

AQUEOUS BIOCUPS



2023 SUSTAINABLE PACKAGING DESIGN OF THE YEAR - COMPOSTABLES SILVER WINNER



BioPak
Aqueous BioCups



Key Outcomes and Measurement

- Can be home or industrially composted
- Certified Home Compostable to Australian Standards AS5810
- Unique water-based coating AS5810
- Certified Home Compostable Aqueous Lined cups
- Reduction in material needed
- FSC™ Certified Paper

Sustainable Packaging Guidelines



Design for Recovery



Use of Renewable Materials



Eliminate Hazardous Materials

BioPak
It doesn't cost the earth

Product: Aqueous BioCups
Company: BioPak
Country: Australia

BioPak was founded in 2006 and specialises in designing, producing and distributing certified compostable packaging made from rapidly renewable plant-based materials including bioplastics and bagasse pulp. Born out of an idea to eliminate problematic, unnecessary, and unrecyclable plastic packaging BioPak's focus has been on eliminating single use fossil based plastic used within the food and foodservice industry. As more businesses seek to reduce their consumption of single-use plastic in order to meet government legislated targets and consumer demands, a new generation of fibre-based alternatives are the preferred choice where they provide the required functional performance along with the ability to be recycled in the paper or organic waste stream.

COORDINATED BY



ANZ REGIONAL AWARDS PROGRAM



INTERNATIONALLY ENDORSED BY



EXCLUSIVE ENTRY TO



- ✓ **BioPak identified the need for a home compostable coffee cup for more responsible disposal.**
- ✓ **BioPak invested in research and development of Aqueous for years to create a certified home compostable coffee cup.**
- ✓ **Switching to water-based dispersion lining for their paper-based products will increase availability of home compostable packaging on the market. This initiative aims to promote responsible disposal of BioPak products and contribute to sustainable packaging practices.**

In the context of your packaging innovation, what do you see as Sustainable Packaging?

Lea Maguero, Head of Sustainability, BioPak says, *“At BioPak, we believe that sustainable packaging is an ongoing journey of finding the best materials that benefit the planet and people. Our investment in research and development has led to the development of Aqueous - a water-based dispersion coating for our BioCups, resulting in a significant milestone for us - a certified home compostable coffee cup. Previously, our coffee cups were only certified to industrially compostable standards (AS4736), which required collection by industrial waste composters and transportation to specialised facilities for composting. With our new Aqueous cups, when paired with our plastic-free plant fibre pulp lids, you have a fully home compostable coffee cup solution. Consumers can simply dispose of their takeaway coffee cup in their own backyard compost bin. Our goal goes beyond replacing single-use fossil fuel-based packaging with plant-based alternatives; we also aim to ensure that our packaging is effectively composted while working towards increasing composting rates in the countries where we operate. To be considered truly ‘sustainable,’ packaging must constantly evolve to meet the demands of our rapidly expanding world.”*

What would you say were the decision-making drivers (Internal and External) influencing your packaging design?

BioPak’s mission has always been to create sustainable packaging that puts the planet first while helping to create a world without waste. They acknowledge that with the current composting infrastructure in the countries they operate in, it is impossible that 100% of their compostable packaging will make its way to a compost facility. It is important to note that a significant portion of their carbon emissions (60%) comes from the disposal of their products at the end of their lifecycle, assuming they end up in landfills. While BioPak’s products are intended to be composted, this doesn’t always happen due to a lack of composting infrastructure and customer education. While customer education is a big piece of the puzzle, ease of disposal is an even bigger piece that will help close the loop on their packaging.

Making a certified home compostable cup means that customers don’t have to worry about returning their cup to the café they bought their coffee at or checking if their council accepted compostable packaging in their FOGO bin, they can simply dispose of their Aqueous coffee cup in their own backyard composting bin. BioPak is always trying to reduce their carbon footprint and the aqueous cup and plastic-free plant fibre lid provides a simple end of life solution that is in the hands of the consumer. They can simply pop the cups and lids in their home compost bin rather than rely on small business owners to have industrial composting facilities.



What benefits does this new design offer your business and your consumers? Why is the pack more sustainable?

The benefits of BioPak's new Aqueous coffee cups for their business are twofold. Firstly, after completing extensive research and development of the Aqueous water-based dispersion coating, they have successfully launched a product that they are confident will be suitable for their other paper-based products as well. This means that they can expand their range of home compostable products, making it even easier for businesses and consumers to responsibly dispose of their packaging.

Secondly, their Aqueous cups have recently received home composting certification to Australian standards (AS5810). This certification means that BioPak's cups are now even easier for consumers to dispose of, as they can be composted in their own backyard composting bin. In comparison, their regular Ingeo™ PLA bioplastic lined cups and containers, while still better options than fossil fuel-based plastic lining, require transportation to an industrial composting facility and special machinery to break down with controlled temperatures. Not only does the home compostability of their Aqueous cups provide a more convenient and environmentally friendly disposal option for their consumers, but it also aligns with their commitment to sustainability, as it reduces the need for transportation and processing in industrial facilities.

What volumes of materials, packaging and waste have you saved by designing this new packaging?

Did you do this through changing materials, lightweighting, recycled content, making the packs recyclable or reusable?

Aqueous is a new cup coating technology that uses a water-based coating to coat coffee cups. The coating is printed like water-based ink, allowing it to be absorbed into the paper fibres, rather than sitting on top as an additional layer. This reduces the amount of material needed- while still providing the same leak and grease-proof benefits of other coatings. Their new coffee cups are now much easier to dispose of for the general public, as they can be composted at home. The key to maximising the waste reduction potential of their new packaging will be through consumer re-education and expanding composting infrastructure for those who do not have access to home composting facilities. By changing the lining material of their cups, they are providing a more sustainable option for consumers, and they are committed to promoting responsible disposal practices. They believe that by offering a home compostable solution, they can help reduce the environmental impact of their packaging and contribute to a more circular economy.

How much on-pack and off-pack information do you provide your customers?

BioPak understand that there are currently no specific laws regarding the printing of information on coffee cups or other food service packaging. Many other companies may simply print 'compostable' on their cups without providing clear information on the type of composting required for their products to break down. However, BioPak believe that consumer education is crucial in ensuring that their cups end up in the appropriate composting facilities rather than in landfill. That is why they print all compost certifications on their products and specify whether their product requires industrial composting or home composting.

BioPak use the appropriate logo on their packaging materials, which clearly identifies them as certified for industrial or home composting. This helps end consumers and municipal authorities to recognise compostable packaging and dispose of it correctly. In order to be certified compostable and carry the certified compostable logo, their packaging materials undergo rigorous testing in accordance with AS4736 and/or AS5810 standards. Each business also has its own certification number, which is clearly displayed and can be easily checked online on the ABA (Australasian Bioplastics Association) website. They are committed to providing comprehensive information to their customers to promote responsible waste management and help create a more sustainable future.



What do you feel will be needed to further improve packaging design in the future? (e.g. education, investment, policy/legislation, tech, etc?)

Further education for the general public on proper packaging disposal is essential for driving packaging innovation in the future. BioPak's efforts to educate the public through paid social campaigns, highlighting different types of composting, and providing compost information on their packaging are paving the way for responsible disposal of new packaging technologies. Despite paper recycling being well-established in Australia for decades, there are still misconceptions among many people that paper coffee cups can be recycled in paper recycling bins, when in fact, most cups cannot. Plastic recycling, on the other hand, is a relatively newer practice in Australia and until recently, most plastic recycling was sent overseas to China for processing. There is a growing need for onshore plastic recycling to turn waste into usable products within Australia.

BioPak acknowledge that there is still a long way to go, but they believe that composting is a simpler process that is easier for the general public to understand, and it has many benefits, including reducing greenhouse gases.

They will push for legislation to establish their brand as a trusted provider of certified compostable packaging, accepted in FOGO (Food Organics, Garden Organics) bins across the country. While they have proven that home compostable packaging technology exists, there is a need for significant expansion of composting infrastructure to accommodate the growing food waste generated in our country with its increasing population. BioPak is actively working with local governments and has announced an Emissions Reduction Plan that will involve composters, food producers and other packaging manufacturers to expand organic recycling infrastructure where they operate. This will require education, policy/legislation change and technological advancements to further improve packaging design and create a more sustainable packaging ecosystem for the future.

What does your company have planned in the future? Any new innovations on the horizon?

BioPak are always looking to improve the products they already have and expand their range using the materials they trust. In the next couple of months, BioPak has launched plant fibre-based cutlery that is certified home compostable to Australian (AS5810) standards.



As a winner of the PIDA awards, how valuable is the award to your organisation?

"We are deeply honoured to be awarded this prestigious accolade by the Australian/New Zealand Packaging industry, organised by the Australian Institute of Packaging. At BioPak, we are committed to making a positive impact in our industry, and it is truly gratifying to receive recognition for our efforts in sustainable packaging. These awards hold a special significance as they also serve as a gateway to the esteemed WorldStar Packaging Awards, where we hope to bring home some awards as well. We are proud to be contributing to the advancement of sustainable packaging practices, and this recognition inspires us to continue our pursuit of innovation and sustainability in the packaging industry," says Gary Smith, CEO, BioPak.



You have been awarded a WorldStar Packaging Award. What does this mean to your business?



"We are delighted to have received the WorldStar Packaging Award for our Aqueous BioCups. BioPak consistently develops circular economy sustainable, innovative packaging solutions and it is both humbling and encouraging to be acknowledged by the most prestigious global packaging awards. This recognition drives us to continually create, think outside the box, challenge & push ourselves and other producers." says Sarish Shashidhar, Head of New Product Development, BioPak.



The Australasian Packaging Innovation & Design (PIDA) Awards are an Australia and New Zealand program that is coordinated by the Australian Institute of Packaging (AIP). The awards recognise companies and individuals who are making a significant difference in their field across Australia and New Zealand. The PIDA Awards are the exclusive entry point for Australia and New Zealand for the prestigious WorldStar Packaging Awards.

The Design Innovation of the Year company awards recognise organisations that have designed innovative packaging within each of these six manufacturing categories:

- Food
- Beverage
- Health, Beauty & Wellness
- Domestic & Household
- Labelling & Decoration
- Outside of the Box

There are four special awards available:

- Sustainable Packaging Design
- Save Food Packaging Design
- Accessible & Inclusive Packaging Design
- Marketing Award

The **Sustainable Packaging Design Special Award** is designed to recognise companies that have developed innovative packaging solutions that incorporate sustainability considerations. All entries are judged on Sustainable Packaging Design considerations such as social impact, material, source reduction, energy and recovery and what packaging changes the company is undertaking to meet the 2025 National Packaging Targets. This is also a WorldStar Packaging Awards category.



The Australian Institute of Packaging (AIP) is the peak professional body for packaging education and training in Australasia. The AIP helps shape the careers of generations of packaging professionals – from packaging technologists to international packaging business leaders along with a host of people in associated disciplines – sales and marketing, purchasing, production and environment.

Australian Institute of Packaging

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