Bio-based plastics Case study SME RPC Envases, S.A.





RPC Envases, S.A., company located in Madrid (Spain) and specialized in the manufacturing of blow moulded bottles for different markets like food, cosmetics and chemicals, has applied LCA to go tool for the environmental improvement of the packaging for an air freshener of 125 mL.

The company, RPC Envases, S.A., decided to join the training programme of LCA to go with the support of ITENE. The main drivers to join this training were the current customer & market needs as well as the full implementation of the environment as a part of the product development & improvement strategy.

TOTAL				100%
MATERIALS			49%	
Raw materials	-		49%	
Compounding	- 0%			
TRANSPORT		33%		
PROCESSING	- 0%			
Processes	- 0%			
Transport	- 0%			
DISTRIBUTION	- 3%			
Packaging	- 1%			
Transport	- 1%			
END-OF-LIFE	- 13%			
Landfill	- 5%			
Incineration	- 7%			
Composting	- 0%			
Recycling	- 1%			
Transport	- 0%			
	0 10 20 30	40 5	50 60 70 80 90 100	11

The LCA to go tool was used in order to define main environmental improvement strategies for the primary package of a concentrated air freshener of 125 mL aimed at the minimization of its carbon footprint. Based on different strategies for environmental improvement recommended by ITENE, as well as the results of the LCA to go tool, it was estimated a potential carbon footprint minimization of about 3.46% if the bottle is produced from biobased polyethylene

Figure 1 Environmental profile of PE bottle 125 mL obtained from LCA to go tool

Other additional alternatives for environmental improvement were also considered, which included the analyses of alternative raw material suppliers. This action resulted in a substantial minimization of the carbon footprint during transport stage.

These results conducted to different alternatives for an improvement of environmental profile of the primary packaging for the concentrated air freshener of 125mL.

Ms. Maite Martín, Quality Manager at RPC Envases, S.A. said: "The mentored training with LCA to go tool has help us to know from an early step the environmental impacts of our decisions".

Mr. Miguel Lozano, Sales Dept. said, "LCA to go tool is an easy-to-use tool that makes available valuable environmental information for our activities and products".

