduces the frequency of shutdown cleaning of the circulating water station and the amount of wastewater discharge
- The condensate produced by the evaporator is recovered by the recovery pump and used in other available processes to achieve water saving

Product Carbon Footprint

In 2024, AHB adhered to the scientific carbon reduction path of "Exploring the bottom, Identifying potential, Implementing emission reductions, and Green transformation," continuously advancing the carbon footprint calculation and assessment of core products, conducting carbon footprint calculations for key products such as L-valine and β -alanine, scientifically quantifying their lifecycle carbon impacts to precisely align with the coordinates of green development. At the same time, the Company will continue this strategic mindset, gradually promoting the construction of a comprehensive product carbon footprint verification system, deepening low-carbon management practices, and continuously strengthening the environmental governance foundation for sustainable development under the ESG framework.

Case | AHB won the BASF Product Carbon Footprint Pioneer Award

AHB was invited by BASF to attend the China Supplier Conference on the theme of "Sustainable Procurement" and won the Product Carbon Footprint Pioneer Award, which recognizes AHB's outstanding contribution to product carbon footprint management and sustainable development.



Promote Research and Innovation

R&D System

AHB-Research Institute focuses on market demand, grounded in independent research and open innovation, developing cutting-edge synthetic biology technologies. We have established several high-level research platforms, including independent R&D platform, central research institute, strategic investment cooperation, joint laboratories with major institutes and universities, and academician postdoctoral workstations. The institute's R&D team provides comprehensive support in areas such as strain construction, technology scaling, and innovative management, laying a solid foundation for product innovation and sustainable development.

In 2024, AHB built a complete synthetic biological industry chain from design to industrialization, and the research institute and four bases jointly built a global innovation ecology.

The Company places great emphasis on the standardization and systematization of R&D management. We have issued documents such as the Management Standards for Technological Innovation Achievements of the Research Institute, Project Management Standards, R&D Control Management Standards, and Patent Incentive Measures. These documents comprehensively cover the entire process from project research, pilot-scale planning and experimentation, to intermediate-scale planning and experimentation, and project summary. Through standardized R&D processes and systematic management, the Company has effectively improved R&D efficiency and capability in converting research results into practical applications. At the same time, we encourage innovation, laying a solid technical foundation for sustainable development.

R&D Cooperation

We rely on the Hefei Institute of Synthetic Biology Innovation and have established long-term cooperative relationships with research institutions such as Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, Institute of Microbiology, Chinese Academy of Sciences, Beijing University of Chemical Technology, and Zhejiang University of Technology. Through these collaborations, we gather outstanding talents in the field of synthetic biology and related downstream applications, forming an open R&D ecosystem. This promotes interdisciplinary cooperation and knowledge sharing, driving innovative development.

We value close communication with the industry and maintain close collaboration with corporate partners to better enhance our understanding of market demands and industry trends, integrating them into our research and product development processes. We are committed to pursuing technological and product innovation, developing promising biotech products and solutions, and making positive contributions to human health and environmental protection.



Institute cooperation: Continuous connection with well-known institutes at home and abroad, such as Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, Institute of Microbiology, Chinese Academy of Sciences, to complete the development of a number of projects, realizing a great leap from science and technology to economic benefits and social value.

Enterprise cooperation: Jointly promote the innovation and improvement of each link of synthetic biology industry chain with excellent enterprises in the industry.

University-enterprise cooperation: Accelerate the transformation of scientific and technological achievements and personnel training with well-known universities, such as building an academician workstation with Academician Zheng Yuguo of Zhejiang University of Technology and building "AHB Excellence Class" with Hefei University.

Customer cooperation: Create multiple innovative projects for core customers, and continue to promote product innovation, industrial upgrading and cooperation upgrading.

Case | Hefei Synthetic Biology Innovation Research Institute was established

In March 2024, the Hefei Synthetic Biology Innovation Research Institute was established, marking the official launch of the innovative consortium jointly built by Changfeng County Government, AHB, and the team led by Academician Zheng Yuguo. The project, through platform-based management and corporate operations, aims to integrate resources and promote the application and dissemination of synthetic biology technology in fields such as medicine, chemicals, and food, exploring new models of cooperation among government, universities, and enterprises.





Case

Established a joint Laboratory for Innovation of Sustainable Personal Care Raw Materials in cooperation with Shanghai Institute of Technology

In July 2024, AHB and Shanghai Institute of Technology established a joint Laboratory for Innovation of Sustainable Personal Care Raw Material. Leveraging both strengths in cosmetic research and synthetic biology, we aimed to jointly promote the innovation of Chinese-characteristic ingredients. The laboratory will serve as a platform for deep integration of industry, academia, and research, focusing on technological innovation, product evaluation, and talent cultivation. It will support the continuous advancement of personal care ingredient development, formula design, and safety efficacy assessment.



Case

Establish a joint Laboratory for Bio-based Chemical Fiber with Donghua University

In July 2024, AHB and Donghua University jointly established the Joint Laboratory for Bio-based Chemical Fibers, aiming to advance cutting-edge research in the PDO-PTT industrial chain and bio-based fiber technology, thereby facilitating the green transformation of the textile industry. Both sides will collaborate on developing new materials such as 1,3-propanediol (PDO) and bio-based monomers, connecting the upstream and downstream segments of the slicing, spinning, dyeing, finishing, garment production, and end-user markets. This initiative seeks to build a comprehensive strategic alliance from raw materials to polymers, fabrics, and brand applications, accelerating the marketization of the PDO-PTT industrial chain.



Case

Led the establishment of Bio-based Polyester Textile Industry Alliance

In September 2024, AHB led the establishment of the world's first Bio-based Polyester Textile Industry Alliance (hereinafter referred to as the "Alliance"). The aim is to break the overseas monopoly on 1,3-PDO and promote the domestication of the PDO-PTT industrial chain. Through an innovative consortium of industry, academia, research, and application, the Alliance accelerates the domestic substitution of core materials, supporting the high-quality development of the bio-based polyester textile industry.



Case

Established R&D Institute of Plant Nutrition Application with BASF

In May 2024, AHB and BASF's Agricultural Solutions Business Unit signed a strategic cooperation agreement. Leveraging our strengths in synthetic biology and agricultural innovation, we will jointly develop plant nutrition products to promote sustainable agricultural development in China. We will establish R&D Institute of Plant Nutrition Application, focusing on bio-stimulants to enhance crop yield, quality, and stress resistance. Through digital agriculture applications, we aim to provide growers with sustainable value-added solutions, supporting the green transformation of agriculture.



Technological Innovation

In 2024, AHB achieved another breakthrough in synthetic biology, not only solidifying our leading position in L-alanine technology but also successfully expanding the research and application of new technologies such as L-malic acid, succinic acid, and 1,3-propanediol. Through genome design, metabolic pathway optimization, and cell factory construction, we have realized the green production of diverse chemical products, significantly reducing carbon emissions. These technologies have not only driven innovation in industrial strains but also provided sustainable solutions for food, pharmaceuticals, and materials sectors, contributing to global green transformation. In the future, we will continue to increase R&D investment, maintain technological leadership, and continuously drive industry progress through innovation.

AHB AH Synova® 1,3-propanediol won the New Leaf Award-Most Commercial Value Award at the International Bio-based Industry Conference

In May 2024, AHB AH Synova® 1,3-propanediol won the New Leaf Award-Most Commercial Value Award for international leading technology level, green and low-carbon properties and broad application prospects.



AHB Bioblanca® 1,3-propanediol won the Ringier Technology Award

In July 2024, AHB won the 2024 Ringier Technology Innovation Award with high performance and natural source of Bioblanca® 1,3-propanediol from many participating raw materials.



AHB BIOBLANCA®PDO won the INPD International Innovation Raw Material Award

In October 2024, AHB BIOBLANCA®PDO won the INPD International Innovative Raw Material Award at the 2024 International Cosmetics Innovation Pia Competition.



AHB BIOBLANCA®1,3-PDO won the "China Good Raw Material Award"

In December 2024, AHB BIOBLANCA®1,3-PDO stood out among more than 200 participating raw materials and won the "China Good Raw Material Award" in the "Amazing Chinese Raw Materials" selection contest of Chunlei Agency.



L-methionine project successfully passed the scientific and technological achievement appraisal of China National Light Industry Council

In July 2024, the biotechnological L-methionine project implemented by Hengyu Bio, a joint venture subsidiary of AHB, successfully passed the scientific and technological achievement appraisal organized by the China National Light Industry Council. L-methionine, an essential amino acid for both humans and animals, is widely used in the pharmaceutical, food, and feed industries. This technology not only reduces production costs but also aligns with green manufacturing principles.



Science and Technology Ethics

In the process of technology research and application, AHB strictly follows the principles of science and technology ethics, and effectively controls the risks of science and technology ethics through ethical review and system guarantee, so as to ensure that the application of technology will not have a negative impact on society, environment and human beings.

Our technical approach is clearly defined with the core principles of "Replacing non-renewable petrochemical resources with renewable biological resources" and "Replacing energy-and-pollution-intensive petrochemical processes with green and clean biological manufacturing techniques." Guided by low-carbon goals, we aim to reduce environmental risks associated with technology application at the source. During experiments, we continuously strengthen operational standards, restrict the acquisition and use of hazardous gene sequences, ensuring that technologies such as gene synthesis and gene editing are not misused for other purposes. Additionally, we establish the AHB Business Partner Code of Conduct to require partners to adhere to ethical standards and set up an audit committee to regularly review compliance. During the reporting period, the Company did not identify any significant scientific and ethical risks, nor were there any incidents of regulatory penalties due to violations of scientific and ethical principles.

Intellectual Property Protection

AHB continuously strengthens intellectual property management, fully protecting the Company's innovative achievements through the Intellectual Property Center and safeguarding legitimate rights and interests. The Intellectual Property Center collaborates closely with the Research Institute, production bases, and sales departments to conduct training on patent layout and infringement risk identification. It has also established an intellectual property learning system to provide guidance on patent application, trademark registration, and relevant laws and regulations, enhancing the employees' overall intellectual property awareness and ensuring compliant operations. The Company has obtained the *GB/T 29490-2023 Intellectual Property Compliance Management System Certification*.



Class	Intellectual Property Management Initiatives
Patent application and trademark use	<ul style="list-style-type: none"> Set KPIs, actively apply for patents, analyze and apply patent information Carry out trademark related work to serve market demand and ensure the effective application of trademarks
Technical route protection	<ul style="list-style-type: none"> Focus on planning technology routes in the research and development process, and take intellectual property protection measures Ask relevant personnel to sign a confidentiality agreement Technical retrieval and FTO analysis are conducted to assess the risk and probability of infringement to ensure that subsequent products do not infringe the intellectual property rights of others Promote relevant analysis before and after to reduce intellectual property risks
Risk control	<ul style="list-style-type: none"> Conduct the whole process of intellectual property risk planning to avoid potential risks Purchase patents to hedge and third-party institutions to analyze infringement and other methods to control risk
Control of cooperative R&D	<ul style="list-style-type: none"> In collaboration with universities and academic professors, focus on the risk of duplication of research and development and work with partners to control this risk In the process of collaborative research and development, pay attention to whether there are published articles to balance the need for intellectual property protection and collaborative research
Patent layout	<ul style="list-style-type: none"> Patent layout is carried out throughout the whole operation chain, covering the whole process from research and development of strains to product production



04 Humanistic Care Create a Better Life

Gather Enterprising Talents	69
Foster Collaborative Success with Partners	80
Contribute to Social Welfare	85



Gather Enterprising Talents

Talent is the most valuable resource of AHB. We adhere to people-oriented, learn from the experience and mechanism of world-class enterprises, and combine with the development situation of AHB, to formulate talent introduction and training mechanism.

Protection of Employees' Rights and Interests

In terms of employee rights and interests protection, AHB always adheres to the concept of legal employment, respect for human rights and labor rights, and advocate diversification, inclusiveness and equality, which is integrated into every link of enterprise management.

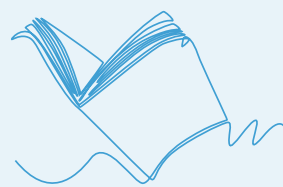
We firmly believe that only by protecting the legitimate rights and interests of employees can we stimulate their creativity and enthusiasm, achieving common development between the Company and our employees. To this end, we have established a comprehensive employee rights protection system and actively foster a diversified and inclusive work environment. We respect individual differences among employees, adhere to reasonable employment practices, and provide equal opportunities for development to every employee. We truly practice the principle of appointing people based on talent, promoting those who are competent, utilizing everyone's abilities to the fullest, and ensuring that talents are fully utilized.

Employment in accordance with the law

AHB strictly adheres to the *Labor Law of the People's Republic of China*, signing labor contracts with all employees and implementing a full-staff contractual management system. We firmly oppose employment discrimination, prohibit the hiring of child workers, and ensure that all employees enjoy equal rights in recruitment, treatment, and promotion, free from factors such as ethnicity, race, nationality, gender, religion, age, sexual orientation, political affiliation, or marital status. The Company upholds the principle of setting positions based on tasks and selecting people according to these positions, providing employees with equal and fair opportunities for job rotation and promotion.

◆◆ Institutional system

- Entry, Departure and Labor Contract Signing Norms
- Working Hours Management Norms
- Prohibition of Child Labor
- Recruitment Management Norms
- Anti-discrimination Policy
- Layoff Management Norms
- Professional Qualification Certification Management Norms
- Salary Management Norms
- Women's Rights and Labor Protection Management Norms



◆◆ Practical measures

Internal recruitment



Internal recommendations: Encourage internal employees to actively recommend candidates based on job recruitment needs, broaden recruitment channels, and reward successful recommendations with varying amounts of compensation according to the rank of the hired individual. The principle of "relative avoidance" is also applied, meaning that recommenders cannot participate in interviews, and department heads must not have a direct hierarchical relationship with the recommended individuals, ensuring fair and just hiring practices.

Social recruitment: Introduce senior talents through diversified forms such as online recruitment information, job fairs and headhunting recommendations.

Campus recruitment: Special campus recruitment is carried out from August each year to attract outstanding graduates from all kinds of majors to join the Company and inject new strength into the sustainable development of the Company.



External recruitment

Awards

AHB won the title of 2024 Anhui Annual Extraordinary Employer for outstanding performance in talent training, talent strategic planning and employer brand building.



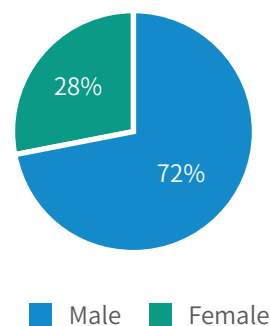
Reasonable employment

AHB adheres to reasonable employment practices. Approved and registered by relevant government departments, the Company implements standard working hours system, comprehensive working hours system, and flexible working hours system, eliminating employee fatigue and overwork. Office staff operate under the standard working hours system. Due to production needs, departments such as production, engineering, safety, and quality adopt the comprehensive working hours system, while marketing, procurement, and senior management use the flexible working hours system.

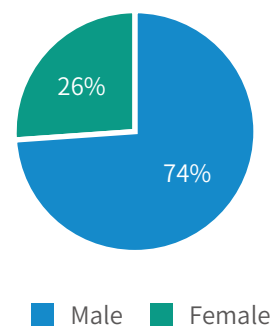
Diversity, inclusion and equality

In the process of promoting sustainable corporate development, we always regard diversification as our core strategy. The Company actively builds an equal and inclusive work environment, with a particular focus on supporting women's career development, eliminating age discrimination, and providing fair growth opportunities for employees from different backgrounds. As of the end of the reporting period, the total number of Company employees reached 2,191, with 1,413 new hires during the year. By fostering a diverse and integrated team, we are committed to stimulating innovation and driving continuous organizational progress.

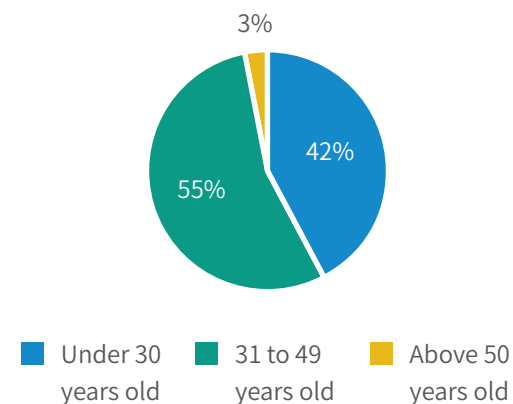
Gender structure of employees



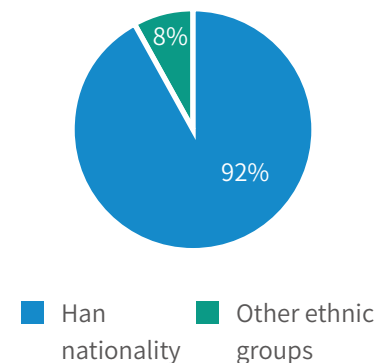
Gender structure of new employees



Age structure of employees



Ethnic structure of employees



The Company resolutely eliminates age discrimination. While introducing young talents, the Company does not set a threshold of 30+ years old. By the end of 2024, the proportion of employees over 30 years old in the Company reached 58%.

AHB insists on setting up positions based on specific needs and selecting people for these positions, effectively promoting employment in the region. We strictly adhere to regulations such as the Anti-Discrimination Policy and the Management Standards for Women's Rights and Labor Protection, firmly eliminating discrimination and unfairness of any kind. We fully respect employees' ethnic customs and actively foster a work environment that is "diverse, equal, and inclusive." As of the end of the reporting period, among full-time employees, there were 170 employees from ethnic minorities, accounting for 8%, involving three ethnic groups: Manchu, Mongolian, and Hui nationality.

Employee welfare

In terms of employee benefits, AHB has always been at the forefront of the industry. In addition to the statutory holidays prescribed by the state, we also offer a variety of paid leave options, including annual leave, marriage leave, sick leave, family visitation leave, childcare leave, bereavement leave, and personal leave. We pay special attention to the rights of female employees, extending the statutory maternity leave by an additional 60 days and providing male employees with 30 days of paternity care leave, supporting them through important moments in family life. Furthermore, our Employee Handbook clearly outlines the childcare leave policy, granting male employees the same childcare benefits as female employees. Before their child turns six years old, employees can enjoy 10 days of childcare leave each year, helping them better balance work and family life. Meanwhile, to support employees working abroad, we offer additional family visit leave.

These measures not only enhance employees' happiness and sense of belonging but also boost their loyalty and productivity. In 2024, a total of 99 employees were entitled to parental leave, with 72 choosing to take it, accounting for 73%. The re-employment rate for those who took leave was 100%, fully demonstrating the employees' trust and recognition of the Company.

The Company handles social security and housing provident fund for employees in accordance with national regulations, and provides free working meals, health check-ups, accommodation, holiday and birthday benefits, high temperature subsidies, afternoon tea and other benefits. The Company is equipped with a gym and rest area to relax the body and mind after work.



Gym



Rest area



Staff dormitory

Human and labour rights management

In 2024, AHB strictly adhered to the relevant provisions of the *Labor Law of the People's Republic of China*, further refining internal management systems such as the Entry, Departure and Labor Contract Signing Norms, Working Hours Management Norms, Training Management Norms, Prohibition of Child Labor, Recruitment Management Norms, Anti-discrimination Policy, Layoff Management Norms, Professional Qualification Certification Management Norms, Salary Management Norms, Women's Rights and Labor, Protection Management Norms. The Company ensured that all these systems were rigorously enforced to fully protect the legitimate rights and interests of employees.

Implementation measures

No forced labor

We firmly reject any form of forced labor, and prohibit the collection of deposits or the seizure of identity documents when employees enter the Company.

No workplace discrimination or harassment

AHB respects the human rights of all employees and other stakeholders, and does not tolerate any form of discrimination, harassment, or retaliation in the workplace. In recruitment, compensation, training, promotion, termination, and retirement, it is strictly prohibited to discriminate based on ethnicity, social status, language, religious beliefs, physical disability, gender, sexual orientation, union membership, political affiliation, or age.

Human rights due diligence

In response to the potential human rights impact of business operations, we have added a labor and human rights dimension to our Supplier Due Diligence Form to avoid significant risks in the supply chain. During the reporting period, we did not identify any operational sites or suppliers with significant risk of forced or compulsory labor.

Security and human rights training

Security services for AHB are provided by third parties, and 100% of security personnel have received formal training in human rights policies or specific procedures and security applications.

Key performance indicators

In 2024, the Company's labor contract signing rate is **100%**, and the coverage rate of social insurance payable is **100%**.

Democratic management

In 2024, the AHB Trade Union Committee, based on the AHB Union Grassroots Organization Election Work Regulations, completed the election and appointment of union members and the union chairman. At the same time, the Company revised and implemented the AHB Enterprise Collective Negotiation System, the AHB Democratic Management System, and the Employee Representative and Collective Negotiation Dialogue Mechanism Document. These measures fully promoted democratic spirit and respected employee opinions. Through active communication and dialogue, the union effectively addressed employees' practical issues and reasonable demands, further promoting the harmony and sustainable development of the Company.

◆◆ Two-way communication mechanism for democratic dialogue:

The management seeks for opinions of employees, listens to public opinion, and understands the situation, covering:



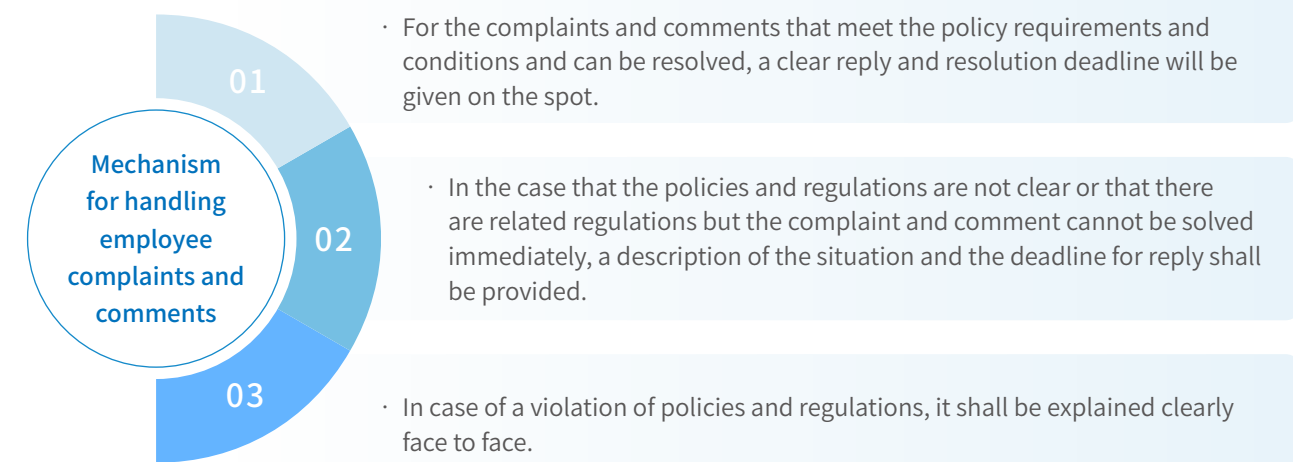
Employees truthfully report issues and provide suggestions to the management, covering:



- In-depth solicitation of opinions and suggestions from cadres and employees on important decisions, important matters and sensitive issues
- Report on key work and hot issues concerned by attitude of leaders and colleagues cadres and employees
- Communication on major work arrangements of superiors in a timely manner, and conduction of key discussions on key positions, key personnel, key issues and key matters

- Opinions and suggestions on the work of the Company
- Views and opinions on the personal working style, working mode, working method and working attitude of leaders and colleagues
- Important issues
- Practical difficulties in work and life that need to be resolved with assistance
- Report on violations of law and discipline

◆◆ Mechanism for handling employee complaints and comments:



Training and Talent Development

We firmly believe that talent is the core driving force for corporate development. To help every employee achieve their career aspirations, we have established a comprehensive training system, a scientific performance evaluation mechanism, and clear career advancement pathways, dedicated to providing all-round growth support for our employees. We continuously optimize our training content, aligning with the actual needs and development goals of our employees, offering diverse learning opportunities to enhance professional skills and overall competence. At the same time, through fair and transparent performance evaluations, we guide employees in their efforts and closely link evaluation results with promotions and salary adjustments, ensuring that every employee's efforts are rewarded accordingly. Additionally, we have designed smooth career development paths for our employees, providing suitable growth directions whether they focus on specialized expertise or management advancement.

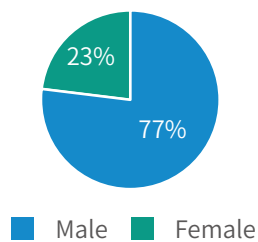
Staff training

In terms of staff training, the Company actively builds a training management system, broadens the development path, and formulates the Training Management Standards. Through internal training and external training, the Company improves the skills and professional knowledge level of employees, optimizes the growth and development system of employees, and constantly empowers the Company's talent resource reserve.

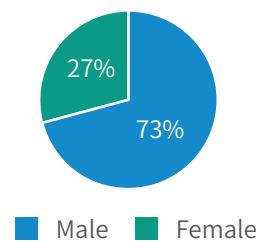
In 2024, the Company provided training for a total of 2,152 employees, the proportion of trained employees among all the staff reached 98%. The total duration of training reached 83,222 hours, and the average duration of training per employee reached 39 hours.

By gender

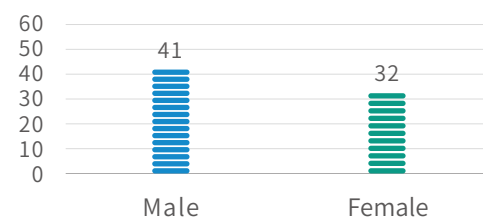
Total duration of training



Total number of trained employees

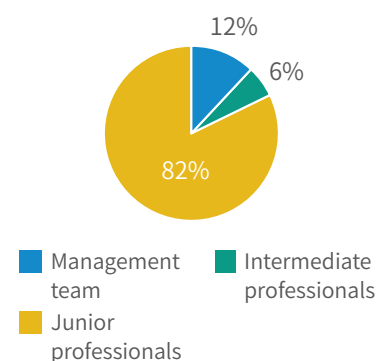


Per capita training hours

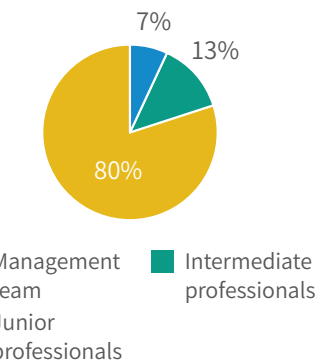


By position

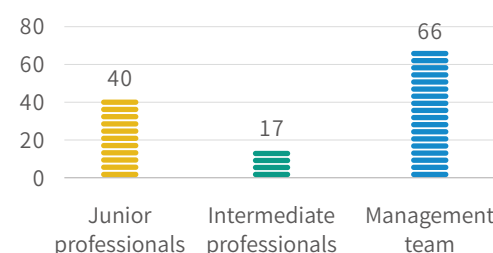
Total duration of training



Total number of trained employees



Per capita training hours



We established the AHB Talent Development Center, focusing on enhancing internal professional capabilities. By integrating case studies with theoretical practice, we have built an educational platform that combines research and study. This place is not only a hub for knowledge dissemination but also an incubator for talent. We explore the most cutting-edge technologies, absorb the most authoritative knowledge, and nurture the most outstanding talents, providing employees with comprehensive learning and development opportunities.

AHB Talent Development Center comprehensively covers business talents, production talents, professional talents and management talents, characterized by high standards, internationalization, AI technology application and professionalism, constantly innovating talent cultivation mechanisms. At the same time, we closely integrate talent cultivation with performance evaluation to ensure that employees' growth is in line with the Company's development goals.

AHB Talent Development Center

Cutting-edge research and exploration in the synthetic biology industry

Advanced technology

Advanced knowledge theory consolidation and refinement in the synthetic biology industry

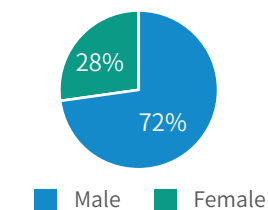
Authoritative knowledge

Cultivation of various kinds of excellent talents in synthetic biology industry

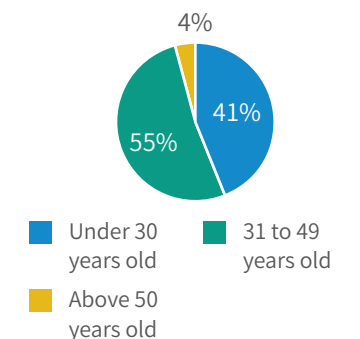
Excellent talents

The Company regularly conducts performance and career development assessment for employees to motivate them to give full play to their potential, improve work efficiency and quality, promote the cooperation and efficiency of the whole team, and provide better training and development opportunities for employees. During the reporting period, a total of 2,033 staff received performance and career development assessment, the specific data is as follows:

By gender



By age



Career development

In terms of career development, at AHB, we offer a diversified career path for our employees, including the "Stellar Plan" program for new graduates and a dual-track talent development system covering all staff. We are committed to building clear career ladders for every employee, helping them realize their self-worth in professional fields or management positions.

The Stellar Plan: A seamless transition from campus to the workplace

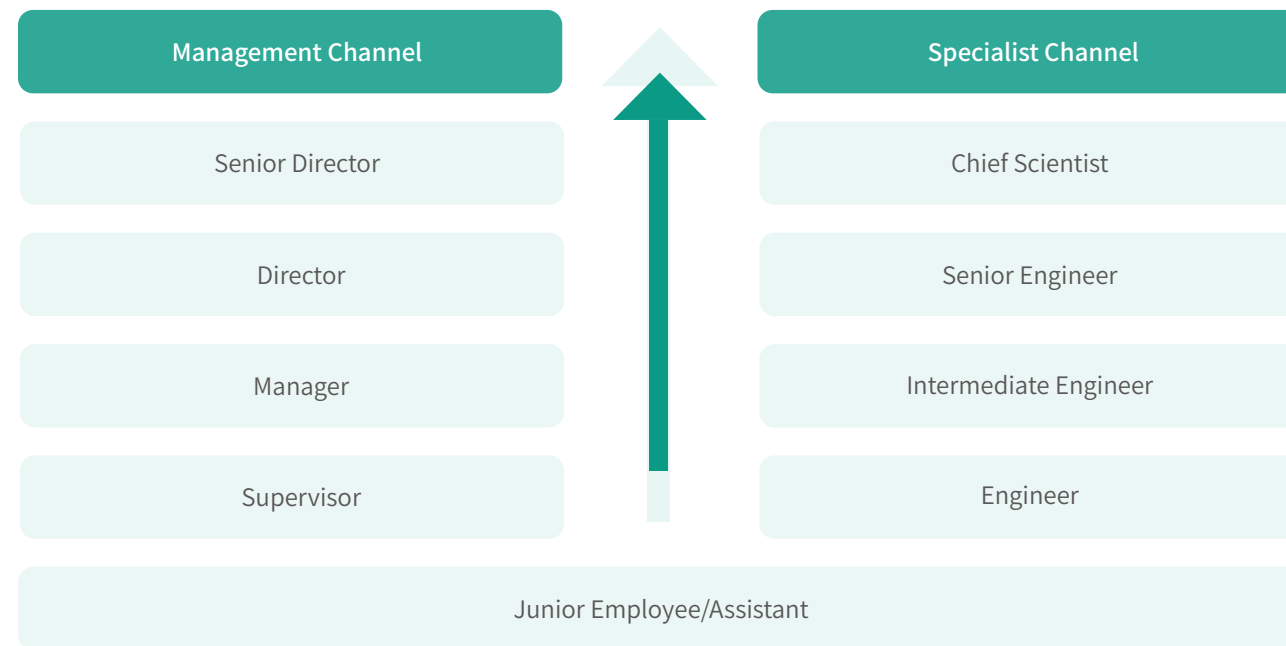
To meet the Company's mid-to-long-term strategic needs for talent, and to build a high-quality team through talent ladder construction, AHB has launched the "Stellar Plan" campus recruitment and training plan. This plan integrates theoretical knowledge with practical activities, specifically comprising six chapters: Preparatory Warm-up, First impression of AHB, Integration, Growth & leaps, Internal dual selection, and Competent development. Through systematic training and cultivation, it aims to help newly hired college graduates quickly establish a sense of belonging, enhance their professional competence, and successfully complete the role transformation from students to corporate employees.



Dual-track development: a parallel growth path of specialization and management

AHB always regards talent cultivation as the top priority, formulating a five-year development plan and implementing the "4221" talent strategy. We have established a dual-channel talent development path and qualification system, providing employees with two career development directions: management channel and specialist channel. This meets the Company's human resource needs for development while also creating a clear growth ladder for employees. Whether it is delving deeper into specialized fields or advancing to management positions, employees can find suitable development paths at AHB, realizing their career aspirations.

◆◆ Dual-channel talent development path



Key performance indicators

Cultivation

Annual training expenditure

4.8 million RMB

Total number of trainees

2,152 persons

Average duration of training received by each employee

39 hours

Career development

Number of employees regularly assessed on performance and career development

2,033 persons

Occupational Health

AHB has always made every effort to ensure the physical and mental health of all employees as well as the safety of life and property. We have set up the Health and Safety Committee, which is composed of elected employee representatives to coordinate and communicate occupational health and safety affairs and ensure the effective operation of the occupational health and safety management system.

Management structure

Health and Safety Committee

The main responsibilities of the Health and Safety Committee include participating in various activities related to the prevention of work-related accidents, identifying various health and safety issues, collecting employees' opinions, making corresponding improvement suggestions, implementing relevant measures to solve problems, and promoting dialogue between labor and management.

EHS Center

In 2024, the Company established EHS Center (Environmental Health and Safety Center) to further strengthen the systematic and professional management of related employees' health and safety work, create a safer and healthier working environment for employees, and promote the sustainable development of the enterprise.

Institutional system and certification

The Company strictly adheres to laws and regulations such as the *People's Republic of China Law on Work Safety*, earnestly managing safety issues. Based on the base as a unit, we have established standards like the Accident Management System, Fire Safety Management System, and Chemical Management Regulations to ensure worker operational safety and chemical safety management. The four production bases of AHB—Changfeng, Bayannur, Qinhuangdao, and Chifeng—have all obtained *ISO 45001 Certification* for their occupational health and safety management systems.

Occupational health management measures

Employee health management

The Company values the physical and mental health of employees. The Safety and Environmental Department has been established at the production base to manage employee occupational health. This department is responsible for formulating occupational health policies and establishing standards for labor protection supplies, addressing health and safety issues encountered by employees during work, such as physiological and psychological problems caused by hazardous equipment, working methods, and harmful substances. It effectively controls occupational health and safety risks related to production and operations, continuously improving occupational health and safety performance.

Occupational health examinations and psychological guidance

The Company fully considers occupational hazards during production and operation processes. We conduct health check-ups for employees in five major categories of occupational health examinations—dust, high temperature, noise, coal dust, welding fumes, industrial frequency electric fields, hydrogen sulfide, methanol, ammonia, arsenic, phosphorus and its inorganic compounds, lead and its inorganic compounds, manganese and its inorganic compounds, ultraviolet light, acetic anhydride mist, nitrogen oxides, hydroquinone, and other types (such as special operations)—before they start work and during their employment. The Company also provides free health check-ups to employees who have been with the Company for more than six months. Additionally, the Company has established a channel for psychological guidance and organized mental health training sessions, such as "Caring for Women's Mental Health," to help employees manage psychological stress.

Production safety management

The Company strictly implements the responsibility system in the process of production operation, carries out fire drills and training, regularly checks and ensures that safety facilities and equipment are perfect and effective, works according to regulations, strengthens staff training and drills, so as to reduce accident risks.

Safety inspections and accident handling

The Company has always adhered to safe production and the elimination of work-related accidents. It has established a production safety management mechanism that includes safety awareness training, safety warning reminders and measure optimization, emergency response to safety incidents, and management and penalties for accident responsibilities. Regular safety inspections are conducted. In 2024, the Company held 44 safety meetings and carried out 95 comprehensive safety inspections. By promptly addressing safety hazards identified during these inspections, the hazard rectification completion rate reached 100%, effectively preventing potential risks before they occur.

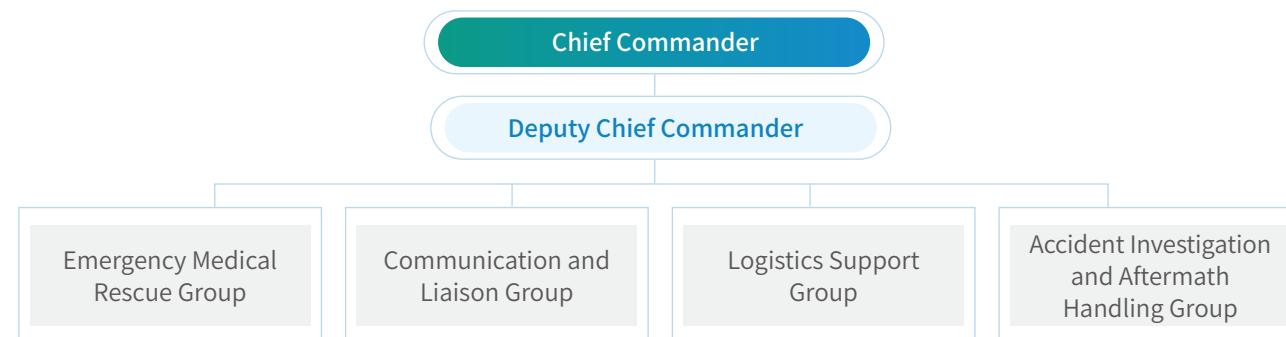
Safety and occupational health training

According to the EHS Training and Education Implementation Plan, each base regularly holds safety production meetings and conducts major hazard source safety training. By establishing Standard Operating Procedures (SOP) and reinforcing employee safety education through training, the next focus will be on enhancing safety in high-altitude work, work in confined spaces, and hot work. This includes cultivating professional personnel for operation management, providing operational management systems, training materials, and specialized audit forms.

Emergency safety management

The Company has established the Production Safety Accident Emergency Plan, aimed at enhancing rapid response capabilities to production safety incidents. This plan seeks to promptly implement effective measures before, during, and after an accident occurs, controlling the occurrence and development of emergencies and minimizing the harm to personnel, the environment, and property as much as possible. The Company has set up an Accident Emergency Rescue Command Center, which comprises four teams: the Emergency Medical Rescue Group, Communication and Liaison Group, Logistics Support Group, Accident Investigation and Aftermath Handling Group. The Command Center is headed by a Chief Commander and Deputy Chief Commander, with all employees serving as members of the rescue organization.

◆◆ Emergency organization system:



Key performance indicators

Class	Performance	Amount
Security management	Safety investment	12.77 million RMB
	The average duration of safety training received by on-the-job employees	27.3 hours
Occupational safety	Occupational health examination coverage	100%
Work-related injuries and accidents	The number of deaths due to work-related causes	0

Foster Collaborative Success with Partners

Empower Customer Value Creation

AHB continues to prioritize customer satisfaction as one of our core goals. We understand that the trust and recognition of our customers are the driving force behind our progress. Therefore, we conduct annual customer satisfaction survey each year to gain deep insights into customer needs, expectations, and genuine feedback on product quality and service. We regularly review and update the Customer Satisfaction Survey Management Standards to ensure that the survey process and methods remain relevant and aligned with market and customer demand changes, truly putting customers at the center.

In response to customer feedback and complaints, we have established a comprehensive Customer Complaint Management Standard, outlining a standardized process from receipt to resolution. When a customer raises a complaint, the system automatically initiates an online handling procedure. The Quality Center and relevant departments promptly conduct issue analysis, examining multiple dimensions including equipment, materials, production processes, environment, and personnel operations to identify causes and develop targeted solutions and preventive measures. We commit to resolving complaints within one month and compile a Customer Complaint Feedback Report afterward, which serves as a critical reference for internal learning and improvement, preventing similar issues from recurring.

To better meet customer needs, we update the customer's goods demand file monthly and apply QC (Quality Control) management techniques to conduct in-depth analysis of quality data during production, continuously optimizing manufacturing processes and standards. At the same time, through QC pillar projects, we focus on tackling technical challenges, gaining a deep understanding of actual application scenarios and potential needs of our customers, ensuring that our products and services always align with customer expectations. In 2024, by implementing these measures, we further optimized our customer service system, improved product quality and service levels, striving to make every customer feel the dedication and professionalism of AHB. In the future, we will continue to prioritize customer satisfaction, continuously improve, and work together with our customers to create greater value.

AHB won the title of "2023 Strategic Partner AAAAA Supplier" from Muyuan Group

Muyuan Group is a long-term customer of AHB. In March 2024, AHB was rated as "2023 Strategic Partner AAAAA Supplier" by Muyuan Group. The good relationship between the two sides in long-term interaction and deep cooperation was once again highlighted, reflecting Muyuan Group's high recognition of AHB's innovation ability, product quality and service quality.



Collaborate with Suppliers to Create the future

Supply chain management is an important link for enterprises to achieve steady operation and sustainable development. AHB always adheres to the concept of sustainable development, promises to purchase products and services in a responsible way, and is always committed to achieving sustainable development together with suppliers.

Supply chain management

◆◆ Management system

AHB has established a comprehensive supply chain management system to identify environmental and social risks in the supply chain. The Company has formed contractual, standardized, and routine management mechanisms for product delivery schedules, quality control, and technical confidentiality. The Company has formulated and revised relevant supply chain management documents, including the AHB Business Partner Code of Conduct, AHB Supplier Management Standards, AHB Procurement Management Standards, and AHB Bidding Management Standards. These documents are based on standards such as quality, business ethics, environment, and human rights, establishing a robust supplier evaluation system and forming a complete procurement framework.

By constantly improving the supplier management standards, AHB encourages and promotes suppliers to practice more responsible purchasing behaviors. At the same time, the Company strengthens the supervision and assessment of suppliers to effectively prevent all kinds of procurement risks and promote the long-term goal of healthy development of the supply chain.

AHB has established a comprehensive supplier admission and evaluation mechanism. We regularly assess supplier performance and set requirements for non-compliant suppliers to rectify or eliminate them. This ensures that suppliers meet qualification standards while also providing opportunities for mutual growth and development with the Company. The assessment results will serve as a critical basis for supplier eligibility reviews, further standardizing supplier behavior and achieving closed-loop management of suppliers.

◆◆ Practical measures



Supplier access

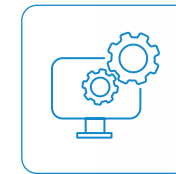
The Company formulates relevant guidelines and explanatory documents for supplier selection and supplier behavior standards. It manages new suppliers according to institutional documents such as the Supplier Basic Information Survey Form, Supplier Due Diligence Form, and Supplier On-site Audit Form. The due diligence process covers various aspects of relevant qualification materials, including business licenses, production permits, system certificates, third-party inspection reports, and REACH registration information, as well as elements of business ethics, environmental, labor, and human rights standards. This ensures that suppliers meet procurement requirements through a comprehensive evaluation system.



Supplier evaluation

AHB adopts a tiered management approach, establishing a dedicated supplier review team to evaluate all Class A and B raw material suppliers or other category suppliers such as key equipment and spare parts that have been cooperating for over a year each year. The evaluation criteria include quality, service, social responsibility, etc., and finally categorizes suppliers based on their total scores.

We categorize suppliers and material grades based on the results of their annual reviews to determine the frequency of annual audits for raw material suppliers. The supplier review team can refer to the audit frequency table to jointly evaluate and formulate the "Annual Supplier Audit Plan." When a supplier exhibits abnormal behavior, after communication and confirmation by the supplier review team, a temporary special audit may be conducted to help the Company respond quickly, adjust procurement strategies, and optimize the supply chain structure.



Supplier training

The Company conducts supplier capability building training for Class A and B material suppliers on an irregular basis, covering quality, business ethics, environment, labor, and human rights. We also continuously monitor the subsequent capability building and performance of suppliers, using these as reference dimensions for annual supplier evaluations.

Sustainable supply chain

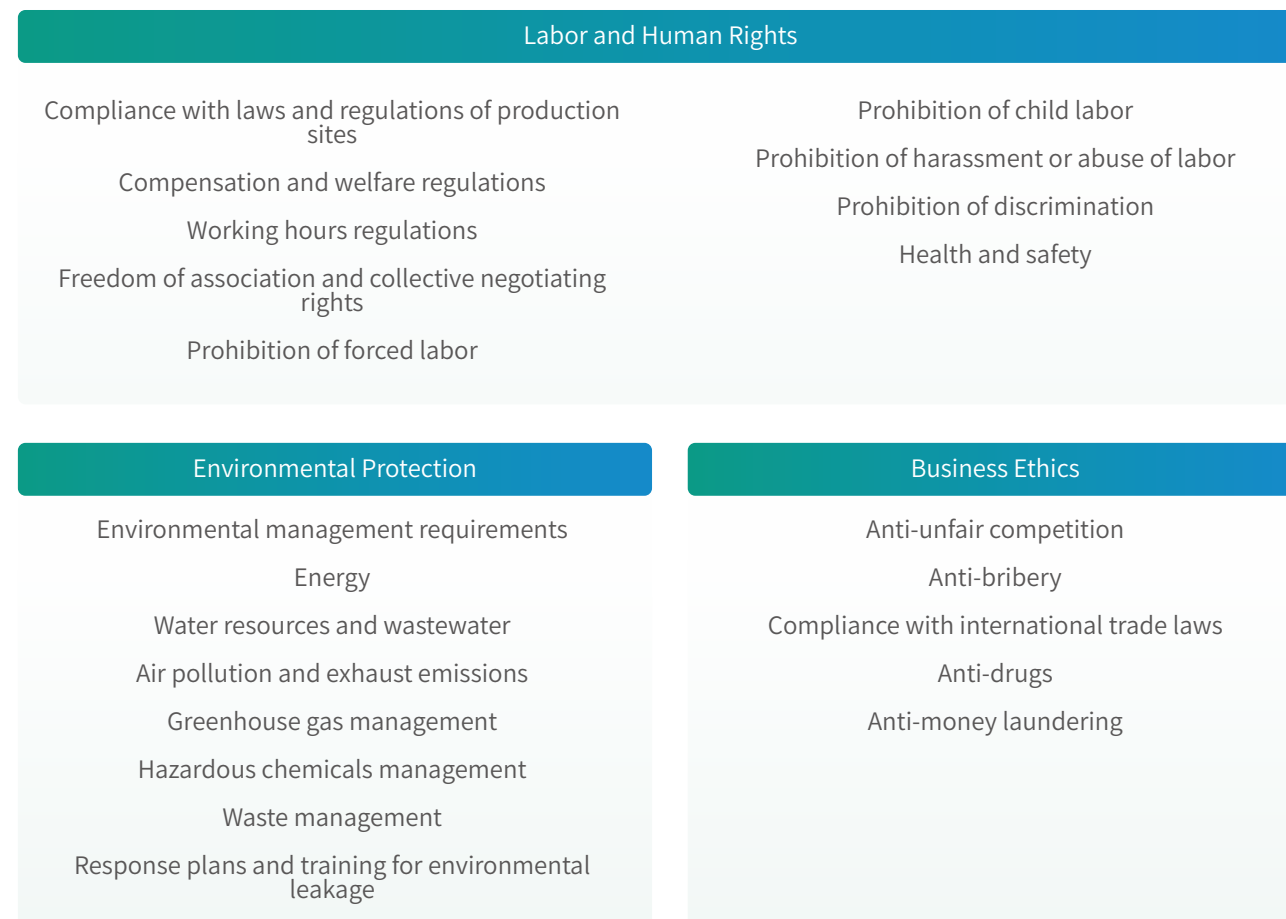
We firmly believe that responsible procurement practices can create positive impacts on society, the environment, and the economy. Based on supplier management, AHB deeply integrates the concept of sustainability into our collaborations, prioritizing environmentally friendly suppliers and products. We consistently uphold principles of human rights, labor rights, and social equity, ensuring that every worker in our supply chain enjoys fair treatment and a safe working environment. We strongly oppose the use of child labor or forced labor and consider it a key criterion for selecting suppliers.

◆◆ Implementation measures

Supplier sustainability requirements: The Company encourages suppliers to establish high standards of social responsibility, promoting continuous improvement in business ethics, environmental protection, and labor rights. To strengthen suppliers' awareness of social responsibility, we have clearly defined their obligations in the Procurement Contract through specific clauses, requiring them to appoint an independent social responsibility management representative to oversee the operation of the social responsibility system, ensuring it is not interfered with by other organizations.

Supplier sustainability investigation: To ensure suppliers actively fulfill their ESG responsibilities, in 2024, the Company added a Supplier Due Diligence Form to the existing supplier entry process, in addition to the Supplier Basic Information Survey Form. This form aims to gather information on suppliers. Beyond the four survey dimensions of business operations, qualifications, intellectual property, and after-sales service, it also includes three new dimensions: labor and human rights, environmental protection, and business ethics. The survey covers 22 categories and 80 questions. Meanwhile, the Procurement Center reviews the questionnaire responses on social responsibility from both public channels and on-site audits, providing corrective suggestions. This approach not only comprehensively evaluates new suppliers but also encourages them to establish stringent social responsibility assurance systems, promoting the development of social responsibility capabilities among upstream suppliers.

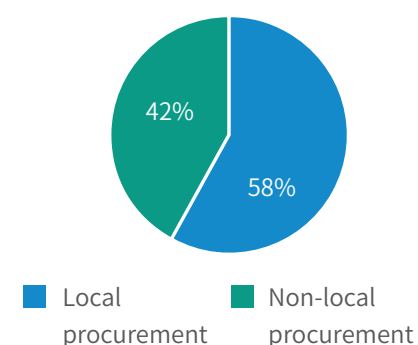
Supplier social responsibility requirements



Sustainable raw materials: The Company has strict requirements on the raw materials used by suppliers. Suppliers should ensure that the parts and materials supplied meet the environmental protection requirements in the Company's purchasing data, encourage suppliers to use environmentally friendly reusable or recyclable packaging materials as far as possible, and carry out REACH registration.

Local procurement: The Company attaches importance to local procurement from production bases. During the reporting period, the total amount of local procurement reaches 871 million RMB, accounting for 58% of the total annual procurement.

Proportion of local procurement



Digital intelligence supply chain

In 2024, AHB accelerated digital and information transformation, deeply integrating digital technology with supply chain management to fully unlock the value of digitalization. We have launched the SRM (Supplier Relationship Management) system, injecting new momentum into supply chain management through digital means. Within the year, we continued to optimize system functions, enhancing transparency and collaboration efficiency in the supply chain, achieving full digital coverage from supplier selection, cooperation management to performance evaluation.

AHB is driven by digitalization, committed to establishing equal, fair, and mutually beneficial partnerships with suppliers. By leveraging the integration of automation and informatization, they aim to create a one-stop procurement platform, standardize procurement processes, shorten procurement cycles, optimize procurement efficiency, reduce procurement costs, and comprehensively streamline all steps in supply chain management. This approach saves on communication costs during supplier engagement, achieving the digitalization, intelligence, and efficiency of the supply chain.

Focus on Partner Cooperation and Development

AHB is committed to promoting industry exchanges and cooperation, realizing technology, resources and knowledge sharing, building a benign ecology with global partners, promoting the development of scientific research and biotechnology, and injecting new vitality into the sustainable development of the industry.

Sustainability Covalence

Initiated by BASF, in collaboration with AHB and other partners in the upstream and downstream of the value chain, the "Sustainability Covalence" was jointly established. The alliance aims to gather industrial chain partners, rely on chemical innovation and global best practices, jointly promote low-carbon development in key industries, and promote circular economy.

Initiated by BASF
巴斯夫倡议

SUSTAINABILITY COVALENCE
可持续发展共建联盟

As a founding member enterprise of the Sustainability Covalence, AHB, in collaboration with alliance enterprises, led the hosting of the second Sustainability Covalence Conference and the Sustainability Covalence's Anniversary Celebration in Hefei, reviewing the achievements of sustainable development and jointly building a new future of green development!

Sustainable strategic cooperation

In September 2024, AHB signed a strategic cooperation agreement with China Chengxin and Wangfanxin. The parties will fully leverage their respective strengths to establish extensive and in-depth cooperation in areas such as corporate sustainability, certification in the dual-carbon field, building a carbon footprint database, and enhancing corporate compliance management. Together, we aim to promote the bio-manufacturing industry toward a circular, integrated, and sustainable future.



Exhibition communication

In April 2024, AHB made a remarkable appearance at the 2024 China Feed Industry Exhibition in Xiamen, where we launched new products including L-Isoleucine, L-Arginine, and L-Tryptophan. The Company comprehensively showcased sustainable amino acid and vitamin product lines and solutions.



In July 2024, the 19th China International Polyurethane Exhibition (PU China 2024) was grandly held in Shanghai. Under the theme of "Innovating Chemistry, Exploring a Low-Carbon Future", with a focus on sustainable development and the green transformation of the industrial value chain, AHB showcased multiple innovative bio-based material monomers and cutting-edge solutions at the exhibition for the first time.

Contribute to Social Welfare

In 2024, AHB continued to regard social welfare as a core part of corporate culture. While ensuring steady growth and continuous economic value creation, we have always closely integrated social responsibility with corporate development. We actively build mutual trust and supportive partnerships with the communities where we operate, fulfilling our corporate social responsibility through concrete actions. By actively participating in and initiating various charitable and public welfare activities, we are deeply involved in local philanthropic efforts, striving to give back to society and promote regional sustainable development, thereby truly achieving a win-win situation between the enterprise and society. We believe that every small action can bring about positive change, and AHB is committed to being part of this positive force.

Charitable Initiatives

AHB continues to place a high priority on community responsibility and pay attention to the coordination between the development of enterprises and that of community. We actively participate in charitable initiatives, focusing on and supporting vulnerable groups in society, and striving to contribute to the well-being of the communities we serve. Over the past year, we donated a total of RMB 230,000 to charitable causes and dedicated 400 hours to community service. These efforts reflect not only our care for society but also our determination to grow together with our communities and move forward hand in hand. We believe that every act of kindness and effort can help make society warmer and better.

AHB donated RMB **200,000** in student aid to the Education Bureau of Hangjin Rear Banner.

AHB donated RMB **30,000** to the Bayannur Municipal People's Education Foundation to support a sports gift package initiative for underprivileged children.

Community Building

As a technology-driven enterprise rooted in the regional economy, AHB has established a mechanism for community co-construction and sharing. Through the industrial spillover effect, the Company continuously expands employment opportunities, particularly cultivating new types of technical positions in the field of biomanufacturing, contributing to the creation of a happiness employment circle close to home. Guided by the principle of full life cycle carbon management, AHB integrates concepts of clean production and circular economy across its entire operational chain. In collaboration with local governments, the Company explores integrated pathways of ecological industrialization and industrial ecologicalization, providing replicable carbon reduction solutions to support the region's "Dual Carbon" goals.

Driven by the value of "Technology for kindness," the Company has developed a systematic public welfare and science education program, regularly offering free lectures to the public on topics such as safety, health, first aid, and synthetic biology. This dual-empowerment approach to corporate social responsibility strengthens the foundation for sustainable development while promoting a new model of urban-rural integration—"Industrial prosperity, ecological beauty, and prosperity for the people." Under the ESG governance framework, AHB exemplifies the responsible practices of a new-era private enterprise.

Rural Revitalization

AHB is committed to "Empowering rural revitalization through technology and building a shared path to prosperity through industry" and deeply fulfills corporate social responsibility. Guided by the strategic blueprint of the 20th National Congress to comprehensively advance rural revitalization, the Company leverages cutting-edge synthetic biology expertise to drive rural industrial upgrading through technological innovation, fully supports the modernization of agriculture through promoting a "Technology-industry-talent" integrated development model. AHB is committed to creating replicable and sustainable models for rural revitalization. The Company not only focuses on enhancing the value of the agricultural industry chain but also emphasizes improving farmers' skills and overall capabilities. These efforts provide strong support for building a modern agricultural powerhouse and demonstrate the responsibility of private enterprises in the great journey of rural revitalization in the new era.

Appendix 1 – Laws and Regulations

Dimension	Applicable Laws
Governance	<i>Civil Code of the People's Republic of China</i>
	<i>Company Law of the People's Republic of China</i>
	<i>Securities Law of the People's Republic of China</i>
	<i>Accounting Law of the People's Republic of China</i>
	<i>Criminal Law of the People's Republic of China</i>
	<i>Anti-Monopoly Law of the People's Republic of China</i>
	<i>Anti-Unfair Competition Law of the People's Republic of China</i>
	<i>Law of the People's Republic of China on the Preservation of State Secrets</i>
	<i>Basic Standards for Internal Control of Enterprises</i>
	<i>Data Security Law of the People's Republic of China</i>
	<i>Cybersecurity Law of the People's Republic of China</i>
	<i>U.S. Foreign Corrupt Practices Act (FCPA)</i>
	<i>U.S. Federal Trade Commission Act</i>
	<i>U.S. Data Protection Act</i>
	<i>EU General Data Protection Regulation (GDPR)</i>
Environmental	<i>Law of the People's Republic of China on the Promotion of Cleaner Production</i>
	<i>Environmental Protection Law of the People's Republic of China</i>
	<i>Law of the People's Republic of China on Environmental Impact Assessment</i>
	<i>Law of the People's Republic of China on Prevention and Control of Water Pollution</i>

Dimension	Applicable Laws
Environmental	<i>Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution</i>
	<i>Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste</i>
	<i>Law of the People's Republic of China on Prevention and Control of Soil Pollution</i>
	<i>Law of the People's Republic of China on Prevention and Control of Noise Pollution</i>
	<i>Regulations on the Safety Management of Hazardous Chemicals of the People's Republic of China</i>
	<i>Law of the People's Republic of China on Energy Conservation</i>
Social	<i>Biosecurity Law of the People's Republic of China</i>
	<i>Production Safety Law of the People's Republic of China</i>
	<i>Emergency Response Law of the People's Republic of China</i>
	<i>Copyright Law of the People's Republic of China</i>
	<i>Advertising Law of the People's Republic of China</i>
	<i>Fire Protection Law of the People's Republic of China</i>
	<i>Law of the People's Republic of China on Tenders and Bids</i>
	<i>Labour Law of the People's Republic of China</i>
	<i>Labor Contract Law of the People's Republic of China</i>
	<i>Employment Promotion Law of the People's Republic of China</i>
	<i>Social Insurance Law of the People's Republic of China</i>
	<i>Special Provisions on Labor Protection of Female Employees</i>
	<i>Law of the People's Republic of China on the Protection of Minors</i>
	<i>Law of the People's Republic of China on the Prevention and Control of Occupational Diseases</i>
	<i>Law of the People's Republic of China on Donations for Public Welfare</i>

Appendix 2 – ESG Key Performance Indicators

Environmental Indicators

Environmental investment	Unit	2024
Environmental investment	million RMB	48.79

Greenhouse gases emissions	Unit	2024
Scope I	tCO ₂ e	246,405.26
Scope II	tCO ₂ e	163,932.41
Total GHG emissions	tCO ₂ e	410,337.67
GHG emission intensity	tCO ₂ e/million RMB revenue	188.41

Energy consumption		Unit	2024
Direct energy	Coal	tons	118,077.40
	Natural gas	m ³	3,234,274.24
	Liquefied petroleum gas	tons	1.23
	Diesel	liters	135,263.55
	Gasoline	liters	57,554.07
	Biomass fuel	GJ	446,187.45
Indirect energy	Purchased electricity (Non-renewable energy)	MWh	259,697.57
	Purchased electricity (Renewable energy)	MWh	163,146.90
	The usage of green electricity generated and consumed by the company	MWh	208.82
	Steam	GJ	80,073.83
Total consolidated energy consumption		tce	158,884.14
Consolidated energy intensity		tce / million RMB revenue	72.95

Water resource utilization	Unit	2024
Fresh water usage	million liters	4,256.57
Water usage intensity	million liters/million RMB revenue	1.95

Exhaust emissions	Unit	2024
Nitrogen oxides	tons	145.66
Sulphur oxides	tons	87.81
Particulate matter	tons	10.96

Wastewater discharge	Unit	2024
Total discharge of pollutants in water	tons	330.23
Chemical oxygen demand (COD)	tons	253.00
Total nitrogen (TN)	tons	63.38
Total phosphorus (TP)	tons	8.88
Ammonia nitrogen (NH ₃ -N)	tons	4.97
Total wastewater discharge	million liters	3,623.61
Wastewater discharge intensity	million liters/million RMB revenue	1.66

Waste discharge	Unit	2024
General waste		
Total amount of general waste discharge	tons	58,993.40
General waste discharge intensity	tons/million RMB revenue	27.09
Waste transferred from disposal (recycle)	tons	5,328.70
Waste for direct disposal (incineration, with energy recovery)	tons	0
Waste for direct disposal (incineration, without energy recovery)	tons	390.14
Waste for direct disposal (landfill)	tons	18,719.61

Waste discharge	Unit	2024
Waste for direct disposal (other operations)	tons	34,554.95
Hazardous waste		
Total amount of hazardous waste discharge	tons	56.65
Hazardous waste discharge intensity	tons/million RMB revenue	0.03
Waste transferred from disposal (recycle)	tons	0
Waste for direct disposal (incineration, with energy recovery)	tons	0
Waste for direct disposal (incineration, without energy recovery)	tons	56.65
Waste for direct disposal (landfill)	tons	0
Waste for direct disposal (other operations)	tons	0

Packaging materials	Unit	2024
Proportion of recyclable packaging materials used	%	87

Social Indicators

Employment		Unit	2024
Overall situation	Total number of employees	persons	2,191
By gender	Male	persons	1,581
	Female	persons	610
By position	Management team (Grade 5 and above)	persons	159
	Intermediate professionals (Grade 4)	persons	283
	Junior professionals (Grades 1-3)	persons	1,749

Employment		Unit	2024
By age	Under 30 years old	persons	923
	31-49 years old	persons	1,194
	Above 50 years old	persons	74
By region	China (including Hong Kong, Macao and Taiwan)	persons	2,179
	Other countries	persons	12
By ethnic groups	Han ethnicity	persons	2,009
	Other ethnic groups	persons	170

Employment absorption		Unit	2024
Total number of new employees		persons	1,413
By gender	Male	persons	1,045
	Female	persons	368
By age	Under 30 years old	persons	791
	31-49 years old	persons	611
	Above 50 years old	persons	11

Diversity, inclusion, and quality		Unit	2024
Diversification of management team	Proportion of management team hired from local area	%	54
	Proportion of women in management team	%	24

Employee training		Unit	2024
Overall situation	Total annual training expenditures	million RMB	4.80
	Total number of employees trained	persons	2,152
	Per capita training expenditure	RMB	2,200

Employee training		Unit	2024
Number of trainees by gender	Male	persons	1,561
	Female	persons	591
Number of trainees by position	Management team (Grade 5 and above)	persons	151
	Intermediate professionals (Grade 4)	persons	273
	Junior professionals (Grades 1-3)	persons	1,728
Total training duration by gender	Male	hours	64,114
	Female	hours	19,108
Total training duration by position	Management team (Grade 5 and above)	hours	10,037
	Intermediate professionals (Grade 4)	hours	4,592
	Junior professionals (Grades 1-3)	hours	68,593
Per capita training duration by gender	Male	hours	41
	Female	hours	32
Per capita training duration by position	Management team (Grade 5 and above)	hours	66
	Intermediate professionals (Grade 4)	hours	17
	Junior professionals (Grades 1-3)	hours	40

Parental leave		Unit	2024
Vacation status	Total number of employees entitled to parental leave	persons	99
	Total number of employees took parental leave	persons	72
	Total number of employees who returned to work in the reporting period after taking parental leave	persons	72

Employee health and safety		Unit	2024
Safety training	Total number of safety training sessions in the reporting period	times	358
	The total duration of safety training in the reporting period	hours	50,291
	The average duration of safety training received by on-the-job employees	hours	27.3
Work-related injuries and accidents	Number of work-related fatalities	persons	0
Occupational health	Number of occupational health examinations	persons	1,271
	Coverage rate of occupational health examinations	%	100
Safety investment	Safety investment amount	million RMB	12.77

Social contribution		Unit	2024
Public welfare inputs	Public welfare donation	million RMB	0.23
	Public service	hours	400
	Number of public service participants	persons	84

Product quality and safety		Unit	2024
Product quality and safety	Incidents of non-compliance concerning the quality and safety impacts of products and services	cases	0
	Number of products recalled for quality and safety reasons	pieces	0
	Number of complaints for quality and safety reasons	times	0

Responsible marketing		Unit	2024
Marketing and labeling	Incidents of non-compliance concerning product and service information and labeling	times	0
	Violations related to marketing	times	0

Sustainable supply chain		Unit	2024
Suppliers	Proportion of expenditure on purchasing from local suppliers	%	58
	Number of target suppliers that have signed the Supplier Code of Conduct	-	273
	Number of target suppliers that have participated in Corporate Social Responsibility(CSR) assessments	-	20
Purchasers	Number of purchasers who have received sustainable procurement training	persons	26
	Proportion of purchasers who have received sustainable procurement training	%	100

Governance Indicators

Governance of General Meeting of Shareholders, Board of Directors and Supervisory Committee		Unit	2024
General Meeting of Shareholders	Number of meetings held	times	3
	Number of proposals deliberated	items	14
Board of Directors	Number of meetings held	times	9
	Number of proposals deliberated	items	47
Supervisory Committee	Number of meetings held	times	7
	Number of proposals deliberated	items	20

Business ethics and anti-corruption		Unit	2024
Anti-corruption situation	Percentage of bases that have undergone corruption risk assessment	%	100
	Corruption incidents	cases	0
Anti-corruption training	Total training hours	hours	1,262
	Number of employees trained	persons	1,262

Data privacy and security		Unit	2024
Information security	Total training hours of information security training	hours	6
	Number of employees who have received information security training	persons	700

Appendix 3 – Content Index

Index Based on the Shanghai Stock Exchange Guidelines

Dimension	Topic	Corresponding Chapter
Environmental	Climate Change Response	Implement Climate Action
	Pollutant Emissions	Optimize Resource Recycling
	Waste Management	Optimize Resource Recycling
	Ecosystem and Biodiversity Protection	Protect Ecological Balance
	Environmental Compliance Management	Implement Climate Action
	Energy Utilization	Implement Climate Action
	Water Resource Utilization	Optimize Resource Recycling
	Circular Economy	Optimize Resource Recycling
Social	Rural Revitalization	Contribute to Social Welfare
	Social Contribution	Contribute to Social Welfare
	Innovation-Driven Development	Promote Research and Innovation
	Science and Technology Ethics	Promote Research and Innovation
	Supply Chain Security	Foster Collaborative Success with Partners
	Fair Treatment of SMEs	Refer to Annual Report
	Product and Service Safety & Quality	Ensure Product Safety
	Data Security & Customer Privacy Protection	Enhance Compliance Code
	Employees	Gather Enterprising Talents
Governance for Sustainable Development	Due Diligence	ESG Development Strategy
	Stakeholder Communication	ESG Development Strategy
	Anti-Bribery and Anti-Corruption	Adhere to Business Ethics
	Anti-Unfair Competition	Adhere to Business Ethics

GRI Content Index

Statement of use: AHB has prepared this report with reference to the Global Reporting Initiative (GRI) Sustainability Reporting Standards. The reporting period is from January 1, 2024 to December 31, 2024.

Disclosure	Disclosure Title	Corresponding Chapter
GRI 2: General Disclosures 2021		
2-1	Organizational details	About this Report, About AHB
2-2	Entities included in the organization's sustainability reporting	About this Report
2-3	Reporting period, frequency, and contact point	About this Report
2-4	Restatements of information	About this Report
2-6	Activities, value chain and other business relationships	Foster Collaborative Success with Partners
2-7	Employees	Gather Enterprising Talents
2-9	Governance structure and composition	Strengthen Regulated Governance
2-10	Nomination and selection of the highest governance body	Strengthen Regulated Governance
2-11	Chair of the highest governance body	Strengthen Regulated Governance
2-12	Role of the highest governance body in overseeing the management of impacts	ESG Development Strategy, Strengthen Regulated Governance
2-13	Delegation of responsibility for managing impacts	Enhance Compliance Code
2-14	Role of the highest governance body in sustainability reporting	ESG Development Strategy
2-16	Communication of critical concerns	ESG Development Strategy
2-18	Evaluation of the performance of the highest governance body	Refer to Annual Report
2-19	Remuneration policies	Refer to Annual Report
2-20	Process to determine remuneration	Refer to Annual Report
2-22	Statement on sustainable development strategy	Chairwoman's Message, ESG Development Strategy
2-27	Compliance with laws and regulations	Appendix 1
2-29	Approach to stakeholder engagement	ESG Development Strategy
2-30	Collective bargaining agreements	Gather Enterprising Talents
GRI 3: Material Topics 2021		
3-1	Process to determine material topics	ESG Development Strategy
3-2	List of material topics	ESG Development Strategy
3-3	Management of material topics	ESG Development Strategy

Disclosure	Disclosure Title	Corresponding Chapter
GRI 201: Economic Performance 2016		
201-1	Direct economic value generated and distributed	Refer to Annual Report
201-2	Financial implications and other risks and opportunities due to climate change	Implement Climate Action
201-3	Defined benefit plan obligations and other retirement plans	Gather Enterprising Talents
GRI 204: Procurement Practices 2016		
204-1	Proportion of spending on local suppliers	Foster Collaborative Success with Partners
GRI 205: Anti-corruption 2016		
205-1	Operations assessed for risks related to corruption	Adhere to Business Ethics
205-2	Communication and training about anti-corruption policies and procedures	Adhere to Business Ethics
205-3	Confirmed incidents of corruption and actions taken	Adhere to Business Ethics
GRI 301: Materials 2016		
301-2	Recycled input materials used	Prioritize Sustainable Products
301-3	Reclaimed products and their packaging materials	Prioritize Sustainable Products
GRI 302: Energy 2016		
302-1	Energy consumption within the organization	Implement Climate Action
302-2	Energy consumption outside of the organization	Implement Climate Action
302-3	Energy intensity	Implement Climate Action
302-4	Reduction of energy consumption	Implement Climate Action
302-5	Reductions in energy requirements of products and services	Implement Climate Action
GRI 303: Water and Effluents 2018		
303-1	Interactions with water as a shared resource	Optimize Resource Recycling
303-2	Management of water discharge-related impacts	Optimize Resource Recycling
303-3	Water withdrawal	Optimize Resource Recycling
303-4	Water discharge	Optimize Resource Recycling
303-5	Water consumption	Optimize Resource Recycling
GRI 304: Biodiversity 2016		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Protect Ecological Balance

Disclosure	Disclosure Title	Corresponding Chapter
304-2	Significant impacts of activities, products and services on biodiversity	Protect Ecological Balance
304-3	Habitats protected or restored	Protect Ecological Balance
GRI 305: Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	Implement Climate Action
305-2	Energy indirect (Scope 2) GHG emissions	Implement Climate Action
305-4	GHG emissions intensity	Implement Climate Action
305-5	Reduction of GHG emissions	Implement Climate Action
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Optimize Resource Recycling
GRI 306: Waste 2016		
306-1	Waste generation and significant waste-related impacts	Optimize Resource Recycling
306-2	Management of significant waste-related impacts	Optimize Resource Recycling
306-3	Waste generated	Optimize Resource Recycling
306-4	Waste diverted from disposal	Optimize Resource Recycling
306-5	Waste directed to disposal	Optimize Resource Recycling
GRI 308: Supplier Environmental Assessment 2016		
308-1	New suppliers that were screened using environmental criteria	Foster Collaborative Success with Partners
308-2	Negative environmental impacts in the supply chain and actions taken	Foster Collaborative Success with Partners
GRI 401: Employment 2016		
401-1	New employee hires and employee turnover	Gather Enterprising Talents
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Gather Enterprising Talents
401-3	Parental leave	Gather Enterprising Talents
GRI 403: Occupational Health and Safety 2018		
403-1	Occupational health and safety management system	Gather Enterprising Talents
403-2	Hazard identification, risk assessment, and incident investigation	Gather Enterprising Talents
403-3	Occupational health services	Gather Enterprising Talents
403-4	Worker participation, consultation, and communication on occupational health and safety	Gather Enterprising Talents
403-5	Worker training on occupational health and safety	Gather Enterprising Talents
403-6	Promotion of worker health	Gather Enterprising Talents

Disclosure	Disclosure Title	Corresponding Chapter
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Gather Enterprising Talents
403-8	Workers covered by an occupational health and safety management system	Gather Enterprising Talents
403-9	Work-related injuries	Gather Enterprising Talents
403-10	Work-related ill health	Gather Enterprising Talents
GRI 404: Training and Education 2016		
404-1	Average hours of training per year per employee	Gather Enterprising Talents
404-2	Programs for upgrading employee skills and transition assistance programs	Gather Enterprising Talents
404-3	Percentage of employees receiving regular performance and career development reviews	Gather Enterprising Talents
GRI 405: Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	Gather Enterprising Talents
GRI 408: Child Labor 2016		
408-1	Operations and suppliers at significant risk for incidents of child labor	Gather Enterprising Talents
GRI 409: Forced or Compulsory Labor 2016		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Gather Enterprising Talents
GRI 414: Supplier Social Assessment 2016		
414-1	New suppliers that were screened using social criteria	Foster Collaborative Success with Partners
414-2	Negative social impacts in the supply chain and actions taken	Foster Collaborative Success with Partners
GRI 416: Customer Health and Safety 2016		
416-1	Assessment of the health and safety impacts of product and service categories	Ensure Product Safety
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Ensure Product Safety
GRI 417: Marketing and Labeling 2016		
417-1	Requirements for product and service information and labeling	Ensure Product Safety
417-2	Incidents of non-compliance concerning product and service information and labeling	Ensure Product Safety
417-3	Incidents of non-compliance concerning marketing communications	Ensure Product Safety
GRI 418: Customer Privacy 2016		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Enhance Compliance Code

Ecovadis Index

Dimension	Sub-category	Indicator	Corresponding Chapter
Environmental	Operation	Energy Consumption and Greenhouse Gas Emissions	Implement Climate Action
		Water Resource Management	Optimize Resource Recycling
		Biodiversity	Protect Ecological Balance
		Local Environmental Pollution	Optimize Resource Recycling
		Raw Materials, Chemicals and Waste	Optimize Resource Recycling
	Product	Product Usage	Ensure Product Safety
		End of Product Life	Ensure Product Safety
		Consumer Health and Safety	Ensure Product Safety
		Environmental Services and Advocacy	Prioritize Sustainable Products
Labor & Human Rights	Human Resources	Employee Health and Safety	Gather Enterprising Talents
		Working Conditions	Gather Enterprising Talents
		Communication	Gather Enterprising Talents
		Career Development and Training	Gather Enterprising Talents
	Human Rights	Child Labour, Forced Labour, and Human Trafficking	Gather Enterprising Talents
		Diversity, Discrimination, and Harassment	Gather Enterprising Talents
		Human Rights of External Stakeholders	Gather Enterprising Talents
Sustainable Procurement	/	Environmental Performance of Suppliers	Foster Collaborative Success with Partners
		Social Performance of Suppliers	Foster Collaborative Success with Partners
Business Ethics	/	Corruption and Bribery	Adhere to Business Ethics
		Anti-Unfair Competition Practices	Adhere to Business Ethics
		Social Responsibility and Ethics in Marketing	Ensure Product Safety

Appendix 4 – Feedback Form

Dear Readers,

Thank you for reading the 2024 Environmental, Social and Governance Report of Anhui Huaheng Biotech Co., Ltd. To enhance our ESG management, we sincerely invite you to fill out this feedback form after reading the report and share your valuable opinions and suggestions with us. Your feedback is a crucial basis for our continuous improvement in ESG practices. We look forward to your reply!

1. Category of stakeholder:
☐ Government ☐ Shareholder ☐ Customer ☐ Supplier ☐ Employee
☐ Community ☐ Industry associations ☐ Universities and research institutes

2. Your overall evaluation of this report:
☐ Very good ☐ Good ☐ Average ☐ Poor

3. Your evaluation of AHB's performance in corporate governance:
☐ Very good ☐ Good ☐ Average ☐ Poor

4. Your evaluation of AHB's performance in environmental responsibility:
☐ Very good ☐ Good ☐ Average ☐ Poor

5. Your evaluation of AHB's performance in social responsibility:
☐ Very good ☐ Good ☐ Average ☐ Poor

6. Do you think the information disclosed in this report is complete?
☐ Yes ☐ No

7.Other comments and suggestions for improving AHB's ESG-related work:

Your Contact Information
Name: _____
Employer: _____
Job title: _____

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