

Document title: **Preliminary market analysis**

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Project Title: **Development of Injection and blow extrusion molded BIOdegradable and multifunctional PACKages by nanotechnology: improvement of structural and barrier properties, smart features and sustainability**

Project acronym: **DIBBIOPACK**

Instrument: **Large Scale integrating Collaborative Project**

Thematic Priority: **FP7-NMP.2011.LARGE.5**

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Organisation name of lead contractor for this deliverable: COSMETIC

Dissemination level		
PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	X

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## PUBLISHABLE EXECUTIVE SUMMARY

Bioplastics, the plastics produced from sustainable natural raw materials, have started to appear on the store shelves. Consumer goods giants like Coca Cola, Heinz, Procter & Gamble and Nike have declared their commitment on replacing in the next few years their traditional fossil based packaging with more green and sustainable bioplastics. Since 2009 beverage company Coca-Cola uses 100% bio-based PET (PlantBottle), while since early 2011, the cosmetics division of Procter & Gamble uses a sugarcane-based polyethylene packaging material for products in its Pantene Pro V hair care range in Western Europe as well as in its CoverGirl and Max Factor colour cosmetic ranges. The Coca-Cola Company, Ford Motor Company, H.J. Heinz Company, NIKE, Inc. and Procter & Gamble announced the formation of the Plant PET Technology Collaborative (PTC), a strategic working group focused on accelerating the development and use of 100% plant-based PET materials and fiber in their products. This new collaborative was formed to support new technologies in an effort to evolve today's material that is partially made from plants to a solution made entirely from plants.

Several big petrochemical producers - such as INEOS, Dow, Braskem, ExxonMobil, Mitsui, and Mitsubishi - are now either producing bio-based products or are doing research and development in the field.

Polylactic acid (PLA) is a more eco-friendly polymer since it is biodegradable by composting. DIBBIOPACK project is focused on the production of multifunctional packaging from PLA for cosmetics, food and pharmaceutical industry. The main hurdles are PLA barrier properties and high raw material cost.

Although packaging has the highest environmental footprint within cosmetics, food and pharmaceutical products, it appears to be largely ignored when companies look at sustainability. This is also encouraged by the decision of many natural or organic standard certification bodies in the past not to care about the packaging sustainability.

A datamonitor study of 10/2010, study revealed that around a quarter of consumers have indicated that they will switch personal care products if they find them difficult to recycle. So there is the demand from many consumers to move to sustainable packaging.

Current legislation is also taken into consideration and a SWOT analysis was performed.