



Are Circular Economy Hydal PHA technology and products a good business?

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Key idea of **Hydal**

**Material recovery of
WASTE-WCO**

**Protection of waste
water plant –**
collection of WCO in
household



BIOPOLYMER PHA

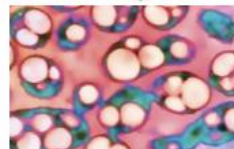
BIOPLASTICS

CHEMICAL
SPECIALITIES

Zero Waste
manufacturing

"NATURE WORKS"

Biotechnological process



Superbio

Consultation, integration
to value chain and sharing
the best practices

**Hydal is
NATURE**



**WHAT ABOUT
BUSINESS?**

Biodiesel or biopolymer from UCO?

PROFIT MARGIN UCOME/ UCO

(UCOME = Used Cooking Oil Methyl Ester)

225 USD/t

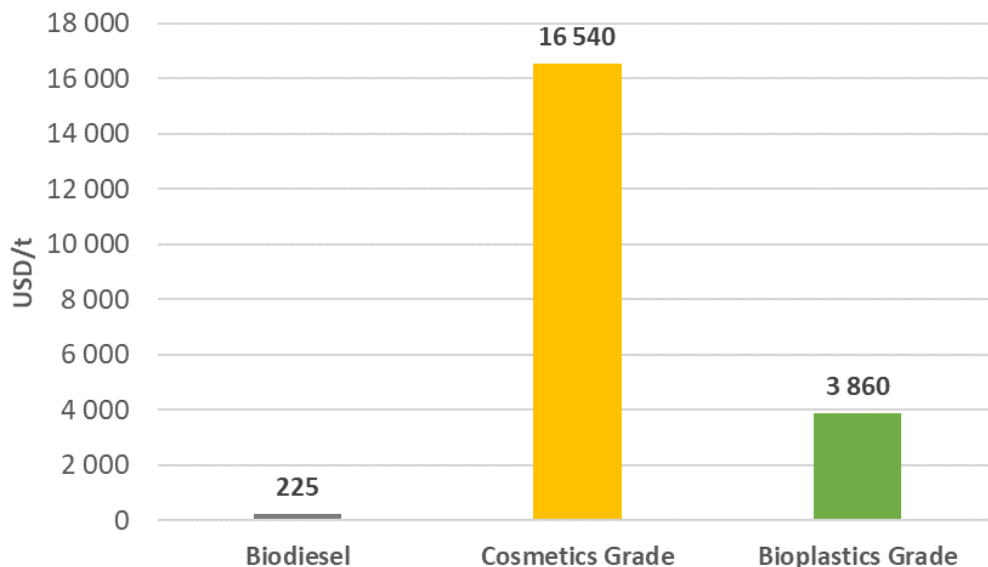


PROFIT MARGIN HYDAL PHA FROM UCO

(UCO = Used Cooking Oil)


Cosmetics Grade 16 540 USD/t

Bioplastics Grade 3 860 USD/t



Note: UCOME minus UCO according to RED schemes
Source: <https://www.greenea.com/en/market-analysis/>

Note: Selling price of Hydal PHA Grades - UCO price/t
Source: NAFIGATE data

An aerial photograph of a dense forest with trees in various shades of green and yellow, suggesting autumn. A large, solid green circle is centered over the image, containing the text "AND WHAT ABOUT NATURE?".

**AND WHAT
ABOUT NATURE?**

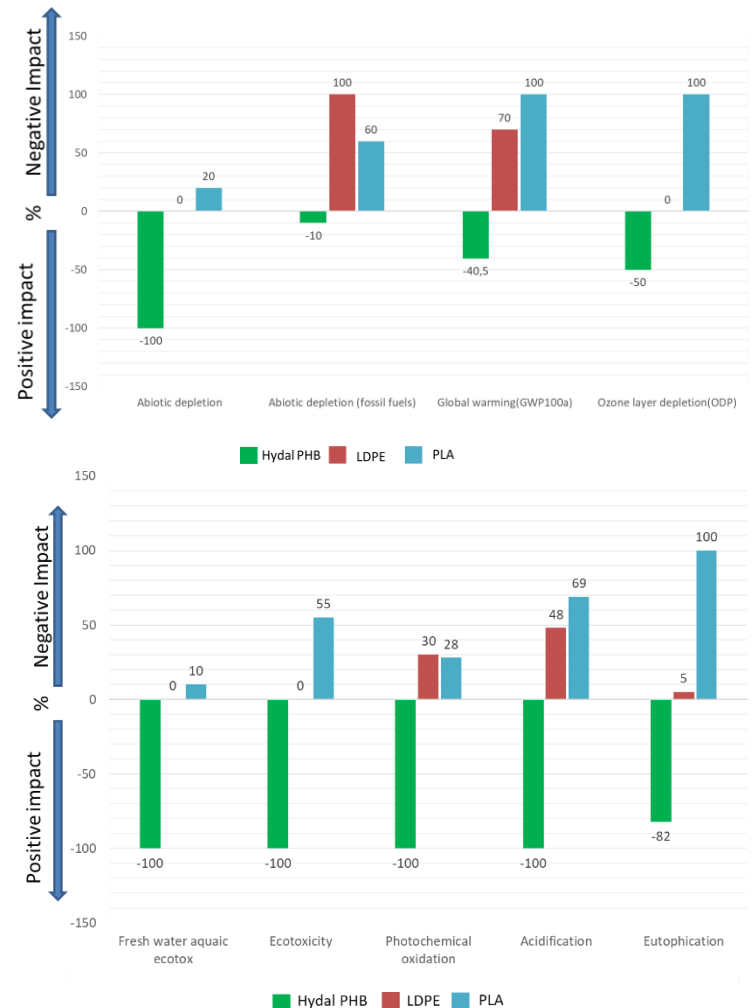
Hydal is NATURE



The LCA method has shown a significant contribution of the production of PHB (poly-3-R-hydroxybutyrate) polymers from used cooking oil using biotechnology Hydal to environment.



Compared to polymers produced from primary raw materials, biotechnology Hydal saves raw material sources, including oil, reduces CO₂ emissions (so it reduces contribution to global warming), reduces ecotoxicity, freshwater toxicity, acidification, eutrophication (the process of nutrient enrichment, especially by nitrogen and phosphorus, which harm natural environment) and reduces also other negative effects on the environment.



Thank You

