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SYMPHONY ENVIRONMENTAL TECHNOLOGIES PLC

("Symphony" or "the Company")

First Report on d2w® Confirms Compliance with Mexican Standard NMX-E-288-NYCE-2022

Symphony Environmental Technologies plc (AIM: SYM), the global specialists in technologies that make plastic and rubber products smarter, safer, and more sustainable, is pleased to announce that Mexico's Centro de Investigación en Química Aplicada ("CIQA"), a public research centre affiliated with Mexico's Secretariat of Science, Humanities, Technology and Innovation, has issued its first report confirming that a finished high-density polyethylene plastic product containing Symphony's d2w® technology meets the requirements of Mexican Standard NMX-E-288-NYCE-2022.

The CIQA testing demonstrated that biodegradation reached 89.5% at 180 days, surpassing by a substantial margin the 60% requirement applicable under the standard to the tested polyethylene product. The Company believes this is the first independent verification by a Mexican public research institution that an oxo-biodegradable product meets the Mexican standard, and the first such study on high-density polyethylene, a polymer which is difficult to biodegrade.

This evidence complements the recently announced study at the ISO 17025-accredited laboratory of Intertek India ("Intertek") which demonstrated 98.7% mineralisation of d2w® plastic in soil after 600 days. Also, in tests designed according to ISO 24187:2023 they had proved that there were no resulting microplastics and no ecotoxicity. These were the latest of eight tests performed by Intertek in 2025/26 which show successful biodegradation with no microplastics and no ecotoxicity.

The CIQA study further strengthens Symphony's scientific evidence-base. The Company believes that this study, taken together with the Intertek reports and earlier independent work including studies by Queen Mary University London and the French Oxomar project, now provide a compelling body of evidence that d2w® technology will safely reduce the persistence of plastic in the open environment.

In addition, CIQA had previously endorsed Symphony's position-paper on microplastics, pointing out that conventional polyethylene (PE) and polypropylene (PP) packaging will fragment into persistent microplastics after weathering, but that if these products are made with a d2w® masterbatch and tested according to ASTM D6954 they will biodegrade and significantly reduce the accumulation of plastic in the open environment. They also noted that recycling is useful but cannot deal with plastic which escapes collection.

Key Findings

CIQA's testing programme concluded that polyethylene film containing Symphony's d2w® technology completed the testing sequence required by the Mexican standard, including degradation, biodegradation and environmental safety assessment.

Among the principal findings were:

- Molecular weight reduced from approximately 89,670 Daltons to 2,941 Daltons during simulated weathering.
- Confirmation that the degraded material becomes available for assimilation by microbes and utilisation by them as a carbon source.
- 89.5% biodegradation within 180 days - leaving little or nothing that could be a microplastic.
- No adverse effects on seed germination, plant growth, root development or biomass.

Expanded Scientific Programme

In addition to confirming compliance with the Mexican standard, the CIQA programme incorporated several areas of scientific investigation extending beyond a simple compliance assessment.

Microbial Assimilation Studies

CIQA evaluated biodegradation using fungal species obtained from the American Type Culture Collection, including *Aspergillus niger* and *Penicillium*. The report demonstrated fungal colonisation and growth on degraded d2w-treated material, whilst untreated polyethylene showed no significant growth. This work provides additional evidence regarding the biological assimilation mechanisms after molecular weight reduction.

Advanced Molecular Weight Analysis

High-temperature Gel Permeation Chromatography was used throughout the degradation process to monitor changes in molecular weight. CIQA also monitored the Polymer Dispersity Index (PDI), which measures the range of molecule sizes present in the abiotically degraded film.

The PDI reduced from approximately 5.5 to around 2 during the degradation process, demonstrating a controlled breakdown of the plastic from a broad range of polymer-chain lengths into a consistent population of low molecular weight molecules. This is significant because smaller, more uniform molecules are more readily accessible to naturally occurring microorganisms, supporting biodegradation and helping to ensure that persistent long-chain polymer fragments do not remain in the environment.

Long-Term Carbon Conversion Studies

The biodegradation phase used continuous carbon dioxide evolution measurements over a 180-day period and demonstrated biological mineralisation of the degraded polymer.

Comprehensive Environmental Safety Assessment

The ecotoxicity programme included seed viability testing, germination studies, root development measurements, plant height assessments, wet biomass and dry biomass analysis using *Solanum lycopersicum* (tomato plants).

The programme confirmed that degraded d2w-treated plastic caused no adverse environmental effects.

Circular Economy Law Significance

The findings are particularly relevant because they were generated within Mexico's Circular Economy framework, which recognises the need for scientific assessment of technologies intended to address long-term plastic pollution.

Independent validation from CIQA will assist regulators, manufacturers, retailers and brand owners in Mexico and other markets when evaluating technologies intended to reduce pollution when plastic products escape collection systems and get into the open environment.

Why This Matters

Plastic products do enter the open environment in significant quantities all around the world, notwithstanding the efforts of governments to promote better waste-management and recycling.

Mexico's biodegradation standard is intended to determine whether suitably manufactured plastics will ultimately biodegrade after oxidation and whether the resulting material is environmentally safe.

The standard follows the same three-tier methodology as the internationally recognised ASTM D6954 framework, covering accelerated measurement of the loss of physical properties and molecular weight in plastic products, biodegradation and ecotoxicity, in order to evaluate thermal or photo-oxidative abiotic degradation and subsequent biodegradation in the open environment.

Commercial Implications

Symphony believes that the CIQA report materially strengthens its commercial position in Mexico - one of Latin America's largest economies, and in Latin America generally.

The CIQA report provides:

- Independent third-party validation from a respected public scientific institution.

- Confirmation that d2w® technology successfully completed all stages of the oxo-biodegradation process, including abiotic degradation, biodegradation and ecotoxicity assessment.
 - Additional scientific evidence relating to microbial assimilation mechanisms, molecular weight reduction pathways, carbon conversion and environmental safety, beyond simple pass/fail testing.
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- A substantial body of independently generated scientific data which Symphony will be able to utilise in discussions with regulators, manufacturers, distributors, retailers and brand owners throughout Mexico and elsewhere.

Michael Laurier, Chief Executive of Symphony Environmental, commented:

"This is an important milestone for Symphony and for Mexico. Independent confirmation that a finished plastic product containing d2w® complies with Mexican Standard NMX-E-288-NYCE-2022 provides clear, objective evidence that the technology meets Mexico's established requirements for oxo-biodegradable plastics.

We believe this is the most comprehensive evaluation of d2w® technology yet conducted in Mexico. Importantly, it was carried out by a respected Mexican public research institution and provides manufacturers, retailers, brand owners and policymakers with scientific evidence generated within the country to support their assessment and use of the technology.

As governments seek practical solutions to plastic pollution, this confirmation of compliance demonstrates that d2w® can provide an effective safeguard when plastic escapes collection and enters the open environment, without requiring major changes to manufacturing processes, supply chains or recycling systems."

Enquiries

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Notes to Editors

In addition to its d2w biodegradable plastic technology - www.d2w.net - Symphony supplies a range of plastic technologies under its d2p (designed to protect) brand - www.d2p.net - to provide protection against insects, viruses, bacteria, fungi, rodents, odours, food deterioration and fire.

Symphony also provides marker technology under its d2t brand to enable proof of recycled content of plastic products and to prevent counterfeiting [Taggant Technology | Symphony Environmental](#)

Symphony has also introduced a new product under its NbR brand – www.nbr.technology to reduce the amount of fossil-derived material in plastic products.

Symphony has a diverse and growing customer-base and has established itself over more than 30 years as an international business with over 70 distributors around the world. Products made with Symphony's plastic technologies are now available in nearly 100 countries and in many different product applications. Symphony itself is certified according to ISO9001 and ISO14001, and has held the London Stock Exchange's Green Economy Mark since its launch in 2019.

Symphony participates in the Committee work of the British Standards Institute (BSI), the American Standards Organisation (ASTM), the European Standards Organisation (CEN), and the International Standards Organisation (ISO).

Further information on the Group can be found at www.symphonyenvironmental.com