

General Notice

Recyclability of bamboo and/or sugar cane cellulose fibre-based packaging

PRELIMINARY REMARKS

Novel packaging made from natural fibres is increasingly common on the market. This is especially true for bamboo, sugar cane, straw and wood-based materials.

Paper or cardboard may be produced from any plant material with cellulose-rich fibres (bamboo, cotton, flax, certain reeds, or other herbaceous plants, wheat straw, sugarcane bagasse, corn or sorghum stalks). This involves removing unwanted wood components to retain just the cellulose fibre. This is why packaging made from pulp or raw wood is not within CEREC's remit which solely concerns used household paper/cardboard packaging. Therefore only bamboo and/or sugar cane cellulose fibre-based trays are covered by this notice.

Only virgin packaging was assessed. This packaging can nevertheless be covered with film (e.g. PE or PET) to provide a barrier, which generates additional waste that needs to be processed during tray recycling.

TABLE OF IMPACTS ON RECYCLABILITY

CHARACTERISTICS ASSESSED	BAMBOO CELLULOSE FIBRE-BASED PACKAGING	SUGAR CANE CELLULOSE FIBRE-BASED PACKAGING
PULPING	Total disintegration at t>30 minutes and rapid wet disintegration	Difficult disintegration > loss at pulper output and during screening stages
FIBRE YIELD	High (100%)	10% rejects at 30 minutes
CONCLUSION OF THE RESEARCH LABORATORY	Packaging <u>recyclable in a Conventional packaging recycling line</u>	Packaging <u>difficult to recycle in a conventional packaging recycling line</u> (Likely presence of a hydrophobic binder between the fibres preventing efficient disintegration)

GENERAL OPINION OF CEREC

- CEREC has issued a favourable opinion regarding recycling of bamboo and/or sugar cane cellulose fibre packaging, provided there are no hydrophobic binders between the cellulose fibres, which can be integrated into 5.02A, 1.05A and 5.03A type paper/cardboard recycling processes
- CEREC advises against use of a hydrophobic binder between the cellulose fibres (regardless of cellulose fibre source), as a considerable time is required for disintegration which is not compatible with discontinuous pulpers and causes substantial rejection in a continuous system.

APPROVAL



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