

ACT Ecolabel

Solving for transparency

Abstract

As healthcare organisations increasingly focus on sustainable practices, the need for standardised environmental impact measurement becomes critical. The ACT (Accountability, Consistency, Transparency) ecolabel provides a robust framework for evaluating and communicating the environmental impact of laboratory products. We examine how this certification advances sustainability through social, environmental and economic dimensions, whilst supporting improved transparency in the healthcare sector.

Introduction

The healthcare sector faces mounting pressure to reduce its environmental footprint. Major institutions like the UK's NHS have set ambitious net-zero targets for 2045, requiring suppliers to meet stringent environmental standards by 2030 [1]. Group



Purchasing Organisations (GPOs) are establishing clear product sustainability criteria [2], emphasising the need for greater transparency and verifiable data.

An ACT Environmental Impact Factor Label provides clear, third-party verified information about a product's environmental impact [3], emphasizing Accountability, Consistency, and Transparency (ACT) around manufacturing, energy and water use, packaging, and end-of-life. ACT-labeled products are independently audited by SMS Collaborative, LLC (SMSC) [4] and published by My Green Lab. Within this context, we have implemented the ACT label as a vital tool for meeting these evolving market demands.

Understanding the ACT Framework

The ACT label serves as the laboratory industry's premier ecolabel, providing standardised environmental impact scoring across multiple categories:

- Manufacturing Impact
- Energy Consumption
- Water Usage
- Packaging Materials
- Transportation
- End-of-Life Considerations
- Innovation Practices

 ACT. The Environmental Impact Factor Label		us
Roche LightCycler® PRO, 96 Rotkreuz, Switzerland SKU 09541713001		
Environmental Impact Scale Decreasing Environmental Impact 1 ————— 10		
Manufacturing		
Manufacturing Impact Reduction		1.0
Renewable Energy Use		Yes
Responsible Chemical Management		1.0
Shipping Impact		9.5
Product Content		5.0
Packaging Content		5.0
User Impact		
Energy Consumption (kWh/day)		2.8
Water Consumption (gallons/day)		N/A
Product Lifetime		7.0
End of Life		
Packaging		4.2
Product		6.0
Innovation		
Innovative Practices		-1.0
Environmental Impact Factor:		40.5
Label Valid Through:		November 2026
		act.mygreenlab.org

Each category receives a score from 1-10, with lower numbers indicating reduced environmental impact [1]. The comprehensive evaluation creates an Environmental Impact Factor that enables direct product comparisons within categories. These scores serve as benchmarks for continued improvement, allowing organizations to measure

progress and set targeted goals for environmental impact reduction.

Certification Process

Products undergo rigorous third-party verification through SMCS Global Services, ensuring objectivity and reliability. The certification:

- Remains valid for two years
- Applies to specific geographic markets (US, EU, UK)
- Requires detailed documentation supporting product sustainability initiatives, including manufacturing site practices
- Evaluates both direct and indirect environmental impacts

Advancing all Facets of Sustainability

Environmental Stewardship

Environmental considerations form the foundation of the ACT ecolabel. By measuring and documenting these impacts, we enable healthcare providers to make environmentally conscious purchasing decisions that support their own sustainability goals. The certification provides detailed insights into energy consumption, water usage and waste generation across the product lifecycle, helping to identify areas for improvement in manufacturing processes, packaging design and end-of-life management. The standardised scoring system facilitates meaningful comparisons between products, driving continuous improvement in environmental performance.

Social Impact

The ACT ecolabel's transparency requirements create measurable social impact across the supply chain. The certification process

requires documentation of labor practices, workplace safety standards and community impact assessments at manufacturing sites. Healthcare providers can use this information to evaluate products based on their social impact throughout the manufacturing process. Being open about our environmental impact does more than just provide numbers - it helps build trust with the communities where we operate. When we're clear about how we use resources and what we're doing to minimise our impact, it shows our commitment to being a responsible neighbor. It also helps our healthcare customers meet their own sustainability goals, contributing to broader positive change in the industry. Additionally, the certification's focus on local sourcing and waste reduction can have noticeable societal ripple effects: reduced travel emissions and traffic, quicker turnaround times for procuring goods and more streamlined production, all things that help lab conditions as well as the wellbeing of their local communities.

Economic Benefits

ACT certification generates economic impact across operations and procurement. The required resource tracking during certification often reveals specific areas where material and energy usage can be optimised. For example, packaging assessments frequently identify opportunities for reduction in material costs. In procurement, the environmental impact data allows healthcare providers to quantitatively compare products' operational costs alongside their environmental metrics. This framework can reduce the time needed to respond to environmental requirements in tenders, as the necessary data

is already compiled and verified. Organisations using environmental criteria in purchasing decisions can use ACT scores as one of several objective metrics in their evaluation process.

Implementation at Roche

We initiated ACT ecolabel implementation across multiple product lines, with notable progress in achieving the first ACT ecolabel of any kind in healthcare diagnostics, for the LightCycler® PRO system—a Roche qPCR analyzer that meets important research and clinical diagnostic laboratory needs.

LightCycler PRO system Implementation

The LightCycler® PRO received impressive scoring measurements based on multiple criteria [5, 6]:

1. Manufacturing Excellence

- The Rotkreuz, Switzerland facility that manufactures the Lightcycler® PRO system purchases renewable energy through a program with the local utility provider.
- Implementation of reusable inbound packaging from local suppliers
- Comprehensive water efficiency measures across the site

2. Product Innovation

- Enhanced efficiency compared to predecessor (LightCycler® 480)
- Integration of built-in computer and touchscreen
- Revolutionary Vapor Chamber Mount (VCM) technology
- First IVD/RUO instrument in the qPCR space, reducing need for additional instrumentation

3. Lifestyle Considerations

- Optimised resource consumption during use phase
- Sustainable material selection
- Responsible end-of-life disposal protocols

Future Applications

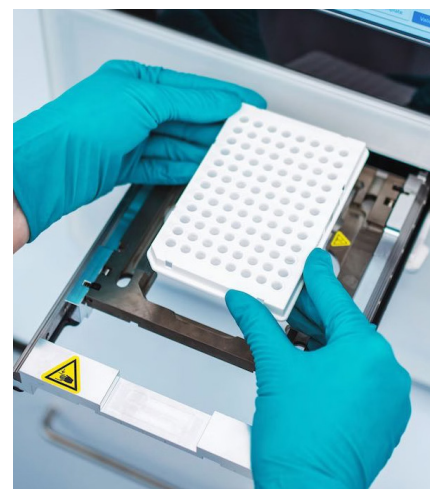
Building on our initial success, we are expanding ACT certification efforts:

- Pilot program for liquid reagent and consumables
- Starting with molecular diagnostic reagents and consumables for **cobas® 5800/6800/8800** system assays and **cobas® Liat®** system assay portfolio

This strategic approach addresses growing customer demand for environmental impact information.

Conclusion

The ACT ecolabel represents a significant advancement in environmental impact transparency for laboratory products. As market demands for sustainable practices continue to grow, this certification system provides a standardised framework for evaluation and communication. Our implementation demonstrates the practical value of ACT certification in meeting customer needs while advancing broader sustainability objectives across social, environmental and economic dimensions.



References:

1. NHS England (2023). Sustainable Supplier Guidelines.
2. Vizient (2024). Environmental Preferred Purchasing Criteria.
3. My Green Lab (2024). ACT Label Certification Guidelines.
4. SMS Collaborative, LLC (2024). ACT Label Audit Requirements and Procedures.
5. Roche Diagnostics (2024). LightCycler® PRO Environmental Impact Assessment Report.
6. My Green Lab (2024). LightCycler® PRO, 96 ACT Label Assessment. Available at act.mygreenlabs.org.

COBAS and LIGHTCYCLER are trademarks of Roche. Other product names and trademarks are the property of their respective owners.

©2025

Published by;

Roche Diagnostics International Ltd
Forrenstrasse 2
CH-6343 Rotkreuz
Switzerland