Hong Kong Green Label Scheme
Product Environmental Criteria for
Degradable Food / drink Containers and Bags (GL-005-005)

GREEN COUNCIL 環保促進會

BACKGROUND

The Hong Kong Green Label Scheme (HKGLS) is an independent and voluntary scheme, which aims to identify products that are, based on life cycle analysis consideration, more environmentally preferable than other similar products with the same function. The Scheme is organized by the Green Council (GC) with contributions from the HKGLS Advisory Committee and a number of supporting organizations.

The prime objectives of HKGLS are:

- For Consumers: assist in making purchases of products that are less harmful to the environment;
- For Industry: stimulate development and production of environmentally preferable alternatives.

This specification sets out the requirements that degradable food/drink containers and bags will be required to meet in order to be licensed to use the HKGLS label. The requirements include environmental criteria and product characteristics. The specification also defines the testing and other means to be used to verify conformance with the environmental criteria and product characteristics.

POTENTIAL ENVIRONMENTAL IMPACTS

Plastic wastes account for about 20% of the total weight of municipal solid waste disposed of in landfills in Hong Kong, with plastic bags and expanded polystyrene (EPS) products (e.g. food / drink containers and packaging materials) making up the most significant portion. These plastic materials do not decompose and remain in the earth for a long time, thereby polluting the earth and creating environmental problems. The use of degradable (biodegradable or photodegradable) containers and bags could alleviate the loading of landfill sites.

LABEL OBJECTIVE

The aim of the environmental criteria developed for degradable containers and bags is to:

- Promote the use of degradable materials.
- Reduce the massive consumption of plastic bags and food containers which would not decompose after disposal at landfill.

PRODUCT DEFINITION

This document and all product environmental criteria therein apply to degradable food/drink containers and ‘degradable food bags.

PRODUCT ENVIRONMENTAL CRITERIA

The table below sets out the product performance and environmental criteria for Degradable Food/drink Containers and Bags (GL-005-005) under the HKGLS. They have been developed based on the Environmental Protection Department (Hong Kong SAR)'s "Testing Guideline on the Degradability and Food Safety of Containers and Bags".

Product Criteria	Verification Method(s)*
PHYSICAL PERFORMANCE CRITERIA	
1. Containers shall be resistant to static loading such that the average deformation in height of specimens subject to test shall be ≤ 6%.	✓ Review of laboratory test report(s). Static loading Test HS 3001 or equivalent.
2. Fold resistance of containers with non-detachable lids shall be resistant to folding and unfolding and no hinge breakage shall occur for at least two out of three test specimens.	✓ Review of laboratory test report(s). Fold Resistance Test HS 3002 or equivalent.
3. Low temperature resistance: When the product is stored at a temperature of - 25℃ for about 4 hrs, there shall be no breakage for at least two out of three test specimens.	✓ Review of laboratory test report(s). Low Temperature Resistance Test HS 3003 or equivalent.
4. Oil and water proof at raised temperature: The container shall not permit oil and grease, moisture or small amounts of water to penetrate at raised temperature for a minimum of about twenty minutes.	✓ Review of laboratory test report(s). Oil and Water Proof Tests at raised temperature HS 3004 or equivalent.
5. Acid resistance: The container shall be resistant to acidic foodstuffs, and there shall be no discoloration, defects, distortion and leakage for all the test specimens.	✓ Review of laboratory test report(s). Acid Resistance Test HS 3006 or equivalent.
6. Tensile strength: Degradable food bags shall meet the standard as claimed.	✓ Review of laboratory test report(s). Tensile Strength Test HS 3005 or equivalent.

Product Criteria	Verification Method(s)*
PRODUCT ENVIRONMENTAL CRITERIA 7. The quantity of constituents of the product that may migrate from the product to the foodstuffs contained therein shall not exceed the following limits : • Distilled water stimulant ≤10 mg/dm or 60 mg/kg • Acetic acid stimulant ≤10 mg/dm or 60 mg/kg • Ethanol stimulant ≤10 mg/dm or 60 mg/kg	✓ Review of laboratory test report(s). HS 1001 or HS 1002 or equivalent.
8. The concentration levels of lead, cadmium, mercury, and chromium VI present in the product shall not exceed the following limits: • Cadmium ≤3 ppb • Chromium ≤50 ppb • Lead ≤10 ppb • Mercury ≤1 ppb	✓ Review of laboratory test report(s). Heavy metals test HS 1003 or equivalent.
9. The concentration levels of pesticide residues listed below that are present in the product shall not exceed the following limits: • Organophosphate pesticide : ≤100 ppb for each of the following : Dichlorvos, Dimethoate, Fenitrothion, Fenthion, Malathion, Parathion, Phorate • Organochlorine pesticide : ≤100 ppb for each of the following : Aldrin, BHC, DDT, Dieldrin, Heptachlor	✓ Review of laboratory test report(s). Pesticide residues test HS 1004 or equivalent.
10. Coliform bacteria shall be below the detection limit of 1 colony per 100 g.	✓ Review of laboratory test report(s). Coliform bacteria test HS 1005 or equivalent.
11. Moulds and yeasts present in the product shall be ≤50 colonies per gram of material.	✓ Review of laboratory test report(s). Moulds and yeasts test HS 1006 or equivalent.
12. Degradability The percent Biodegradation of the product material shall be ≥60% within 180 days.	✓ Review of laboratory test report(s). Biodegradability Test HS 2001 or equivalent.

*Analytical testing should be accredited and performed by laboratories that meet the requirement laid out in the IEC/ISO 17025 or EN45001 standards or any equivalent systems e.g. HOKLAS, CNAS. Under special situation and with the approval from GC, test can be performed by in-house method by the accredited laboratory or manufacturer.

Notes:

1. The Environmental Protection Department (HKSAR)'s HS series of tests as set out in the "Testing Guideline on the Degradability and Food Safety of Containers and Bags", available at https://www.wastereduction.gov.hk/en/assistancewizard/guide_food_cont.htm.

2. Recognized standards that have international acceptability (these may include regional or national standards, or industry or trade methods, which have been subjected to peer review).