



ENVIRONMENTAL PRODUCT DECLARATION FOR EXTRA VIRGIN OLIVE OIL

Deoleo®
The Olive Oil Company.

EPD®

According to ISO 14025.
Programme: The International EPD® System, www.environdec.com
Programme Operator: EPD International AB

Registration number: S-P-08356
Publication date: 2023-03-30

Validity date: 2028-03-30

CONTENT

1. WHAT IS AN EPD

An EPD® (Environmental Product Declaration)[1] is a verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of a product. The International EPD® System is a global programme for environmental declarations based on ISO 14025.

The relevant standard for Environmental Product Declarations is ISO 14025, where they are referred to as "type III environmental declarations". A type III environmental declaration is created and registered in the framework of a programme, such as the International EPD® System.

The concept of type III environmental declarations was developed to primarily be used in business-to-business communication, but their use in business-to-consumer communication is increasingly demanded by markets.

[1] http://www.environdec.com/en/What-is-an-EPD/

1.1. Programme information

EPD Program	EPD program: EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, E-mail: info@environdec.com
EPD Program Operator	EPD Program Operator: EPD International AB
PCR reviwed by	The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR moderator or PCR committee and were excused from the review
Chair of the PCR review:	Adriana del Borghi
Product category rules (PCR)	PCR 2010:07 v.3.0. VIRGIN OLIVE OIL AND ITS FRACTIONS - PRODUCT GROUP: UN CPC 21537
EPD Registration Number	S-P- 08356

EPD prepared by	CO2 Consulting S.L. More information at www.co2co.es Contact: Juan Antonio Polo, E-mail: japolo@co2co.es
EPD owner	DEOLEO GLOBAL S.A.U. More information at https://Deoleo.com/ Contact: Javier Reyes E-mail: javier.reyes@Deoleo.com
Validity date:	2028-03-30
Geographical scope:	Global
Comparasion of EPD within this PCR:	EPDs within the same product category but from different programmes may not be comparable.

2. DEOLEO, THE OLIVE OIL COMPANY

We create value through what we do: Our mission is to inspire those who are part of the olive oil world to make a positive difference every day. As the world's No. 1 olive oil company, we have a valuable opportunity to use our scale to foster change, protecting olive oil heritage, and leading our industry in prioritizing responsible business.

The future comes first: Our vision is to drive olive oil towards a sustainable future. This starts with creating strong partnerships with our suppliers to incorporate sustainable agricultural practices. We work closely with farmers, sharing our knowledge about olives to develop comprehensive solutions that promote their economic success while preserving and developing the land we all depend on.

Innovation in every drop: Our purpose is to offer exceptional products that provide superior quality. Our Master Blenders have in-depth knowledge of taste preferences worldwide and use this knowledge to preserve the taste of our iconic blends. At the same time, we innovate in the development of our products and processes, to continue to delight our consumers.

Protecting the process from field to fork: Quality and freshness are essential characteristics of our olive oil. Therefore, we are diligent when it comes to protecting them from the field to the supermarket. We take care of each phase of its elaboration, from the production techniques used to the quality parameters applied, all to preserve the nutrients of our oils. Our packaging protects extra virgin olive oil against the effect of light and oxygen, so that the consumer can enjoy at all times.

Sharing information with transparency: Through clear and honest information about the best before dates on our packaging, we show consumers how and when to use our products to enjoy them as part of a healthy diet. We make a difference by including the date of harvest of the olives and the date of bottling of our oils. Our agents perform quality checks in supermarkets to ensure that what is sold meets our high-quality standards.

Sustainability: To create, by making quality products that delight consumers, we must work preserving the environment and supporting the people who make our business possible. Thinking and acting sustainably is the key to promoting a healthier future.

Olive oil occupies a central place in many people's lives. From those who grow olives to those who create magnificent blends through those who bottle it and even our consumers, who enjoy every day the benefits of a good olive oil. Olive oil is the key ingredient around which our history as creators of exceptional brands revolves, brands that today remain so authentic and original thanks to our commitment to responsible production protecting livelihoods, promoting health and caring for our planet.

3. DEOLEO´S EXTRA VIRGIN OLIVE OIL

3.1. What the olive oil is?

Extra virgin olive oil is the juice of the olive (*Olea europaea* L.). It is the only oil, among which are commonly found on the market, extracted from fresh fruit, and without the use of solvents. It is therefore a completely natural product with unique aroma and flavour come directly from the fruit you get.[2]

A virgin olive oil is obtained from fruit juice in perfect maturity, from a healthy olive oil being obtained starting form of a fresh fruit at optimum ripeness and in perfect condition after harvesting and transportation being processed at the mill in a minimum period of time, under criteria and quality control, solely by mechanical or other physical means and which have not undergone any treatment other than washing, decantation, centrifugation and / or filtration. Maximum free acidity content is 0.8% as oleic acid. Virgin olive oils are classified as extra virgin, virgin and lampant. Only the first two are intended for direct consumption[3].

3.2. Intended applications

Extra virgin olive oil is ideal for salads, sauces or dressings vegetables, so olive juice retains all the aroma and flavour.

Furthermore, it is also eaten raw sprinkled on bread or toast or even on table olives with smoked meats, sandwiches, sausages, etc. Very versatile for the preparation of all kinds of sauces.

Olive oils are the most stable vegetable fats and do not result toxic reactions when subjected to frying, grilling or baking, in normal conditions, thus contributing to improving the gastronomic qualities of food.

Therefore, olive oils, are most suitable for cooking at high temperatures requires the preparation of food skipped, roasted, sauteed or fried.

[2] *International Olive Oil Council: IOC*

[3] *Olive Oil Interprofessional.*

4. THE LIFE CYCLE of EVOO

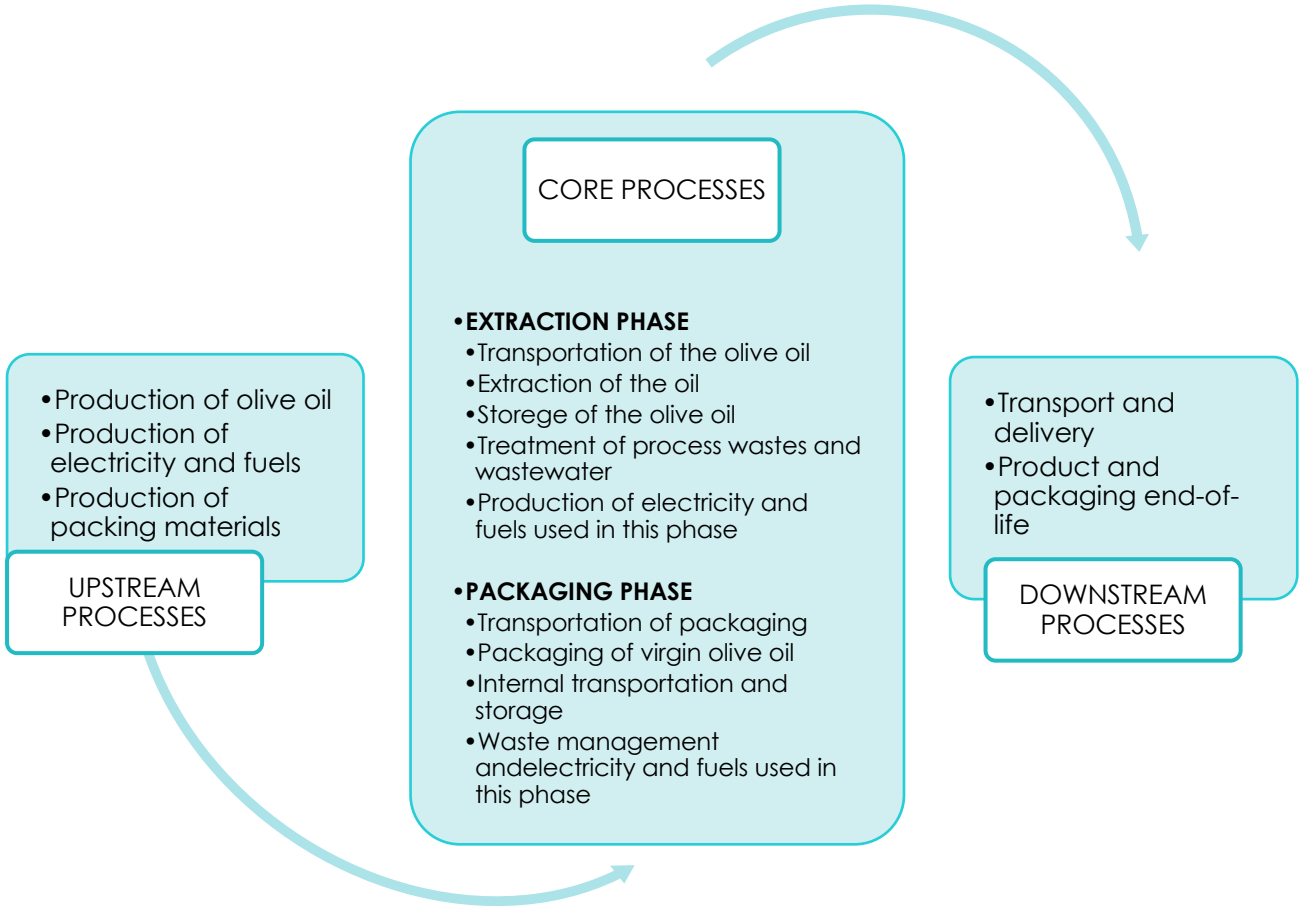


Figure 1.Stages of Extra Olive Oil´s life cycle.

5. PRINCIPLES AND CRITERIA OF LIFE CYCLE ANALYSIS

This Environmental Product Declaration has been developed for the Extra Virgin Olive Oil produced from the 2018/2019, 2019/2020 and 2020/2021 harvest, by DEOLEO at their facilities located in Cordoba (Spain).

5.1. The functional unit

As provided in Product category rule 2010:07 v 3.0, the declared functional unit is "1 liter of Extra Virgin Olive Oil, packaging included", to be used by consumers as salad dressing and for cooking.

The Product Category Rule 2010:07 v 3.0 includes the products that belong to group UN CPC 21537 "Virgin Olive Oil and its fractions".

Following tables present a summary of the data regarding the content of packaging materials per functional unit based on representativeness of the packaging types:

Table 1. Content of packaging material (kg) per functional unit (1 L EVOO packed)

Packaging Material	Content (kg/UF)
Glass	3,59E-02
PET	3,62E-02
Label	2,16E-03
Stopper	8,00E-04
Cardboard	6,63E-03
Pallet	4,19E-03

The following data show the composition of UF (% by volume) according to the representativeness ® of the formats sold by DEOLEO in the study period.

Table 2. Composition of Functional Unit

Brand	Material	Volume (L)	R (%)
Carbonell	Glass	0,25	0,21%
		0,50	0,89%
		0,75	2,42%
	PET	0,50	0,08%
		0,75	0,03%
		1	10,59%
		3	4,31%
		5	27,09%
Maestros de Hojiblanca	Glass	0,25	0,01%
		0,50	0,05%
		0,75	0,03%
		1	0,05%
	PET	0,75	0,01%
		1	3,89%
		3	4,87%
		5	23,66%
Bertolli	PET	0,25	0,06%
		0,50	2,27%
		0,75	2,90%
		1	1,93%
		1,50	6,02%
		2	1,97%
		3	6,70%

5.2. System boundaries

As shown in Figure 1 and in accordance with PCR 2010:07 v 3.0, the LCA of extra virgin olive oil is divided into upstream, core processes and downstream. The system limits of this EPD are "cradle to grave".

5.2.1. Upstream processes (Field Phase)

For the purposes of this Environmental Product Declaration, considered *upstream processes* are the agronomic operations or Field phase:

- Operations for the transformation of land use if the lifespan of the sea olive grove is expected to be less than 25 years.
- Operations for the establishment of the olive grove including the irrigation system if the olive grove life is expected to be less than 25 years.
  - Olive fruit production (CPC 0145) used in the central process on crib farms, for which inputs are considered:
  - Production of seeds, cuttings or plants for cultivation.
  - Production of inputs, such as fertilizers and plant protection products.
  - Waste management.
  - Cultivation phase (e.g. land preparation, planting operation, irrigation, fertilization, application of plant protection products, collection).
  - Fertilizer emissions and plant protection/pesticide application products.
  - Use of wood as a by-product of the renovation or end-of-life pruning of olive trees.
  - External transport of inputs to the production region and sites.
  - Water extraction and use.
  - Production of auxiliary products for harvesting (networks, boxes, detergents, etc.)
- Impacts due to the production of electricity and fuels in the upstream module (generation of energy products - fuel and electricity - uses in agriculture on the farm).
- Manufacture of primary, secondary, and tertiary packaging.

5.2.2. Core processes (Industrial Phase and Packaging Phase)

As key processes in Industrial Phase are considered:

- Mechanical processes to extract the oil contained in the olives, consisting on grinding, centrifugation, malaxiting, and filtering the oil.
- Use of water at the mill, exclusively for cleaning operations since this EVOO not incorporate water.
- Preservation in stainless steel tanks.

- Maintenance (e.g. of the machines).
- Production of electricity and fuels used in the extraction module.
- Pomace produced in this phase is considered as a co-product.
- Wastewater treatment.
- Waste management, mainly "alpeorujo" (wet pomace) and auxiliary elements.

As key processes in Packaging Phase are considered:

- External transportation of packaging & raw materials to the packing unit.
- Transportation of virgin olive oil to the packing unit.
- Packaging of virgin olive oil.
- Internal transportation.
- Storage of packed product before dispatch.
- Waste management generated during packing.
- Production of electricity and fuels used in the packaging module.

5.2.3. Downstream processes (Distribution, use and EoL Phase)

By *downstream processes* have been considered in this Environmental Product Declaration:

Transports:

Calculations of transportation of packed olive oil to distribution centres and the retail stores to reach the consumer is included in this phase. Data takes into account gross weight (including pallets weight, if applicable), packaging types and sizes, distances by road and by sea, vehicles of transportation. Activity data is expressed in tkm per litre of extra virgin olive oil. The consumer transports to the store are excluded.

Then, the main inputs need included in the logistic stage are the next points:

- The product distribution is done across Spain and the world. The main sales countries are: Spain, USA, Brazil, United Kingdom,etc.
- Transportation from final production/storage site to an average distribution platform, if applicable.
- Transportation to retailer, if applicable.

Use product:

In the phase is has been considered that is used for salad dressing, for cooking and for deep-frying. If for salad dressing, no further data are required, but it for cooking and deep frying the electricity

consumption per process has to be included in the model.

In this study is assumed that 55% of all olive oil produced is used in fresh, 38% for cooking (excluding deep-frying) and 7% for deep-frying. Moreover, for deep-frying it is assumed that the oil is cooked 10 minutes in 180ºC, whereas for normal cooking it is assumed that the oil is cooked for 10 minutes in 100ºC.

The waste of the product in use (e.g. the olive oil left after cooking and deep frying) is excluded from the use stage but is part of the end of life stage.

The inputs required in this phase are the following:

- Natural gas requirement for cooking.
- Energy requirement for deep-frying.

The end-of-life:

The End of Life (EoL) of packaging, it was modelled according to the EoL formula provided by the European Commission. All packaging waste not recycled are assumed to be incinerated or landfilled. It was considered that all the packaging materials were primary materials. The average recycling rates of the packaging materials in EU according to Eurostat statistics are included in the following table:

Table 3. Average recycled and non-recycled rates (source: Eurostat 2017)

Packaging material	Recycled	Incineration	Landfill
Glass	74.70%	0.30%	25.00%
Aluminium	79.20%	0.40%	20.40%
Paper/cardboard	84.60%	7.40%	8.00%
Plastic	41.90%	27.90%	30.20%

The flows included in this phase are the following:

- End of life of the olive oil packaging materials.
- End of life of the waste olive oil left after deep-frying.

Here, it is assumed that waste oil is generated only from deep-frying, whereas in other use scenarios it is assumed that no waste is generated, as all olive oil is consumed.

5.3. Time reference period of Life Cycle Analysis

Data used for this study of LCA are referred for campaign 2018/2019, 2019/2020 and 2020/2021.

5.4. Use of LCA software

Software system for global analysis "SimaPro 8.0.5" has been used for this life cycle analysis. The Ecoinvent database (v3.01) has been applied.

5.5. Criteria for Life Cycle Inventory

Results of the life cycle assessment are bases on the following assumptions:

- Transport of all raw materials and/or secondary materials are calculated according to the means of transport used.
- Conversion factors to determine the value of impact of each activity data were obtained from ECOINVENT.
- The agronomy phase information is generic secondary data of the most representative supplier countries. The average data to cultivation of olive trees for the three last campaigns are used. (Table X). A "mix" has been made for each country based on its cultivation systems (traditional, intensive and super-intensive).
- The kilometric distances have been obtained using "google maps" and nautical distances with "SeaRates.com[4]".

5.6. Data Quality

All used data in this environmental declaration study counts on less than 5 years old. Viability of all data submitted has been checked.

All Information of industrial, packaging and distribution phases come from primary data and measurements, therefore, the quality of the data can be described as appropriate.

However, information of agronomy, use and end-of-life phases come from generic data.

Table 4. System boundary and scope of this study. The table illustrates the different life cycle stages according to the PCR

PARAMETERS	UPSTREAM			CORE		DOWNSTREAM	
Processes	Olive oil fruit	Electricity and fuels	Production of packaging material	Extraction phase	Packaging phase	Transport	Use and End of life
Quality data*	2º	2º	1º	1º	1º	1º	2º
Scope**	X	X	X	X	X	X	X

**Data Quality can be primary or specific data (1º) or secondary data (2º).*

***Scope: X= module is declared in EPD. MND = module not declared (does not indicate zero impact result). According to PCR 2010:07 v3.0.*

5.7. Allocation rules

The allocation refers to the allocation of input and output flows for a lifecycle module of the product that is being investigated as ISO 14040.

[4] SeaRates

The assignment of the different factors of the impact categories studied for the case of electricity consumption is calculated from the average of Spanish electricity sources.

The calculation of emissions (e.g., CO_2, HCl, SO_2 or particulates) that depends on the inputs is carried out based on the composition of the feed material.

Table 5. Main inputs and outputs

PROCESS	MAIN PRODUCT AND CO-PRODUCT	ALLOCATION INSTRUCTION
Cultivation of olives	Wood produced by pruning and tree renovation	Product mass
Production of olive oil	Pomace	Product mass

Olive oil arrivals to DEOLEO's facilities come from both external suppliers and own oil mills controlled by DEOLEO, so a mixed one is available.

The most representative suppliers of olive oil are collected in the following table:

Table 6. Representativeness of purchases by main countries

Country	Representativeness			
	2019	2020	2021	Average
Country 1	78,45%	79,08%	92,05%	82,01%
Country 2	0,00%	14,53%	7,95%	11,15%
Country 3	6,82%	6,38%	0,00%	4,91%
Country 4	14,73%	0,00%	0,00%	1,83%
Total				**>95%**

The country 1 and 2 show more than 90% average of total purchases of Deoleo's olive oil in recent years.

6. CONTENT DECLARATION

The content declared in this Environmental Product Declaration content exceeds 99% of the total ingredients, as this product does not include preservatives or additives, pursuant to the applicable national and European legislation.

6.1. Information about packaging

The packaging has been classified as distribution or consumer packaging. Table 7 shows the type, composition (about Ecoinvent v 3.01 database), function and treatment end-of-life. The different size packaging is as follow:

Table 7. Packaging

Material	Volume (L)
Glass	0,25 L
	0,50 L
	0,75 L
	1 L
PET	0,25 L
	0,50 L
	0,75 L
	1 L
	1,5 L
	2 L
	3 L
	5 L

Table 8. Information about packaging

Packaging	Type	Composition	Function	Treatment end-of-life
Distribution Packaging	Cardboard	Corrugated board box	Secondary packaging	Recycling treatment
	Pallet	EUR-flat pallet		Reuse
Consumer packaging	Glass bottle	Packaging glass, green	Primary packaging	Recycling treatment
	PET bottle	Polyethylene terephthalate, granulate, bottle grade		
	Cap	Aluminium/ Polyethylene		
	Label	Printed paper, offset		
	Stopper	Polyvinylidenchloride, granulate		

7. ENVIRONMENTAL PERFORMANCE

7.1. Environmental performance

The Environmental performance considered for the evaluation of impact associated with the production of EVOO under 2010:07 v 3.0 PCR are as follows:

Table 9. Impact categories

IMPACT CATEGORY (UNIT)	CHARACTERISATION FACTORS
Global warming potential (kg CO_2 eq.)	GWP100, CML 2001 **baseline** Version: January 2016.
Acidification potential (kg SO_2 eq.)	AP, CML 2001 **non-baseline** Version: January 2016.
Eutrophication potential (kg PO43- eq.)	EP, CML 2001 **baseline** Version: January 2016.
Photochemical oxidant formation potential (kg C_2H_4 eq.)	POFP, LOTOS-EUROS as applied in ReCiPe 2008.
Abiotic depletion potential – Elements (kg Sb eq.)	ADPelements, CML 2001 baseline Version: January 2016.
Abiotic depletion potential – Fossil fuels (MJ)	ADPfossil, CML 2001 baseline Version: January 2016
Water Scarcity Footprint (m^3 H_2O eq)	WSF, AWARE Method. Boulay et al (2017)
Human toxicity (kg 1,4-DB eq.)	Tox H, CML 2001 **non-baseline** Version: January 2016.
Freshwater aquatic eco-toxicity (kg 1,4-DB eq)	Ecotox W, CML 2001 **non-baseline** Version: January 2016.
Land use (m^2a)	LU, Ecological footprint Version 1.01 (April 2009)

7.2. Use of resources

The indicators for resource use based on the life cycle inventory (LCI) listed following:

- Primary energy resources – Renewable (MJ)
- Primary energy resources – Non-renewable (MJ)
- Secondary material (kg)
- Renewable secondary fuels (MJ)
- Non-renewable secondary fuels (MJ)
- Net use of fresh water (m^3)

7.3. Waste production and output flows

- Hazardous waste disposed (kg)
- Non-hazardous waste disposed (kg)
- Radioactive waste disposed (kg)
- Components for reuse (kg)
- Material for recycling (kg)
- Materials for energy recovery (kg)
- Exported energy, electricity (MJ)
- Exported energy, thermal (MJ)

8. RESULTS OF LIFE CYCLE ANALYSIS

Evaluation of the impact categories are shown in the following tables, for the generic functional unit "1 liter of extra virgin olive oil" depend on different packaging:

- ✓ Environmental profile of the functional unit of 1 liter of extra virgin olive oil
- ✓ Environmental profile of the functional unit of 1 liter of Carbonell extra virgin olive oil bottled in glass and PET in different sizes
- ✓ Environmental profile of the functional unit of 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass and PET in different sizes
- ✓ Environmental profile of the functional unit of 1 liter of Bertolli extra virgin olive oil bottled in PET in different sizes

The image below illustrates the set of formats analysed in the LCA of this product declaration.

Carbonell
1866

MAESTROS DE
Hojiblanca
ACEITE DE OLIVA VIRGEN EXTRA

BERTOLLI
DAL 1865

BERTOLLI PET 250ml. BERTOLLI PET 500ml. BERTOLLI PET 750ml. BERTOLLI PET 1L. BERTOLLI PET 1,5L. BERTOLLI PET 2L. BERTOLLI PET 3L

CARBONELL VID 250ml. CARBONELL VID 500ml. CARBONELL VID 750ml. CARBONELL PET 500ml CARBONELL PET 750ml CARBONELL PET 1L CARBONELL PET 5L

MdH VID 250ml. MdH VID 500ml. MdH VID 750ml. MdH VID 1L MdH PET 750ml MdH PET 1L MdH PET 3L MdH PET 5L

MdH = Maestros de Hojiblanca

Table 10. Functional unit: 1 liter of extra virgin olive oil (l)

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,58E+00**	7,10E-01	2,63E-01	1,98E-01	1,97E-02	5,53E-02	6,99E-02	3,62E-01	-1,01E-01
GWP Biogenic	**kg CO_2 eq**	**4,19E-01**	9,31E-02	5,09E-03	1,02E-02	4,73E-02	4,84E-04	5,71E-04	2,68E-01	-6,21E-03
GWP LU-LT	**kg CO_2 eq**	**3,83E-02**	3,80E-02	1,31E-04	2,56E-04	6,68E-05	1,09E-05	3,80E-05	7,49E-05	-2,45E-04
GWP Total	**kg CO_2 eq**	**2,03E+00**	8,41E-01	2,68E-01	2,09E-01	6,70E-02	5,58E-02	7,05E-02	6,31E-01	-1,07E-01
AP	**kg SO_2 eq**	**1,55E-02**	1,02E-02	1,64E-03	1,16E-03	1,29E-04	3,43E-04	1,05E-03	1,80E-03	-8,74E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	3,39E-04	1,92E-04	7,99E-05	1,26E-04	3,46E-04	-1,71E-04
POCP	**kg C_2H_4 eq**	**5,64E-04**	3,69E-04	7,81E-05	6,27E-05	6,83E-06	1,10E-05	3,44E-05	4,72E-05	-4,49E-05
Abiot elem	**kg Sb eq**	**1,29E-05**	1,19E-05	1,34E-07	8,35E-07	3,44E-08	1,37E-07	6,06E-08	9,91E-08	-2,87E-07
Abiot F	**MJ**	**2,41E+01**	8,92E+00	7,05E+00	4,20E+00	2,18E-01	8,56E-01	1,07E+00	3,67E+00	-1,85E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	2,18E-03	9,22E-05	8,66E-05	1,23E-04	2,10E-04	-9,70E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	1,29E-01	8,22E-03	2,47E-02	2,98E-02	4,01E-02	-1,07E-01
Ecotox W	**kg 1,4-DB eq**	**6,13E+00**	5,96E+00	5,04E-02	5,74E-02	2,75E-02	1,09E-02	8,61E-03	3,85E-02	-2,96E-02
LU	**m^2a**	**6,59E-01**	6,11E-01	1,55E-02	3,46E-02	4,20E-03	6,35E-03	8,14E-03	5,05E-03	-2,59E-02
ByP	**kg**	**3,24E+00**	3,24E+00	0,00E+00	0,00E+00	3,40E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 11. Functional unit: 1 liter of extra virgin olive oil (II)

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,22E-01**	1,80E-01	3,65E-01	8,69E-02	1,65E-02	2,20E-02	1,21E-02	1,13E-01	-7,36E-02
Used as raw materials	MJ	**3,87E+00**	3,73E+00	6,69E-02	1,55E-01	2,61E-02	5,07E-03	7,01E-03	2,19E-02	-1,40E-01
TOTAL	MJ	**4,59E+00**	3,91E+00	4,32E-01	2,41E-01	4,26E-02	2,71E-02	1,91E-02	1,35E-01	-2,14E-01
Use as energy carrier	MJ	**2,72E+01**	1,03E+01	8,27E+00	4,35E+00	2,66E-01	9,07E-01	1,12E+00	3,84E+00	-1,94E+00
Used as raw materials	MJ	**9,79E-01**	9,20E-01	1,97E-02	6,89E-02	4,80E-03	1,05E-02	9,79E-03	1,04E-02	-6,50E-02
TOTAL	MJ	**2,81E+01**	1,13E+01	8,29E+00	4,42E+00	2,70E-01	9,18E-01	1,13E+00	3,85E+00	-2,00E+00
Secondary material	kg	**8,81E-03**	0,00E+00	0,00E+00	8,81E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,83E-03**	1,14E-03	0,00E+00	0,00E+00	3,76E-04	3,16E-04	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**4,19E-03**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,19E-03	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**1,00E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,40E-02	6,64E-03	0,00E+00	7,94E-02
Materials for energy recovery	kg	**9,00E-04**	0,00E+00	0,00E+00	0,00E+00	9,00E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 12. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in glass 0,25 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,66E+00**	7,10E-01	2,63E-01	2,48E+00	1,97E-02	2,13E-02	1,21E-01	3,62E-01	-2,32E+00
GWP Biogenic	**kg CO_2 eq**	**4,51E-01**	9,31E-02	5,09E-03	1,57E-01	4,73E-02	1,72E-04	9,16E-04	2,68E-01	-1,21E-01
GWP LU-LT	**kg CO_2 eq**	**3,78E-02**	3,80E-02	1,31E-04	2,78E-03	6,68E-05	7,41E-06	7,19E-05	7,49E-05	-3,35E-03
GWP Total	**kg CO_2 eq**	**2,15E+00**	8,41E-01	2,68E-01	2,64E+00	6,70E-02	2,15E-02	1,22E-01	6,31E-01	-2,44E+00
AP	**kg SO_2 eq**	**1,73E-02**	1,02E-02	1,64E-03	1,99E-02	1,29E-04	1,34E-04	2,22E-03	1,80E-03	-1,87E-02
EP	**kg PO_4^{3-} eq**	**5,83E-01**	5,80E-01	5,58E-04	4,51E-03	1,92E-04	2,67E-05	2,51E-04	3,46E-04	-3,31E-03
POCP	**kg C_2H_4 eq**	**6,24E-04**	3,69E-04	7,81E-05	8,76E-04	6,83E-06	4,06E-06	7,22E-05	4,72E-05	-8,29E-04
Abiot elem	**kg Sb eq**	**1,53E-05**	1,19E-05	1,34E-07	6,37E-06	3,44E-08	5,81E-08	6,40E-08	9,91E-08	-3,37E-06
Abiot F	**MJ**	**3,11E+01**	8,92E+00	7,05E+00	3,67E+01	2,18E-01	3,39E-01	1,80E+00	3,67E+00	-2,76E+01
WSP	**m^3**	**1,21E+00**	1,21E+00	7,73E-04	1,10E-02	9,22E-05	3,67E-05	2,00E-04	2,10E-04	-1,08E-02
HT	**kg 1,4-DB eq**	**2,38E+01**	2,38E+01	6,60E-02	1,73E+00	8,22E-03	1,04E-02	5,22E-02	4,01E-02	-1,91E+00
Ecotox W	**kg 1,4-DB eq**	**5,99E+00**	5,96E+00	5,04E-02	5,97E-01	2,75E-02	2,79E-03	1,29E-02	3,85E-02	-6,98E-01
LU	**m^2a**	**6,59E-01**	6,11E-01	1,55E-02	3,46E-02	4,20E-03	6,35E-03	8,14E-03	5,05E-03	-2,59E-02
ByP	**kg**	**6,66E-03**	6,65E-03	0,00E+00	0,00E+00	6,98E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 13. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in glass 0,25 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**5,39E-01**	1,80E-01	3,65E-01	9,05E-01	1,65E-02	2,16E-03	2,35E-02	1,13E-01	-1,07E+00
Used as raw materials	MJ	**4,45E+00**	3,73E+00	6,69E-02	3,40E+00	2,61E-02	2,04E-03	1,11E-02	2,19E-02	-2,81E+00
TOTAL	MJ	**4,98E+00**	3,91E+00	4,32E-01	4,30E+00	4,26E-02	4,20E-03	3,46E-02	1,35E-01	-3,88E+00
Use as energy carrier	MJ	**3,48E+01**	1,03E+01	8,27E+00	3,87E+01	2,66E-01	3,48E-01	1,89E+00	3,84E+00	-2,89E+01
Used as raw materials	MJ	**7,77E-01**	9,20E-01	1,97E-02	7,16E-01	4,80E-03	4,45E-03	1,26E-02	1,04E-02	-9,11E-01
TOTAL	MJ	**3,56E+01**	1,13E+01	8,29E+00	3,94E+01	2,70E-01	3,53E-01	1,90E+00	3,85E+00	-2,98E+01
Secondary material	kg	**1,17E-02**	0,00E+00	0,00E+00	1,17E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**3,77E-06**	2,35E-06	0,00E+00	0,00E+00	7,72E-07	6,49E-07	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**8,61E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,61E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**2,15E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,95E-02	1,36E-05	0,00E+00	2,10E+00
Materials for energy recovery	kg	**1,85E-06**	0,00E+00	0,00E+00	0,00E+00	1,85E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 14. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in glass 0,50 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,87E+00**	7,10E-01	2,63E-01	1,74E+00	1,97E-02	1,02E-01	1,84E-01	3,62E-01	-1,50E+00
GWP Biogenic	**kg CO_2 eq**	**4,38E-01**	9,31E-02	5,09E-03	1,11E-01	4,73E-02	8,25E-04	1,51E-03	2,68E-01	-8,94E-02
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	1,47E-03	6,68E-05	3,56E-05	9,97E-05	7,49E-05	-1,48E-03
GWP Total	**kg CO_2 eq**	**2,35E+00**	8,41E-01	2,68E-01	1,85E+00	6,70E-02	1,03E-01	1,86E-01	6,31E-01	-1,60E+00
AP	**kg SO_2 eq**	**1,95E-02**	1,02E-02	1,64E-03	1,42E-02	1,29E-04	6,40E-04	2,72E-03	1,80E-03	-1,18E-02
EP	**kg PO_4^{3-} eq**	**5,83E-01**	5,80E-01	5,58E-04	2,89E-03	1,92E-04	1,28E-04	3,29E-04	3,46E-04	-2,12E-03
POCP	**kg C_2H_4 eq**	**7,09E-04**	3,69E-04	7,81E-05	5,93E-04	6,83E-06	1,94E-05	8,96E-05	4,72E-05	-4,95E-04
Abiot elem	**kg Sb eq**	**1,37E-05**	1,19E-05	1,34E-07	3,66E-06	3,44E-08	2,78E-07	1,64E-07	9,91E-08	-2,56E-06
Abiot F	**MJ**	**3,04E+01**	8,92E+00	7,05E+00	2,47E+01	2,18E-01	1,62E+00	2,83E+00	3,67E+00	-1,86E+01
WSP	**m^3**	**1,21E+00**	1,21E+00	7,73E-04	7,12E-03	9,22E-05	1,76E-04	3,25E-04	2,10E-04	-7,48E-03
HT	**kg 1,4-DB eq**	**2,42E+01**	2,38E+01	6,60E-02	1,14E+00	8,22E-03	4,97E-02	7,84E-02	4,01E-02	-9,79E-01
Ecotox W	**kg 1,4-DB eq**	**6,14E+00**	5,96E+00	5,04E-02	3,63E-01	2,75E-02	1,34E-02	2,29E-02	3,85E-02	-3,40E-01
LU	**m^2a**	**8,03E-01**	6,11E-01	1,55E-02	5,95E-01	4,20E-03	1,35E-02	2,20E-02	5,05E-03	-4,63E-01
ByP	**kg**	**2,90E-02**	2,90E-02	0,00E+00	0,00E+00	3,04E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 15. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in glass 0,50 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**5,39E-01**	1,80E-01	3,65E-01	9,05E-01	1,65E-02	2,16E-03	2,35E-02	1,13E-01	-1,07E+00
Used as raw materials	MJ	**4,45E+00**	3,73E+00	6,69E-02	3,40E+00	2,61E-02	2,04E-03	1,11E-02	2,19E-02	-2,81E+00
TOTAL	MJ	**4,98E+00**	3,91E+00	4,32E-01	4,30E+00	4,26E-02	4,20E-03	3,46E-02	1,35E-01	-3,88E+00
Use as energy carrier	MJ	**3,48E+01**	1,03E+01	8,27E+00	3,87E+01	2,66E-01	3,48E-01	1,89E+00	3,84E+00	-2,89E+01
Used as raw materials	MJ	**7,77E-01**	9,20E-01	1,97E-02	7,16E-01	4,80E-03	4,45E-03	1,26E-02	1,04E-02	-9,11E-01
TOTAL	MJ	**3,56E+01**	1,13E+01	8,29E+00	3,94E+01	2,70E-01	3,53E-01	1,90E+00	3,85E+00	-2,98E+01
Secondary material	kg	**6,46E-03**	0,00E+00	0,00E+00	6,46E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,64E-05**	1,02E-05	0,00E+00	0,00E+00	3,36E-06	2,82E-06	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**3,75E-05**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,75E-05	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**1,64E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,41E-02	5,94E-05	0,00E+00	1,63E+00
Materials for energy recovery	kg	**8,05E-06**	0,00E+00	0,00E+00	0,00E+00	8,05E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 16. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in glass 0,75 L (l).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**3,13E+00**	7,10E-01	2,63E-01	2,58E+00	1,97E-02	1,78E+00	6,49E-02	3,62E-01	-2,65E+00
GWP Biogenic	**kg CO_2 eq**	**4,72E-01**	9,31E-02	5,09E-03	1,73E-01	4,73E-02	1,44E-02	5,12E-04	2,68E-01	-1,30E-01
GWP LU-LT	**kg CO_2 eq**	**3,64E-02**	3,80E-02	1,31E-04	5,32E-03	6,68E-05	6,29E-04	3,69E-05	7,49E-05	-7,81E-03
GWP Total	**kg CO_2 eq**	**3,64E+00**	8,41E-01	2,68E-01	2,76E+00	6,70E-02	1,79E+00	6,54E-02	6,31E-01	-2,79E+00
AP	**kg SO_2 eq**	**2,05E-02**	1,02E-02	1,64E-03	1,76E-02	1,29E-04	1,12E-02	1,08E-03	1,80E-03	-2,32E-02
EP	**kg PO_4^{3-} eq**	**5,86E-01**	5,80E-01	5,58E-04	5,70E-03	1,92E-04	2,22E-03	1,25E-04	3,46E-04	-3,97E-03
POCP	**kg C_2H_4 eq**	**6,71E-04**	3,69E-04	7,81E-05	9,93E-04	6,83E-06	3,39E-04	3,52E-05	4,72E-05	-1,20E-03
Abiot elem	**kg Sb eq**	**2,61E-05**	1,19E-05	1,34E-07	1,08E-05	3,44E-08	4,87E-06	4,59E-08	9,91E-08	-1,76E-06
Abiot F	**MJ**	**6,89E+01**	8,92E+00	7,05E+00	4,77E+01	2,18E-01	2,84E+01	9,80E-01	3,67E+00	-2,79E+01
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	1,76E-02	9,22E-05	3,08E-03	1,11E-04	2,10E-04	-1,07E-02
HT	**kg 1,4-DB eq**	**2,34E+01**	2,38E+01	6,60E-02	2,31E+00	8,22E-03	8,70E-01	2,78E-02	4,01E-02	-3,67E+00
Ecotox W	**kg 1,4-DB eq**	**5,81E+00**	5,96E+00	5,04E-02	9,24E-01	2,75E-02	2,30E-01	7,49E-03	3,85E-02	-1,43E+00
LU	**m^2a**	**9,32E-01**	6,11E-01	1,55E-02	6,39E-01	4,20E-03	2,37E-01	6,11E-03	5,05E-03	-5,86E-01
ByP	**kg**	**7,84E-02**	7,83E-02	0,00E+00	0,00E+00	8,21E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 17. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in glass 0,75 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,42E-01**	1,80E-01	3,65E-01	5,10E-01	1,65E-02	1,02E-02	3,17E-02	1,13E-01	-4,85E-01
Used as raw materials	MJ	**4,29E+00**	3,73E+00	6,69E-02	2,50E+00	2,61E-02	9,79E-03	1,86E-02	2,19E-02	-2,08E+00
TOTAL	MJ	**5,03E+00**	3,91E+00	4,32E-01	3,01E+00	4,26E-02	2,00E-02	5,03E-02	1,35E-01	-2,56E+00
Use as energy carrier	MJ	**3,37E+01**	1,03E+01	8,27E+00	2,58E+01	2,66E-01	1,67E+00	2,95E+00	3,84E+00	-1,94E+01
Used as raw materials	MJ	**1,00E+00**	9,20E-01	1,97E-02	4,63E-01	4,80E-03	2,13E-02	2,63E-02	1,04E-02	-4,65E-01
TOTAL	MJ	**3,47E+01**	1,13E+01	8,29E+00	2,63E+01	2,70E-01	1,69E+00	2,98E+00	3,85E+00	-1,99E+01
Secondary material	kg	**6,16E-02**	0,00E+00	0,00E+00	6,16E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**4,43E-05**	2,76E-05	0,00E+00	0,00E+00	9,08E-06	7,63E-06	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**1,01E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**1,09E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,02E-01	1,60E-04	0,00E+00	8,84E-01
Materials for energy recovery	kg	**2,17E-05**	0,00E+00	0,00E+00	0,00E+00	2,17E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 18. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 0,50 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,65E+00**	7,10E-01	2,63E-01	3,12E-01	1,97E-02	4,15E-03	1,93E-02	3,62E-01	-4,29E-02
GWP Biogenic	**kg CO_2 eq**	**4,19E-01**	9,31E-02	5,09E-03	1,28E-02	4,73E-02	3,37E-05	1,93E-04	2,68E-01	-7,91E-03
GWP LU-LT	**kg CO_2 eq**	**3,85E-02**	3,80E-02	1,31E-04	2,55E-04	6,68E-05	1,42E-06	7,54E-06	7,49E-05	-8,63E-05
GWP Total	**kg CO_2 eq**	**2,10E+00**	8,41E-01	2,68E-01	3,25E-01	6,70E-02	4,19E-03	1,95E-02	6,31E-01	-5,09E-02
AP	**kg SO_2 eq**	**1,50E-02**	1,02E-02	1,64E-03	1,49E-03	1,29E-04	2,61E-05	9,08E-05	1,80E-03	-3,92E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	4,04E-04	1,92E-04	5,24E-06	1,88E-05	3,46E-04	-1,18E-04
POCP	**kg C_2H_4 eq**	**5,73E-04**	3,69E-04	7,81E-05	9,09E-05	6,83E-06	7,94E-07	3,36E-06	4,72E-05	-2,30E-05
Abiot elem	**kg Sb eq**	**1,30E-05**	1,19E-05	1,34E-07	1,31E-06	3,44E-08	1,13E-08	3,66E-08	9,91E-08	-5,09E-07
Abiot F	**MJ**	**2,58E+01**	8,92E+00	7,05E+00	7,84E+00	2,18E-01	6,60E-02	3,19E-01	3,67E+00	-2,24E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	4,41E-03	9,22E-05	7,14E-06	3,98E-05	2,10E-04	-1,51E-03
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	1,62E-01	8,22E-03	2,02E-03	7,86E-03	4,01E-02	-1,19E-02
Ecotox W	**kg 1,4-DB eq**	**6,18E+00**	5,96E+00	5,04E-02	7,71E-02	2,75E-02	5,54E-04	3,33E-03	3,85E-02	2,29E-02
LU	**m^2a**	**6,49E-01**	6,11E-01	1,55E-02	3,44E-02	4,20E-03	5,49E-04	5,01E-03	5,05E-03	-2,65E-02
ByP	**kg**	**2,57E-03**	2,57E-03	0,00E+00	0,00E+00	2,69E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 19. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 0,50 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,66E-01**	1,80E-01	3,65E-01	1,10E-01	1,65E-02	4,64E-04	2,12E-03	1,13E-01	-2,07E-02
Used as raw materials	MJ	**3,82E+00**	3,73E+00	6,69E-02	1,55E-01	2,61E-02	3,98E-04	2,44E-03	2,19E-02	-1,76E-01
TOTAL	MJ	**4,59E+00**	3,91E+00	4,32E-01	2,65E-01	4,26E-02	8,61E-04	4,56E-03	1,35E-01	-1,97E-01
Use as energy carrier	MJ	**2,90E+01**	1,03E+01	8,27E+00	8,19E+00	2,66E-01	6,79E-02	3,29E-01	3,84E+00	-2,35E+00
Used as raw materials	MJ	**1,02E+00**	9,20E-01	1,97E-02	1,02E-01	4,80E-03	8,66E-04	4,79E-03	1,04E-02	-3,83E-02
TOTAL	MJ	**3,00E+01**	1,13E+01	8,29E+00	8,29E+00	2,70E-01	6,88E-02	3,33E-01	3,85E+00	-2,39E+00
Secondary material	kg	**4,01E-03**	0,00E+00	0,00E+00	4,01E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,45E-06**	9,05E-07	0,00E+00	0,00E+00	2,98E-07	2,50E-07	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**3,32E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,32E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**1,46E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,01E-02	5,26E-06	0,00E+00	1,16E-01
Materials for energy recovery	kg	**7,13E-07**	0,00E+00	0,00E+00	0,00E+00	7,13E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 20. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 0,75 L (l).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,48E+00**	7,10E-01	2,63E-01	1,26E-01	1,97E-02	1,54E-03	1,93E-02	3,62E-01	-1,81E-02
GWP Biogenic	**kg CO_2 eq**	**4,16E-01**	9,31E-02	5,09E-03	5,72E-03	4,73E-02	1,25E-05	1,93E-04	2,68E-01	-3,74E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	1,09E-04	6,68E-05	5,28E-07	7,54E-06	7,49E-05	-3,66E-05
GWP Total	**kg CO_2 eq**	**1,94E+00**	8,41E-01	2,68E-01	1,32E-01	6,70E-02	1,55E-03	1,95E-02	6,31E-01	-2,19E-02
AP	**kg SO_2 eq**	**1,44E-02**	1,02E-02	1,64E-03	6,12E-04	1,29E-04	9,66E-06	9,08E-05	1,80E-03	-1,66E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,70E-04	1,92E-04	1,94E-06	1,88E-05	3,46E-04	-5,02E-05
POCP	**kg C_2H_4 eq**	**5,32E-04**	3,69E-04	7,81E-05	3,64E-05	6,83E-06	2,94E-07	3,36E-06	4,72E-05	-9,70E-06
Abiot elem	**kg Sb eq**	**1,25E-05**	1,19E-05	1,34E-07	5,52E-07	3,44E-08	4,18E-09	3,66E-08	9,91E-08	-2,14E-07
Abiot F	**MJ**	**2,24E+01**	8,92E+00	7,05E+00	3,10E+00	2,18E-01	2,45E-02	3,19E-01	3,67E+00	-9,40E-01
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	1,83E-03	9,22E-05	2,65E-06	3,98E-05	2,10E-04	-6,37E-04
HT	**kg 1,4-DB eq**	**2,39E+01**	2,38E+01	6,60E-02	6,59E-02	8,22E-03	7,47E-04	7,86E-03	4,01E-02	-5,03E-03
Ecotox W	**kg 1,4-DB eq**	**6,12E+00**	5,96E+00	5,04E-02	3,21E-02	2,75E-02	2,05E-04	3,33E-03	3,85E-02	9,52E-03
LU	**m^2a**	**6,44E-01**	6,11E-01	1,55E-02	1,56E-02	4,20E-03	2,03E-04	5,01E-03	5,05E-03	-1,27E-02
ByP	**kg**	**8,57E-04**	8,56E-04	0,00E+00	0,00E+00	8,98E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 21. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 0,75 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,13E-01**	1,80E-01	3,65E-01	4,46E-02	1,65E-02	1,72E-04	2,12E-03	1,13E-01	-8,75E-03
Used as raw materials	MJ	**3,83E+00**	3,73E+00	6,69E-02	6,95E-02	2,61E-02	1,47E-04	2,44E-03	2,19E-02	-8,56E-02
TOTAL	MJ	**4,54E+00**	3,91E+00	4,32E-01	1,14E-01	4,26E-02	3,20E-04	4,56E-03	1,35E-01	-9,44E-02
Use as energy carrier	MJ	**2,53E+01**	1,03E+01	8,27E+00	3,24E+00	2,66E-01	2,52E-02	3,29E-01	3,84E+00	-9,87E-01
Used as raw materials	MJ	**9,87E-01**	9,20E-01	1,97E-02	4,33E-02	4,80E-03	3,21E-04	4,79E-03	1,04E-02	-1,61E-02
TOTAL	MJ	**2,63E+01**	1,13E+01	8,29E+00	3,29E+00	2,70E-01	2,55E-02	3,33E-01	3,85E+00	-1,00E+00
Secondary material	kg	**2,00E-03**	0,00E+00	0,00E+00	2,00E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**4,85E-07**	3,02E-07	0,00E+00	0,00E+00	9,93E-08	8,35E-08	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**1,11E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,11E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**5,54E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,70E-03	1,75E-06	0,00E+00	4,57E-02
Materials for energy recovery	kg	**2,38E-07**	0,00E+00	0,00E+00	0,00E+00	2,38E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 22. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 1 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,46E+00**	7,10E-01	2,63E-01	9,46E-02	1,97E-02	6,49E-03	1,93E-02	3,62E-01	-1,39E-02
GWP Biogenic	**kg CO_2 eq**	**4,15E-01**	9,31E-02	5,09E-03	4,53E-03	4,73E-02	7,74E-05	1,93E-04	2,68E-01	-3,73E-03
GWP LU-LT	**kg CO_2 eq**	**3,83E-02**	3,80E-02	1,31E-04	8,68E-05	6,68E-05	-3,59E-06	7,54E-06	7,49E-05	-2,86E-05
GWP Total	**kg CO_2 eq**	**1,91E+00**	8,41E-01	2,68E-01	9,92E-02	6,70E-02	6,56E-03	1,95E-02	6,31E-01	-1,76E-02
AP	**kg SO_2 eq**	**1,43E-02**	1,02E-02	1,64E-03	4,61E-04	1,29E-04	3,76E-05	9,08E-05	1,80E-03	-1,27E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,31E-04	1,92E-04	1,54E-05	1,88E-05	3,46E-04	-3,90E-05
POCP	**kg C_2H_4 eq**	**5,26E-04**	3,69E-04	7,81E-05	2,68E-05	6,83E-06	1,55E-06	3,36E-06	4,72E-05	-7,39E-06
Abiot elem	**kg Sb eq**	**1,25E-05**	1,19E-05	1,34E-07	4,15E-07	3,44E-08	7,68E-09	3,66E-08	9,91E-08	-1,61E-07
Abiot F	**MJ**	**2,19E+01**	8,92E+00	7,05E+00	2,31E+00	2,18E-01	8,57E-02	3,19E-01	3,67E+00	-7,09E-01
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	1,37E-03	9,22E-05	5,03E-06	3,98E-05	2,10E-04	-4,89E-04
HT	**kg 1,4-DB eq**	**2,39E+01**	2,38E+01	6,60E-02	4,85E-02	8,22E-03	1,59E-03	7,86E-03	4,01E-02	-3,91E-03
Ecotox W	**kg 1,4-DB eq**	**6,12E+00**	5,96E+00	5,04E-02	2,42E-02	2,75E-02	3,34E-03	3,33E-03	3,85E-02	7,03E-03
LU	**m^2a**	**6,40E-01**	6,11E-01	1,55E-02	1,22E-02	4,20E-03	1,70E-04	5,01E-03	5,05E-03	-1,30E-02
ByP	**kg**	**3,44E-01**	3,43E-01	0,00E+00	0,00E+00	3,60E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 23. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 1 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,16E-01**	1,80E-01	3,65E-01	3,40E-02	1,65E-02	1,20E-02	2,12E-03	1,13E-01	-6,72E-03
Used as raw materials	MJ	**3,81E+00**	3,73E+00	6,69E-02	5,57E-02	2,61E-02	4,54E-04	2,44E-03	2,19E-02	-8,98E-02
TOTAL	MJ	**4,53E+00**	3,91E+00	4,32E-01	8,97E-02	4,26E-02	1,25E-02	4,56E-03	1,35E-01	-9,66E-02
Use as energy carrier	MJ	**2,48E+01**	1,03E+01	8,27E+00	2,42E+00	2,66E-01	1,07E-01	3,29E-01	3,84E+00	-7,45E-01
Used as raw materials	MJ	**9,81E-01**	9,20E-01	1,97E-02	3,28E-02	4,80E-03	6,34E-04	4,79E-03	1,04E-02	-1,21E-02
TOTAL	MJ	**2,58E+01**	1,13E+01	8,29E+00	2,45E+00	2,70E-01	1,08E-01	3,33E-01	3,85E+00	-7,57E-01
Secondary material	kg	**2,90E-03**	0,00E+00	0,00E+00	2,90E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,94E-04**	1,21E-04	0,00E+00	0,00E+00	3,98E-05	3,35E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**4,44E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,44E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**4,10E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,00E-03	7,03E-04	0,00E+00	3,33E-02
Materials for energy recovery	kg	**9,53E-05**	0,00E+00	0,00E+00	0,00E+00	9,53E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 24. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 3 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,68E+00**	7,10E-01	2,63E-01	2,62E-01	1,97E-02	4,16E-03	1,01E-01	3,62E-01	-4,25E-02
GWP Biogenic	**kg CO_2 eq**	**4,20E-01**	9,31E-02	5,09E-03	8,73E-03	4,73E-02	4,38E-05	8,24E-04	2,68E-01	-2,96E-03
GWP LU-LT	**kg CO_2 eq**	**3,85E-02**	3,80E-02	1,31E-04	2,37E-04	6,68E-05	-9,22E-07	5,52E-05	7,49E-05	-8,25E-05
GWP Total	**kg CO_2 eq**	**2,14E+00**	8,41E-01	2,68E-01	2,71E-01	6,70E-02	4,20E-03	1,02E-01	6,31E-01	-4,56E-02
AP	**kg SO_2 eq**	**1,63E-02**	1,02E-02	1,64E-03	1,28E-03	1,29E-04	2,49E-05	1,53E-03	1,80E-03	-3,85E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	3,81E-04	1,92E-04	8,16E-06	1,83E-04	3,46E-04	-1,14E-04
POCP	**kg C_2H_4 eq**	**6,00E-04**	3,69E-04	7,81E-05	7,06E-05	6,83E-06	9,21E-07	5,02E-05	4,72E-05	-2,30E-05
Abiot elem	**kg Sb eq**	**1,30E-05**	1,19E-05	1,34E-07	1,27E-06	3,44E-08	7,29E-09	8,64E-08	9,91E-08	-5,17E-07
Abiot F	**MJ**	**2,54E+01**	8,92E+00	7,05E+00	6,18E+00	2,18E-01	5,91E-02	1,54E+00	3,67E+00	-2,28E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	3,90E-03	9,22E-05	4,68E-06	1,77E-04	2,10E-04	-1,49E-03
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	1,38E-01	8,22E-03	1,39E-03	4,31E-02	4,01E-02	-1,14E-02
Ecotox W	**kg 1,4-DB eq**	**6,19E+00**	5,96E+00	5,04E-02	7,16E-02	2,75E-02	1,55E-03	1,24E-02	3,85E-02	2,41E-02
LU	**m^2a**	**6,61E-01**	6,11E-01	1,55E-02	2,15E-02	4,20E-03	2,72E-04	1,16E-02	5,05E-03	-7,73E-03
ByP	**kg**	**1,40E-01**	1,39E-01	0,00E+00	0,00E+00	1,46E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 25. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 3 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,72E-01**	1,80E-01	3,65E-01	9,50E-02	1,65E-02	5,04E-03	1,76E-02	1,13E-01	-2,04E-02
Used as raw materials	MJ	**3,91E+00**	3,73E+00	6,69E-02	9,62E-02	2,61E-02	3,31E-04	1,01E-02	2,19E-02	-3,80E-02
TOTAL	MJ	**4,68E+00**	3,91E+00	4,32E-01	1,91E-01	4,26E-02	5,37E-03	2,77E-02	1,35E-01	-5,83E-02
Use as energy carrier	MJ	**2,85E+01**	1,03E+01	8,27E+00	6,48E+00	2,66E-01	6,84E-02	1,61E+00	3,84E+00	-2,39E+00
Used as raw materials	MJ	**1,03E+00**	9,20E-01	1,97E-02	9,98E-02	4,80E-03	5,77E-04	1,40E-02	1,04E-02	-3,88E-02
TOTAL	MJ	**2,95E+01**	1,13E+01	8,29E+00	6,58E+00	2,70E-01	6,90E-02	1,63E+00	3,85E+00	-2,43E+00
Secondary material	kg	**3,86E-04**	0,00E+00	0,00E+00	3,86E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**7,90E-05**	4,92E-05	0,00E+00	0,00E+00	1,62E-05	1,36E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**1,80E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,80E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**9,01E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,86E-04	2,86E-04	0,00E+00	8,89E-02
Materials for energy recovery	kg	**3,87E-05**	0,00E+00	0,00E+00	0,00E+00	3,87E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 26. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 5 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,57E+00**	7,10E-01	2,63E-01	1,11E-01	1,97E-02	1,66E-02	1,01E-01	3,62E-01	-1,68E-02
GWP Biogenic	**kg CO_2 eq**	**4,18E-01**	9,31E-02	5,09E-03	4,57E-03	4,73E-02	1,98E-04	8,24E-04	2,68E-01	-1,11E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	1,09E-04	6,68E-05	-9,15E-06	5,52E-05	7,49E-05	-3,26E-05
GWP Total	**kg CO_2 eq**	**2,02E+00**	8,41E-01	2,68E-01	1,16E-01	6,70E-02	1,68E-02	1,02E-01	6,31E-01	-1,80E-02
AP	**kg SO_2 eq**	**1,58E-02**	1,02E-02	1,64E-03	5,41E-04	1,29E-04	9,66E-05	1,53E-03	1,80E-03	-1,53E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,64E-04	1,92E-04	3,94E-05	1,83E-04	3,46E-04	-4,50E-05
POCP	**kg C_2H_4 eq**	**5,76E-04**	3,69E-04	7,81E-05	2,97E-05	6,83E-06	3,98E-06	5,02E-05	4,72E-05	-9,09E-06
Abiot elem	**kg Sb eq**	**1,26E-05**	1,19E-05	1,34E-07	5,14E-07	3,44E-08	1,98E-08	8,64E-08	9,91E-08	-2,05E-07
Abiot F	**MJ**	**2,34E+01**	8,92E+00	7,05E+00	2,64E+00	2,18E-01	2,20E-01	1,54E+00	3,67E+00	-9,02E-01
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	1,60E-03	9,22E-05	1,30E-05	1,77E-04	2,10E-04	-5,88E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	5,66E-02	8,22E-03	4,11E-03	4,31E-02	4,01E-02	-4,52E-03
Ecotox W	**kg 1,4-DB eq**	**6,14E+00**	5,96E+00	5,04E-02	2,98E-02	2,75E-02	8,55E-03	1,24E-02	3,85E-02	9,57E-03
LU	**m^2a**	**6,56E-01**	6,11E-01	1,55E-02	1,13E-02	4,20E-03	4,44E-04	1,16E-02	5,05E-03	-2,82E-03
ByP	**kg**	**8,79E-01**	8,78E-01	0,00E+00	0,00E+00	9,21E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 27. Functional unit: 1 liter of Carbonell extra virgin olive oil bottled in PET 5 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,56E-01**	1,80E-01	3,65E-01	4,15E-02	1,65E-02	3,08E-02	1,76E-02	1,13E-01	-8,06E-03
Used as raw materials	MJ	**3,89E+00**	3,73E+00	6,69E-02	5,42E-02	2,61E-02	1,17E-03	1,01E-02	2,19E-02	-1,32E-02
TOTAL	MJ	**4,65E+00**	3,91E+00	4,32E-01	9,57E-02	4,26E-02	3,20E-02	2,77E-02	1,35E-01	-2,13E-02
Use as energy carrier	MJ	**2,65E+01**	1,03E+01	8,27E+00	2,78E+00	2,66E-01	2,75E-01	1,61E+00	3,84E+00	-9,47E-01
Used as raw materials	MJ	**9,96E-01**	9,20E-01	1,97E-02	4,10E-02	4,80E-03	1,63E-03	1,40E-02	1,04E-02	-1,54E-02
TOTAL	MJ	**2,74E+01**	1,13E+01	8,29E+00	2,82E+00	2,70E-01	2,77E-01	1,63E+00	3,85E+00	-9,62E-01
Secondary material	kg	**1,90E-03**	0,00E+00	0,00E+00	1,90E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**4,97E-04**	3,10E-04	0,00E+00	0,00E+00	1,02E-04	8,56E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**1,14E-03**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,14E-03	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**3,90E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,00E-03	1,80E-03	0,00E+00	3,52E-02
Materials for energy recovery	kg	**2,44E-04**	0,00E+00	0,00E+00	0,00E+00	2,44E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 28. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 0,25 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,65E+00**	7,10E-01	2,63E-01	1,12E+00	1,97E-02	9,42E-02	1,66E-01	3,62E-01	-1,09E+00
GWP Biogenic	**kg CO_2 eq**	**4,33E-01**	9,31E-02	5,09E-03	7,35E-02	4,73E-02	7,61E-04	1,35E-03	2,68E-01	-5,62E-02
GWP LU-LT	**kg CO_2 eq**	**3,79E-02**	3,80E-02	1,31E-04	1,59E-03	6,68E-05	3,33E-05	9,16E-05	7,49E-05	-2,09E-03
GWP Total	**kg CO_2 eq**	**2,12E+00**	8,41E-01	2,68E-01	1,20E+00	6,70E-02	9,50E-02	1,68E-01	6,31E-01	-1,15E+00
AP	**kg SO_2 eq**	**1,65E-02**	1,02E-02	1,64E-03	8,63E-03	1,29E-04	5,92E-04	2,57E-03	1,80E-03	-9,09E-03
EP	**kg PO_4^{3-} eq**	**5,83E-01**	5,80E-01	5,58E-04	2,19E-03	1,92E-04	1,18E-04	3,06E-04	3,46E-04	-1,57E-03
POCP	**kg C_2H_4 eq**	**5,86E-04**	3,69E-04	7,81E-05	4,08E-04	6,83E-06	1,80E-05	8,41E-05	4,72E-05	-4,26E-04
Abiot elem	**kg Sb eq**	**1,47E-05**	1,19E-05	1,34E-07	3,46E-06	3,44E-08	2,58E-07	1,37E-07	9,91E-08	-1,31E-06
Abiot F	**MJ**	**2,85E+01**	8,92E+00	7,05E+00	1,79E+01	2,18E-01	1,50E+00	2,54E+00	3,67E+00	-1,33E+01
WSP	**m^3**	**1,21E+00**	1,21E+00	7,73E-04	5,95E-03	9,22E-05	1,63E-04	2,90E-04	2,10E-04	-6,33E-03
HT	**kg 1,4-DB eq**	**2,37E+01**	2,38E+01	6,60E-02	8,12E-01	8,22E-03	4,61E-02	7,10E-02	4,01E-02	-1,08E+00
Ecotox W	**kg 1,4-DB eq**	**6,04E+00**	5,96E+00	5,04E-02	3,04E-01	2,75E-02	1,22E-02	2,01E-02	3,85E-02	-3,76E-01
LU	**m^2a**	**7,30E-01**	6,11E-01	1,55E-02	3,43E-01	4,20E-03	1,26E-02	1,84E-02	5,05E-03	-2,79E-01
ByP	**kg**	**2,12E-04**	2,12E-04	0,00E+00	0,00E+00	2,23E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 29. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 0,25 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**5,52E-01**	1,80E-01	3,65E-01	5,02E-01	1,65E-02	8,56E-03	2,92E-02	1,13E-01	-6,63E-01
Used as raw materials	MJ	**4,00E+00**	3,73E+00	6,69E-02	1,47E+00	2,61E-02	9,06E-03	1,65E-02	2,19E-02	-1,34E+00
TOTAL	MJ	**4,55E+00**	3,91E+00	4,32E-01	1,97E+00	4,26E-02	1,76E-02	4,57E-02	1,35E-01	-2,00E+00
Use as energy carrier	MJ	**3,19E+01**	1,03E+01	8,27E+00	1,90E+01	2,66E-01	1,54E+00	2,65E+00	3,84E+00	-1,40E+01
Used as raw materials	MJ	**8,19E-01**	9,20E-01	1,97E-02	3,46E-01	4,80E-03	1,98E-02	2,26E-02	1,04E-02	-5,24E-01
TOTAL	MJ	**3,27E+01**	1,13E+01	8,29E+00	1,93E+01	2,70E-01	1,56E+00	2,68E+00	3,85E+00	-1,46E+01
Secondary material	kg	**1,22E-02**	0,00E+00	0,00E+00	1,22E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,20E-07**	7,49E-08	0,00E+00	0,00E+00	2,46E-08	2,07E-08	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,74E-07**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,74E-07	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**8,33E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,26E-02	4,35E-07	0,00E+00	7,91E-01
Materials for energy recovery	kg	**5,89E-08**	0,00E+00	0,00E+00	0,00E+00	5,89E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 30. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 0,50 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,52E+00**	7,10E-01	2,63E-01	7,27E-01	1,97E-02	7,84E-02	1,93E-02	3,62E-01	-6,55E-01
GWP Biogenic	**kg CO_2 eq**	**4,25E-01**	9,31E-02	5,09E-03	4,61E-02	4,73E-02	6,34E-04	1,93E-04	2,68E-01	-3,61E-02
GWP LU-LT	**kg CO_2 eq**	**3,82E-02**	3,80E-02	1,31E-04	7,33E-04	6,68E-05	2,77E-05	7,54E-06	7,49E-05	-8,36E-04
GWP Total	**kg CO_2 eq**	**1,99E+00**	8,41E-01	2,68E-01	7,74E-01	6,70E-02	7,91E-02	1,95E-02	6,31E-01	-6,92E-01
AP	**kg SO_2 eq**	**1,50E-02**	1,02E-02	1,64E-03	5,85E-03	1,29E-04	4,93E-04	9,08E-05	1,80E-03	-5,24E-03
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,27E-03	1,92E-04	9,79E-05	1,88E-05	3,46E-04	-9,31E-04
POCP	**kg C_2H_4 eq**	**5,45E-04**	3,69E-04	7,81E-05	2,53E-04	6,83E-06	1,50E-05	3,36E-06	4,72E-05	-2,27E-04
Abiot elem	**kg Sb eq**	**1,31E-05**	1,19E-05	1,34E-07	1,73E-06	3,44E-08	2,15E-07	3,66E-08	9,91E-08	-1,01E-06
Abiot F	**MJ**	**2,41E+01**	8,92E+00	7,05E+00	1,06E+01	2,18E-01	1,25E+00	3,19E-01	3,67E+00	-7,92E+00
WSP	**m^3**	**1,21E+00**	1,21E+00	7,73E-04	3,12E-03	9,22E-05	1,36E-04	3,98E-05	2,10E-04	-3,14E-03
HT	**kg 1,4-DB eq**	**2,39E+01**	2,38E+01	6,60E-02	5,04E-01	8,22E-03	3,84E-02	7,86E-03	4,01E-02	-4,99E-01
Ecotox W	**kg 1,4-DB eq**	**6,08E+00**	5,96E+00	5,04E-02	1,67E-01	2,75E-02	1,01E-02	3,33E-03	3,85E-02	-1,79E-01
LU	**m^2a**	**7,04E-01**	6,11E-01	1,55E-02	2,39E-01	4,20E-03	1,05E-02	5,01E-03	5,05E-03	-1,87E-01
ByP	**kg**	**1,63E-03**	1,63E-03	0,00E+00	0,00E+00	1,71E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 31. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 0,50 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**6,57E-01**	1,80E-01	3,65E-01	2,42E-01	1,65E-02	7,18E-03	2,12E-03	1,13E-01	-2,68E-01
Used as raw materials	MJ	**4,02E+00**	3,73E+00	6,69E-02	1,01E+00	2,61E-02	7,54E-03	2,44E-03	2,19E-02	-8,41E-01
TOTAL	MJ	**4,68E+00**	3,91E+00	4,32E-01	1,25E+00	4,26E-02	1,47E-02	4,56E-03	1,35E-01	-1,11E+00
Use as energy carrier	MJ	**2,71E+01**	1,03E+01	8,27E+00	1,10E+01	2,66E-01	1,28E+00	3,29E-01	3,84E+00	-8,27E+00
Used as raw materials	MJ	**9,41E-01**	9,20E-01	1,97E-02	2,02E-01	4,80E-03	1,65E-02	4,79E-03	1,04E-02	-2,37E-01
TOTAL	MJ	**2,80E+01**	1,13E+01	8,29E+00	1,12E+01	2,70E-01	1,30E+00	3,33E-01	3,85E+00	-8,51E+00
Secondary material	kg	**3,30E-03**	0,00E+00	0,00E+00	3,30E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**9,24E-07**	5,75E-07	0,00E+00	0,00E+00	1,89E-07	1,59E-07	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,11E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,11E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**6,65E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,13E-02	3,34E-06	0,00E+00	6,53E-01
Materials for energy recovery	kg	**4,53E-07**	0,00E+00	0,00E+00	0,00E+00	4,53E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 32. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 0,75 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,59E+00**	7,10E-01	2,63E-01	5,07E-01	1,97E-02	1,82E-01	6,25E-02	3,62E-01	-5,17E-01
GWP Biogenic	**kg CO_2 eq**	**4,19E-01**	9,31E-02	5,09E-03	3,21E-02	4,73E-02	1,47E-03	5,31E-04	2,68E-01	-2,94E-02
GWP LU-LT	**kg CO_2 eq**	**3,83E-02**	3,80E-02	1,31E-04	4,70E-04	6,68E-05	6,43E-05	3,23E-05	7,49E-05	-5,61E-04
GWP Total	**kg CO_2 eq**	**2,05E+00**	8,41E-01	2,68E-01	5,40E-01	6,70E-02	1,83E-01	6,31E-02	6,31E-01	-5,47E-01
AP	**kg SO_2 eq**	**1,58E-02**	1,02E-02	1,64E-03	4,11E-03	1,29E-04	1,14E-03	8,22E-04	1,80E-03	-4,09E-03
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	8,65E-04	1,92E-04	2,27E-04	1,03E-04	3,46E-04	-7,31E-04
POCP	**kg C_2H_4 eq**	**5,64E-04**	3,69E-04	7,81E-05	1,75E-04	6,83E-06	3,46E-05	2,72E-05	4,72E-05	-1,73E-04
Abiot elem	**kg Sb eq**	**1,30E-05**	1,19E-05	1,34E-07	1,13E-06	3,44E-08	4,98E-07	6,59E-08	9,91E-08	-8,51E-07
Abiot F	**MJ**	**2,47E+01**	8,92E+00	7,05E+00	7,31E+00	2,18E-01	2,89E+00	9,71E-01	3,67E+00	-6,34E+00
WSP	**m^3**	**1,21E+00**	1,21E+00	7,73E-04	2,11E-03	9,22E-05	3,15E-04	1,13E-04	2,10E-04	-2,53E-03
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	3,42E-01	8,22E-03	8,88E-02	2,64E-02	4,01E-02	-3,56E-01
Ecotox W	**kg 1,4-DB eq**	**6,10E+00**	5,96E+00	5,04E-02	1,11E-01	2,75E-02	2,34E-02	8,26E-03	3,85E-02	-1,25E-01
LU	**m^2a**	**6,86E-01**	6,11E-01	1,55E-02	1,70E-01	4,20E-03	2,42E-02	8,90E-03	5,05E-03	-1,53E-01
ByP	**kg**	**8,27E-04**	8,27E-04	0,00E+00	0,00E+00	8,67E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 33. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 0,75 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**6,78E-01**	1,80E-01	3,65E-01	1,59E-01	1,65E-02	1,65E-02	1,01E-02	1,13E-01	-1,82E-01
Used as raw materials	MJ	**3,90E+00**	3,73E+00	6,69E-02	7,15E-01	2,61E-02	1,75E-02	6,57E-03	2,19E-02	-6,80E-01
TOTAL	MJ	**4,58E+00**	3,91E+00	4,32E-01	8,74E-01	4,26E-02	3,40E-02	1,67E-02	1,35E-01	-8,62E-01
Use as energy carrier	MJ	**2,77E+01**	1,03E+01	8,27E+00	7,62E+00	2,66E-01	2,97E+00	1,01E+00	3,84E+00	-6,62E+00
Used as raw materials	MJ	**9,72E-01**	9,20E-01	1,97E-02	1,38E-01	4,80E-03	3,81E-02	9,98E-03	1,04E-02	-1,69E-01
TOTAL	MJ	**2,87E+01**	1,13E+01	8,29E+00	7,76E+00	2,70E-01	3,01E+00	1,02E+00	3,85E+00	-6,79E+00
Secondary material	kg	**1,80E-03**	0,00E+00	0,00E+00	1,80E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**4,68E-07**	2,92E-07	0,00E+00	0,00E+00	9,59E-08	8,06E-08	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**1,07E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,07E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**5,45E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,70E-03	1,69E-06	0,00E+00	5,39E-01
Materials for energy recovery	kg	**2,30E-07**	0,00E+00	0,00E+00	0,00E+00	2,30E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 34. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 1 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,63E+00**	7,10E-01	2,63E-01	4,86E-01	1,97E-02	1,55E-01	6,25E-02	3,62E-01	-4,24E-01
GWP Biogenic	**kg CO_2 eq**	**4,22E-01**	9,31E-02	5,09E-03	3,07E-02	4,73E-02	1,25E-03	5,31E-04	2,68E-01	-2,45E-02
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	4,12E-04	6,68E-05	5,47E-05	3,23E-05	7,49E-05	-4,19E-04
GWP Total	**kg CO_2 eq**	**2,09E+00**	8,41E-01	2,68E-01	5,17E-01	6,70E-02	1,56E-01	6,31E-02	6,31E-01	-4,48E-01
AP	**kg SO_2 eq**	**1,63E-02**	1,02E-02	1,64E-03	3,98E-03	1,29E-04	9,72E-04	8,22E-04	1,80E-03	-3,33E-03
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	8,11E-04	1,92E-04	1,93E-04	1,03E-04	3,46E-04	-5,97E-04
POCP	**kg C_2H_4 eq**	**5,84E-04**	3,69E-04	7,81E-05	1,66E-04	6,83E-06	2,95E-05	2,72E-05	4,72E-05	-1,39E-04
Abiot elem	**kg Sb eq**	**1,30E-05**	1,19E-05	1,34E-07	1,02E-06	3,44E-08	4,24E-07	6,59E-08	9,91E-08	-7,19E-07
Abiot F	**MJ**	**2,50E+01**	8,92E+00	7,05E+00	6,90E+00	2,18E-01	2,46E+00	9,71E-01	3,67E+00	-5,23E+00
WSP	**m^3**	**1,21E+00**	1,21E+00	7,73E-04	1,96E-03	9,22E-05	2,68E-04	1,13E-04	2,10E-04	-2,09E-03
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	3,20E-01	8,22E-03	7,56E-02	2,64E-02	4,01E-02	-2,77E-01
Ecotox W	**kg 1,4-DB eq**	**6,11E+00**	5,96E+00	5,04E-02	1,02E-01	2,75E-02	2,00E-02	8,26E-03	3,85E-02	-9,62E-02
LU	**m^2a**	**7,03E-01**	6,11E-01	1,55E-02	1,66E-01	4,20E-03	2,06E-02	8,90E-03	5,05E-03	-1,28E-01
ByP	**kg**	**1,55E-03**	1,54E-03	0,00E+00	0,00E+00	1,62E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential – Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 35. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in glass 1 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,05E-01**	1,80E-01	3,65E-01	1,43E-01	1,65E-02	1,41E-02	1,01E-02	1,13E-01	-1,37E-01
Used as raw materials	MJ	**3,99E+00**	3,73E+00	6,69E-02	6,95E-01	2,61E-02	1,49E-02	6,57E-03	2,19E-02	-5,66E-01
TOTAL	MJ	**4,70E+00**	3,91E+00	4,32E-01	8,38E-01	4,26E-02	2,90E-02	1,67E-02	1,35E-01	-7,03E-01
Use as energy carrier	MJ	**2,80E+01**	1,03E+01	8,27E+00	7,21E+00	2,66E-01	2,53E+00	1,01E+00	3,84E+00	-5,46E+00
Used as raw materials	MJ	**9,96E-01**	9,20E-01	1,97E-02	1,30E-01	4,80E-03	3,25E-02	9,98E-03	1,04E-02	-1,31E-01
TOTAL	MJ	**2,90E+01**	1,13E+01	8,29E+00	7,34E+00	2,70E-01	2,56E+00	1,02E+00	3,85E+00	-5,59E+00
Secondary material	kg	**1,30E-03**	0,00E+00	0,00E+00	1,30E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**8,75E-07**	5,45E-07	0,00E+00	0,00E+00	1,79E-07	1,51E-07	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,00E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,00E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**4,61E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,50E-03	3,17E-06	0,00E+00	4,58E-01
Materials for energy recovery	kg	**4,29E-07**	0,00E+00	0,00E+00	0,00E+00	4,29E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 36. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 0,75 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,51E+00**	7,10E-01	2,63E-01	1,58E-01	1,97E-02	1,60E-03	1,93E-02	3,62E-01	-2,47E-02
GWP Biogenic	**kg CO_2 eq**	**4,14E-01**	9,31E-02	5,09E-03	6,86E-03	4,73E-02	1,30E-05	1,93E-04	2,68E-01	-6,75E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	1,41E-04	6,68E-05	5,62E-07	7,54E-06	7,49E-05	-5,09E-05
GWP Total	**kg CO_2 eq**	**1,96E+00**	8,41E-01	2,68E-01	1,65E-01	6,70E-02	1,62E-03	1,95E-02	6,31E-01	-3,15E-02
AP	**kg SO_2 eq**	**1,45E-02**	1,02E-02	1,64E-03	7,74E-04	1,29E-04	1,01E-05	9,08E-05	1,80E-03	-2,27E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	2,20E-04	1,92E-04	2,01E-06	1,88E-05	3,46E-04	-6,96E-05
POCP	**kg C_2H_4 eq**	**5,37E-04**	3,69E-04	7,81E-05	4,48E-05	6,83E-06	3,06E-07	3,36E-06	4,72E-05	-1,32E-05
Abiot elem	**kg Sb eq**	**1,26E-05**	1,19E-05	1,34E-07	7,24E-07	3,44E-08	4,39E-09	3,66E-08	9,91E-08	-2,87E-07
Abiot F	**MJ**	**2,28E+01**	8,92E+00	7,05E+00	3,82E+00	2,18E-01	2,55E-02	3,19E-01	3,67E+00	-1,26E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	2,33E-03	9,22E-05	2,77E-06	3,98E-05	2,10E-04	-8,71E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	8,30E-02	8,22E-03	7,83E-04	7,86E-03	4,01E-02	-6,96E-03
Ecotox W	**kg 1,4-DB eq**	**6,14E+00**	5,96E+00	5,04E-02	4,15E-02	2,75E-02	2,09E-04	3,33E-03	3,85E-02	1,25E-02
LU	**m^2a**	**6,36E-01**	6,11E-01	1,55E-02	1,84E-02	4,20E-03	2,13E-04	5,01E-03	5,05E-03	-2,36E-02
ByP	**kg**	**3,15E-04**	3,15E-04	0,00E+00	0,00E+00	3,30E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 37. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 0,75 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,21E-01**	1,80E-01	3,65E-01	5,64E-02	1,65E-02	1,56E-04	2,12E-03	1,13E-01	-1,20E-02
Used as raw materials	MJ	**3,76E+00**	3,73E+00	6,69E-02	8,18E-02	2,61E-02	1,54E-04	2,44E-03	2,19E-02	-1,63E-01
TOTAL	MJ	**4,48E+00**	3,91E+00	4,32E-01	1,38E-01	4,26E-02	3,11E-04	4,56E-03	1,35E-01	-1,75E-01
Use as energy carrier	MJ	**2,58E+01**	1,03E+01	8,27E+00	4,00E+00	2,66E-01	2,62E-02	3,29E-01	3,84E+00	-1,33E+00
Used as raw materials	MJ	**9,95E-01**	9,20E-01	1,97E-02	5,68E-02	4,80E-03	3,36E-04	4,79E-03	1,04E-02	-2,16E-02
TOTAL	MJ	**2,68E+01**	1,13E+01	8,29E+00	4,06E+00	2,70E-01	2,66E-02	3,33E-01	3,85E+00	-1,35E+00
Secondary material	kg	**2,00E-03**	0,00E+00	0,00E+00	2,00E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,78E-07**	1,11E-07	0,00E+00	0,00E+00	3,65E-08	3,07E-08	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**4,07E-07**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,07E-07	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**6,40E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,00E-03	6,45E-07	0,00E+00	5,60E-02
Materials for energy recovery	kg	**8,75E-08**	0,00E+00	0,00E+00	0,00E+00	8,75E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 38. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 1 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,49E+00**	7,10E-01	2,63E-01	1,38E-01	1,97E-02	2,50E-03	1,93E-02	3,62E-01	-2,12E-02
GWP Biogenic	**kg CO_2 eq**	**4,17E-01**	9,31E-02	5,09E-03	5,87E-03	4,73E-02	2,94E-05	1,93E-04	2,68E-01	-3,16E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	1,26E-04	6,68E-05	-1,28E-06	7,54E-06	7,49E-05	-4,22E-05
GWP Total	**kg CO_2 eq**	**1,95E+00**	8,41E-01	2,68E-01	1,44E-01	6,70E-02	2,53E-03	1,95E-02	6,31E-01	-2,44E-02
AP	**kg SO_2 eq**	**1,44E-02**	1,02E-02	1,64E-03	6,77E-04	1,29E-04	1,45E-05	9,08E-05	1,80E-03	-1,93E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,96E-04	1,92E-04	5,79E-06	1,88E-05	3,46E-04	-5,80E-05
POCP	**kg C_2H_4 eq**	**5,32E-04**	3,69E-04	7,81E-05	3,85E-05	6,83E-06	5,92E-07	3,36E-06	4,72E-05	-1,14E-05
Abiot elem	**kg Sb eq**	**1,26E-05**	1,19E-05	1,34E-07	6,43E-07	3,44E-08	3,14E-09	3,66E-08	9,91E-08	-2,54E-07
Abiot F	**MJ**	**2,24E+01**	8,92E+00	7,05E+00	3,30E+00	2,18E-01	3,33E-02	3,19E-01	3,67E+00	-1,12E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	2,05E-03	9,22E-05	2,05E-06	3,98E-05	2,10E-04	-7,44E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	7,23E-02	8,22E-03	6,42E-04	7,86E-03	4,01E-02	-5,82E-03
Ecotox W	**kg 1,4-DB eq**	**6,13E+00**	5,96E+00	5,04E-02	3,67E-02	2,75E-02	1,24E-03	3,33E-03	3,85E-02	1,15E-02
LU	**m^2a**	**6,46E-01**	6,11E-01	1,55E-02	1,55E-02	4,20E-03	7,80E-05	5,01E-03	5,05E-03	-1,03E-02
ByP	**kg**	**1,26E-01**	1,26E-01	0,00E+00	0,00E+00	1,32E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 39. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 1 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,21E-01**	1,80E-01	3,65E-01	4,96E-02	1,65E-02	4,43E-03	2,12E-03	1,13E-01	-1,02E-02
Used as raw materials	MJ	**3,85E+00**	3,73E+00	6,69E-02	6,94E-02	2,61E-02	1,78E-04	2,44E-03	2,19E-02	-6,61E-02
TOTAL	MJ	**4,57E+00**	3,91E+00	4,32E-01	1,19E-01	4,26E-02	4,61E-03	4,56E-03	1,35E-01	-7,63E-02
Use as energy carrier	MJ	**2,54E+01**	1,03E+01	8,27E+00	3,46E+00	2,66E-01	4,12E-02	3,29E-01	3,84E+00	-1,17E+00
Used as raw materials	MJ	**9,92E-01**	9,20E-01	1,97E-02	5,05E-02	4,80E-03	2,57E-04	4,79E-03	1,04E-02	-1,91E-02
TOTAL	MJ	**2,64E+01**	1,13E+01	8,29E+00	3,51E+00	2,70E-01	4,15E-02	3,33E-01	3,85E+00	-1,19E+00
Secondary material	kg	**1,66E-03**	0,00E+00	0,00E+00	1,66E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**7,14E-05**	4,45E-05	0,00E+00	0,00E+00	1,46E-05	1,23E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**1,63E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,63E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**5,31E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,06E-03	2,58E-04	0,00E+00	4,78E-02
Materials for energy recovery	kg	**3,50E-05**	0,00E+00	0,00E+00	0,00E+00	3,50E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 40. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 3 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,53E+00**	7,10E-01	2,63E-01	1,78E-01	1,97E-02	3,64E-03	1,93E-02	3,62E-01	-2,84E-02
GWP Biogenic	**kg CO_2 eq**	**4,18E-01**	9,31E-02	5,09E-03	6,08E-03	4,73E-02	4,09E-05	1,93E-04	2,68E-01	-2,07E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	1,61E-04	6,68E-05	-1,42E-06	7,54E-06	7,49E-05	-5,52E-05
GWP Total	**kg CO_2 eq**	**1,98E+00**	8,41E-01	2,68E-01	1,85E-01	6,70E-02	3,68E-03	1,95E-02	6,31E-01	-3,06E-02
AP	**kg SO_2 eq**	**1,45E-02**	1,02E-02	1,64E-03	8,66E-04	1,29E-04	2,14E-05	9,08E-05	1,80E-03	-2,58E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	2,57E-04	1,92E-04	7,89E-06	1,88E-05	3,46E-04	-7,62E-05
POCP	**kg C_2H_4 eq**	**5,38E-04**	3,69E-04	7,81E-05	4,83E-05	6,83E-06	8,39E-07	3,36E-06	4,72E-05	-1,54E-05
Abiot elem	**kg Sb eq**	**1,27E-05**	1,19E-05	1,34E-07	8,51E-07	3,44E-08	5,33E-09	3,66E-08	9,91E-08	-3,46E-07
Abiot F	**MJ**	**2,29E+01**	8,92E+00	7,05E+00	4,23E+00	2,18E-01	4,98E-02	3,19E-01	3,67E+00	-1,52E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	2,63E-03	9,22E-05	3,45E-06	3,98E-05	2,10E-04	-9,93E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	9,36E-02	8,22E-03	1,05E-03	7,86E-03	4,01E-02	-7,65E-03
Ecotox W	**kg 1,4-DB eq**	**6,15E+00**	5,96E+00	5,04E-02	4,83E-02	2,75E-02	1,62E-03	3,33E-03	3,85E-02	1,61E-02
LU	**m^2a**	**6,50E-01**	6,11E-01	1,55E-02	1,51E-02	4,20E-03	1,66E-04	5,01E-03	5,05E-03	-5,50E-03
ByP	**kg**	**1,58E-01**	1,58E-01	0,00E+00	0,00E+00	1,65E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 41. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 3 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,33E-01**	1,80E-01	3,65E-01	6,46E-02	1,65E-02	5,60E-03	2,12E-03	1,13E-01	-1,36E-02
Used as raw materials	MJ	**3,88E+00**	3,73E+00	6,69E-02	6,78E-02	2,61E-02	2,72E-04	2,44E-03	2,19E-02	-2,78E-02
TOTAL	MJ	**4,62E+00**	3,91E+00	4,32E-01	1,32E-01	4,26E-02	5,87E-03	4,56E-03	1,35E-01	-4,14E-02
Use as energy carrier	MJ	**2,60E+01**	1,03E+01	8,27E+00	4,44E+00	2,66E-01	6,00E-02	3,29E-01	3,84E+00	-1,60E+00
Used as raw materials	MJ	**1,00E+00**	9,20E-01	1,97E-02	6,70E-02	4,80E-03	4,29E-04	4,79E-03	1,04E-02	-2,59E-02
TOTAL	MJ	**2,70E+01**	1,13E+01	8,29E+00	4,51E+00	2,70E-01	6,04E-02	3,33E-01	3,85E+00	-1,62E+00
Secondary material	kg	**5,23E-04**	0,00E+00	0,00E+00	5,23E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**8,93E-05**	5,56E-05	0,00E+00	0,00E+00	1,83E-05	1,54E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,04E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,04E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**6,26E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,82E-03	3,23E-04	0,00E+00	6,05E-02
Materials for energy recovery	kg	**4,38E-05**	0,00E+00	0,00E+00	0,00E+00	4,38E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 42. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 5 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,47E+00**	7,10E-01	2,63E-01	8,50E-02	1,97E-02	1,92E-02	1,93E-02	3,62E-01	-1,25E-02
GWP Biogenic	**kg CO_2 eq**	**4,17E-01**	9,31E-02	5,09E-03	3,65E-03	4,73E-02	2,11E-04	1,93E-04	2,68E-01	-9,27E-04
GWP LU-LT	**kg CO_2 eq**	**3,83E-02**	3,80E-02	1,31E-04	8,38E-05	6,68E-05	-6,35E-06	7,54E-06	7,49E-05	-2,44E-05
GWP Total	**kg CO_2 eq**	**1,92E+00**	8,41E-01	2,68E-01	8,87E-02	6,70E-02	1,94E-02	1,95E-02	6,31E-01	-1,35E-02
AP	**kg SO_2 eq**	**1,43E-02**	1,02E-02	1,64E-03	4,12E-04	1,29E-04	1,13E-04	9,08E-05	1,80E-03	-1,14E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,24E-04	1,92E-04	4,02E-05	1,88E-05	3,46E-04	-3,36E-05
POCP	**kg C_2H_4 eq**	**5,25E-04**	3,69E-04	7,81E-05	2,28E-05	6,83E-06	4,36E-06	3,36E-06	4,72E-05	-6,77E-06
Abiot elem	**kg Sb eq**	**1,25E-05**	1,19E-05	1,34E-07	3,85E-07	3,44E-08	3,00E-08	3,66E-08	9,91E-08	-1,52E-07
Abiot F	**MJ**	**2,18E+01**	8,92E+00	7,05E+00	2,02E+00	2,18E-01	2,66E-01	3,19E-01	3,67E+00	-6,70E-01
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	1,21E-03	9,22E-05	1,94E-05	3,98E-05	2,10E-04	-4,38E-04
HT	**kg 1,4-DB eq**	**2,39E+01**	2,38E+01	6,60E-02	4,28E-02	8,22E-03	5,85E-03	7,86E-03	4,01E-02	-3,37E-03
Ecotox W	**kg 1,4-DB eq**	**6,12E+00**	5,96E+00	5,04E-02	2,25E-02	2,75E-02	8,06E-03	3,33E-03	3,85E-02	7,10E-03
LU	**m^2a**	**6,48E-01**	6,11E-01	1,55E-02	9,13E-03	4,20E-03	1,01E-03	5,01E-03	5,05E-03	-2,48E-03
ByP	**kg**	**7,67E-01**	7,66E-01	0,00E+00	0,00E+00	8,04E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 43. Functional unit: 1 liter of Maestros de Hojiblanca extra virgin olive oil bottled in PET 5 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,30E-01**	1,80E-01	3,65E-01	3,17E-02	1,65E-02	2,73E-02	2,12E-03	1,13E-01	-6,00E-03
Used as raw materials	MJ	**3,88E+00**	3,73E+00	6,69E-02	4,39E-02	2,61E-02	1,46E-03	2,44E-03	2,19E-02	-1,27E-02
TOTAL	MJ	**4,61E+00**	3,91E+00	4,32E-01	7,56E-02	4,26E-02	2,88E-02	4,56E-03	1,35E-01	-1,87E-02
Use as energy carrier	MJ	**2,48E+01**	1,03E+01	8,27E+00	2,13E+00	2,66E-01	3,16E-01	3,29E-01	3,84E+00	-7,04E-01
Used as raw materials	MJ	**9,82E-01**	9,20E-01	1,97E-02	3,07E-02	4,80E-03	2,40E-03	4,79E-03	1,04E-02	-1,14E-02
TOTAL	MJ	**2,58E+01**	1,13E+01	8,29E+00	2,16E+00	2,70E-01	3,18E-01	3,33E-01	3,85E+00	-7,15E-01
Secondary material	kg	**1,59E-03**	0,00E+00	0,00E+00	1,59E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**4,34E-04**	2,70E-04	0,00E+00	0,00E+00	8,89E-05	7,48E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**9,91E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,91E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**2,98E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,89E-03	1,57E-03	0,00E+00	2,63E-02
Materials for energy recovery	kg	**2,13E-04**	0,00E+00	0,00E+00	0,00E+00	2,13E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 44. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 0,25 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,89E+00**	7,10E-01	2,63E-01	4,67E-01	1,97E-02	4,14E-03	1,21E-01	3,62E-01	-5,83E-02
GWP Biogenic	**kg CO_2 eq**	**4,19E-01**	9,31E-02	5,09E-03	2,85E-02	4,73E-02	3,36E-05	9,17E-04	2,68E-01	-2,42E-02
GWP LU-LT	**kg CO_2 eq**	**3,86E-02**	3,80E-02	1,31E-04	3,94E-04	6,68E-05	1,43E-06	7,15E-05	7,49E-05	-1,25E-04
GWP Total	**kg CO_2 eq**	**2,35E+00**	8,41E-01	2,68E-01	4,96E-01	6,70E-02	4,17E-03	1,21E-01	6,31E-01	-8,26E-02
AP	**kg SO_2 eq**	**1,78E-02**	1,02E-02	1,64E-03	2,28E-03	1,29E-04	2,60E-05	2,20E-03	1,80E-03	-5,40E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	5,83E-04	1,92E-04	5,21E-06	2,49E-04	3,46E-04	-1,70E-04
POCP	**kg C_2H_4 eq**	**6,87E-04**	3,69E-04	7,81E-05	1,45E-04	6,83E-06	7,91E-07	7,15E-05	4,72E-05	-3,08E-05
Abiot elem	**kg Sb eq**	**1,34E-05**	1,19E-05	1,34E-07	1,84E-06	3,44E-08	1,13E-08	6,54E-08	9,91E-08	-6,55E-07
Abiot F	**MJ**	**3,07E+01**	8,92E+00	7,05E+00	1,19E+01	2,18E-01	6,59E-02	1,80E+00	3,67E+00	-2,88E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	6,65E-03	9,22E-05	7,13E-06	2,00E-04	2,10E-04	-2,07E-03
HT	**kg 1,4-DB eq**	**2,42E+01**	2,38E+01	6,60E-02	2,42E-01	8,22E-03	2,02E-03	5,20E-02	4,01E-02	-1,70E-02
Ecotox W	**kg 1,4-DB eq**	**6,23E+00**	5,96E+00	5,04E-02	1,10E-01	2,75E-02	5,48E-04	1,30E-02	3,85E-02	2,70E-02
LU	**m^2a**	**6,40E-01**	6,11E-01	1,55E-02	8,22E-02	4,20E-03	5,49E-04	8,60E-03	5,05E-03	-8,71E-02
ByP	**kg**	**1,95E-03**	1,94E-03	0,00E+00	0,00E+00	2,04E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 45. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 0,25 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**8,31E-01**	1,80E-01	3,65E-01	1,61E-01	1,65E-02	4,41E-04	2,33E-02	1,13E-01	-2,85E-02
Used as raw materials	MJ	**3,60E+00**	3,73E+00	6,69E-02	3,67E-01	2,61E-02	3,97E-04	1,11E-02	2,19E-02	-6,15E-01
TOTAL	MJ	**4,44E+00**	3,91E+00	4,32E-01	5,28E-01	4,26E-02	8,38E-04	3,44E-02	1,35E-01	-6,44E-01
Use as energy carrier	MJ	**3,41E+01**	1,03E+01	8,27E+00	1,24E+01	2,66E-01	6,77E-02	1,89E+00	3,84E+00	-3,03E+00
Used as raw materials	MJ	**1,06E+00**	9,20E-01	1,97E-02	1,43E-01	4,80E-03	8,65E-04	1,28E-02	1,04E-02	-4,94E-02
TOTAL	MJ	**3,51E+01**	1,13E+01	8,29E+00	1,25E+01	2,70E-01	6,86E-02	1,90E+00	3,85E+00	-3,08E+00
Secondary material	kg	**1,58E-02**	0,00E+00	0,00E+00	1,58E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,10E-06**	6,86E-07	0,00E+00	0,00E+00	2,26E-07	1,90E-07	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,52E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,52E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**2,47E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,97E-02	3,99E-06	0,00E+00	1,78E-01
Materials for energy recovery	kg	**5,40E-07**	0,00E+00	0,00E+00	0,00E+00	5,40E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 46. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 0,50 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,89E+00**	7,10E-01	2,63E-01	4,67E-01	1,97E-02	4,14E-03	1,21E-01	3,62E-01	-5,83E-02
GWP Biogenic	**kg CO_2 eq**	**4,19E-01**	9,31E-02	5,09E-03	2,85E-02	4,73E-02	3,36E-05	9,17E-04	2,68E-01	-2,42E-02
GWP LU-LT	**kg CO_2 eq**	**3,86E-02**	3,80E-02	1,31E-04	3,94E-04	6,68E-05	1,43E-06	7,15E-05	7,49E-05	-1,25E-04
GWP Total	**kg CO_2 eq**	**2,35E+00**	8,41E-01	2,68E-01	4,96E-01	6,70E-02	4,17E-03	1,21E-01	6,31E-01	-8,26E-02
AP	**kg SO_2 eq**	**1,78E-02**	1,02E-02	1,64E-03	2,28E-03	1,29E-04	2,60E-05	2,20E-03	1,80E-03	-5,40E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	5,83E-04	1,92E-04	5,21E-06	2,49E-04	3,46E-04	-1,70E-04
POCP	**kg C_2H_4 eq**	**6,87E-04**	3,69E-04	7,81E-05	1,45E-04	6,83E-06	7,91E-07	7,15E-05	4,72E-05	-3,08E-05
Abiot elem	**kg Sb eq**	**1,34E-05**	1,19E-05	1,34E-07	1,84E-06	3,44E-08	1,13E-08	6,54E-08	9,91E-08	-6,55E-07
Abiot F	**MJ**	**3,07E+01**	8,92E+00	7,05E+00	1,19E+01	2,18E-01	6,59E-02	1,80E+00	3,67E+00	-2,88E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	6,65E-03	9,22E-05	7,13E-06	2,00E-04	2,10E-04	-2,07E-03
HT	**kg 1,4-DB eq**	**2,42E+01**	2,38E+01	6,60E-02	2,42E-01	8,22E-03	2,02E-03	5,20E-02	4,01E-02	-1,70E-02
Ecotox W	**kg 1,4-DB eq**	**6,23E+00**	5,96E+00	5,04E-02	1,10E-01	2,75E-02	5,48E-04	1,30E-02	3,85E-02	2,70E-02
LU	**m^2a**	**6,40E-01**	6,11E-01	1,55E-02	8,22E-02	4,20E-03	5,49E-04	8,60E-03	5,05E-03	-8,71E-02
ByP	**kg**	**1,95E-03**	1,94E-03	0,00E+00	0,00E+00	2,04E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 47. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 0,50 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**8,31E-01**	1,80E-01	3,65E-01	1,61E-01	1,65E-02	4,41E-04	2,33E-02	1,13E-01	-2,85E-02
Used as raw materials	MJ	**3,60E+00**	3,73E+00	6,69E-02	3,67E-01	2,61E-02	3,97E-04	1,11E-02	2,19E-02	-6,15E-01
TOTAL	MJ	**4,44E+00**	3,91E+00	4,32E-01	5,28E-01	4,26E-02	8,38E-04	3,44E-02	1,35E-01	-6,44E-01
Use as energy carrier	MJ	**3,41E+01**	1,03E+01	8,27E+00	1,24E+01	2,66E-01	6,77E-02	1,89E+00	3,84E+00	-3,03E+00
Used as raw materials	MJ	**1,06E+00**	9,20E-01	1,97E-02	1,43E-01	4,80E-03	8,65E-04	1,28E-02	1,04E-02	-4,94E-02
TOTAL	MJ	**3,51E+01**	1,13E+01	8,29E+00	1,25E+01	2,70E-01	6,86E-02	1,90E+00	3,85E+00	-3,08E+00
Secondary material	kg	**1,58E-02**	0,00E+00	0,00E+00	1,58E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,10E-06**	6,86E-07	0,00E+00	0,00E+00	2,26E-07	1,90E-07	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,52E-06**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,52E-06	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**2,47E-01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,97E-02	3,99E-06	0,00E+00	1,78E-01
Materials for energy recovery	kg	**5,40E-07**	0,00E+00	0,00E+00	0,00E+00	5,40E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 48. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 0,75 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,65E+00**	7,10E-01	2,63E-01	2,06E-01	1,97E-02	3,67E-03	1,21E-01	3,62E-01	-3,24E-02
GWP Biogenic	**kg CO_2 eq**	**4,16E-01**	9,31E-02	5,09E-03	8,52E-03	4,73E-02	3,65E-05	9,17E-04	2,68E-01	-7,24E-03
GWP LU-LT	**kg CO_2 eq**	**3,85E-02**	3,80E-02	1,31E-04	1,85E-04	6,68E-05	-3,13E-07	7,15E-05	7,49E-05	-6,58E-05
GWP Total	**kg CO_2 eq**	**2,11E+00**	8,41E-01	2,68E-01	2,15E-01	6,70E-02	3,70E-03	1,21E-01	6,31E-01	-3,97E-02
AP	**kg SO_2 eq**	**1,67E-02**	1,02E-02	1,64E-03	1,01E-03	1,29E-04	2,22E-05	2,20E-03	1,80E-03	-2,96E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	2,90E-04	1,92E-04	6,57E-06	2,49E-04	3,46E-04	-9,02E-05
POCP	**kg C_2H_4 eq**	**6,14E-04**	3,69E-04	7,81E-05	5,76E-05	6,83E-06	7,85E-07	7,15E-05	4,72E-05	-1,73E-05
Abiot elem	**kg Sb eq**	**1,28E-05**	1,19E-05	1,34E-07	9,54E-07	3,44E-08	7,28E-09	6,54E-08	9,91E-08	-3,81E-07
Abiot F	**MJ**	**2,50E+01**	8,92E+00	7,05E+00	4,95E+00	2,18E-01	5,36E-02	1,80E+00	3,67E+00	-1,67E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	3,04E-03	9,22E-05	4,65E-06	2,00E-04	2,10E-04	-1,14E-03
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	1,08E-01	8,22E-03	1,36E-03	5,20E-02	4,01E-02	-9,03E-03
Ecotox W	**kg 1,4-DB eq**	**6,16E+00**	5,96E+00	5,04E-02	5,45E-02	2,75E-02	1,16E-03	1,30E-02	3,85E-02	1,69E-02
LU	**m^2a**	**6,42E-01**	6,11E-01	1,55E-02	2,24E-02	4,20E-03	2,99E-04	8,60E-03	5,05E-03	-2,48E-02
ByP	**kg**	**9,40E-02**	9,39E-02	0,00E+00	0,00E+00	9,86E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 49. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 0,75 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,60E-01**	1,80E-01	3,65E-01	7,38E-02	1,65E-02	3,47E-03	2,33E-02	1,13E-01	-1,57E-02
Used as raw materials	MJ	**3,78E+00**	3,73E+00	6,69E-02	1,00E-01	2,61E-02	3,06E-04	1,11E-02	2,19E-02	-1,69E-01
TOTAL	MJ	**4,54E+00**	3,91E+00	4,32E-01	1,74E-01	4,26E-02	3,77E-03	3,44E-02	1,35E-01	-1,84E-01
Use as energy carrier	MJ	**2,81E+01**	1,03E+01	8,27E+00	5,18E+00	2,66E-01	6,03E-02	1,89E+00	3,84E+00	-1,76E+00
Used as raw materials	MJ	**1,01E+00**	9,20E-01	1,97E-02	7,49E-02	4,80E-03	5,70E-04	1,28E-02	1,04E-02	-2,86E-02
TOTAL	MJ	**2,91E+01**	1,13E+01	8,29E+00	5,26E+00	2,70E-01	6,08E-02	1,90E+00	3,85E+00	-1,79E+00
Secondary material	kg	**2,19E-03**	0,00E+00	0,00E+00	2,19E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**5,32E-05**	3,31E-05	0,00E+00	0,00E+00	1,09E-05	9,16E-06	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**1,22E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**8,04E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,19E-03	1,92E-04	0,00E+00	7,20E-02
Materials for energy recovery	kg	**2,61E-05**	0,00E+00	0,00E+00	0,00E+00	2,61E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 50. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 1 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,60E+00**	7,10E-01	2,63E-01	1,52E-01	1,97E-02	2,61E-03	1,18E-01	3,62E-01	-2,36E-02
GWP Biogenic	**kg CO_2 eq**	**4,18E-01**	9,31E-02	5,09E-03	6,26E-03	4,73E-02	2,56E-05	9,48E-04	2,68E-01	-3,32E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	1,38E-04	6,68E-05	-1,48E-07	6,61E-05	7,49E-05	-4,69E-05
GWP Total	**kg CO_2 eq**	**2,06E+00**	8,41E-01	2,68E-01	1,58E-01	6,70E-02	2,64E-03	1,19E-01	6,31E-01	-2,70E-02
AP	**kg SO_2 eq**	**1,62E-02**	1,02E-02	1,64E-03	7,45E-04	1,29E-04	1,58E-05	1,89E-03	1,80E-03	-2,15E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	2,17E-04	1,92E-04	4,59E-06	2,23E-04	3,46E-04	-6,45E-05
POCP	**kg C_2H_4 eq**	**5,93E-04**	3,69E-04	7,81E-05	4,23E-05	6,83E-06	5,55E-07	6,18E-05	4,72E-05	-1,27E-05
Abiot elem	**kg Sb eq**	**1,27E-05**	1,19E-05	1,34E-07	7,14E-07	3,44E-08	5,31E-09	9,14E-08	9,91E-08	-2,83E-07
Abiot F	**MJ**	**2,41E+01**	8,92E+00	7,05E+00	3,63E+00	2,18E-01	3,84E-02	1,80E+00	3,67E+00	-1,25E+00
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	2,26E-03	9,22E-05	3,39E-06	2,05E-04	2,10E-04	-8,28E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	7,99E-02	8,22E-03	9,89E-04	5,06E-02	4,01E-02	-6,46E-03
Ecotox W	**kg 1,4-DB eq**	**6,15E+00**	5,96E+00	5,04E-02	4,06E-02	2,75E-02	7,93E-04	1,40E-02	3,85E-02	1,29E-02
LU	**m^2a**	**6,54E-01**	6,11E-01	1,55E-02	1,64E-02	4,20E-03	2,22E-04	1,22E-02	5,05E-03	-1,06E-02
ByP	**kg**	**6,25E-02**	6,24E-02	0,00E+00	0,00E+00	6,55E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 51. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 1 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,41E-01**	1,80E-01	3,65E-01	5,46E-02	1,65E-02	2,32E-03	2,12E-02	1,13E-01	-1,14E-02
Used as raw materials	MJ	**3,86E+00**	3,73E+00	6,69E-02	7,34E-02	2,61E-02	2,20E-04	1,16E-02	2,19E-02	-6,79E-02
TOTAL	MJ	**4,60E+00**	3,91E+00	4,32E-01	1,28E-01	4,26E-02	2,54E-03	3,28E-02	1,35E-01	-7,92E-02
Use as energy carrier	MJ	**2,71E+01**	1,03E+01	8,27E+00	3,81E+00	2,66E-01	4,29E-02	1,88E+00	3,84E+00	-1,31E+00
Used as raw materials	MJ	**1,01E+00**	9,20E-01	1,97E-02	5,61E-02	4,80E-03	4,15E-04	1,54E-02	1,04E-02	-2,13E-02
TOTAL	MJ	**2,82E+01**	1,13E+01	8,29E+00	3,86E+00	2,70E-01	4,33E-02	1,90E+00	3,85E+00	-1,33E+00
Secondary material	kg	**1,53E-03**	0,00E+00	0,00E+00	1,53E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**3,54E-05**	2,20E-05	0,00E+00	0,00E+00	7,24E-06	6,09E-06	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**8,07E-05**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,07E-05	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**5,79E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,93E-03	1,28E-04	0,00E+00	5,28E-02
Materials for energy recovery	kg	**1,73E-05**	0,00E+00	0,00E+00	0,00E+00	1,73E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 52. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 1,5 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,58E+00**	7,10E-01	2,63E-01	1,11E-01	1,97E-02	5,53E-03	1,21E-01	3,62E-01	-1,64E-02
GWP Biogenic	**kg CO_2 eq**	**4,17E-01**	9,31E-02	5,09E-03	4,59E-03	4,73E-02	5,89E-05	9,17E-04	2,68E-01	-2,34E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	9,87E-05	6,68E-05	-1,39E-06	7,15E-05	7,49E-05	-3,26E-05
GWP Total	**kg CO_2 eq**	**2,03E+00**	8,41E-01	2,68E-01	1,15E-01	6,70E-02	5,58E-03	1,21E-01	6,31E-01	-1,88E-02
AP	**kg SO_2 eq**	**1,64E-02**	1,02E-02	1,64E-03	5,36E-04	1,29E-04	3,29E-05	2,20E-03	1,80E-03	-1,49E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,54E-04	1,92E-04	1,10E-05	2,49E-04	3,46E-04	-4,48E-05
POCP	**kg C_2H_4 eq**	**5,96E-04**	3,69E-04	7,81E-05	3,10E-05	6,83E-06	1,23E-06	7,15E-05	4,72E-05	-8,82E-06
Abiot elem	**kg Sb eq**	**1,25E-05**	1,19E-05	1,34E-07	4,98E-07	3,44E-08	9,41E-09	6,54E-08	9,91E-08	-1,96E-07
Abiot F	**MJ**	**2,35E+01**	8,92E+00	7,05E+00	2,68E+00	2,18E-01	7,80E-02	1,80E+00	3,67E+00	-8,64E-01
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	1,60E-03	9,22E-05	6,05E-06	2,00E-04	2,10E-04	-5,75E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	5,75E-02	8,22E-03	1,81E-03	5,20E-02	4,01E-02	-4,49E-03
Ecotox W	**kg 1,4-DB eq**	**6,13E+00**	5,96E+00	5,04E-02	2,88E-02	2,75E-02	2,14E-03	1,30E-02	3,85E-02	8,95E-03
LU	**m^2a**	**6,49E-01**	6,11E-01	1,55E-02	1,20E-02	4,20E-03	3,42E-04	8,60E-03	5,05E-03	-7,53E-03
ByP	**kg**	**1,95E-01**	1,95E-01	0,00E+00	0,00E+00	2,05E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 53. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 1,5 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,37E-01**	1,80E-01	3,65E-01	3,97E-02	1,65E-02	7,01E-03	2,33E-02	1,13E-01	-7,89E-03
Used as raw materials	MJ	**3,86E+00**	3,73E+00	6,69E-02	5,46E-02	2,61E-02	4,35E-04	1,11E-02	2,19E-02	-4,81E-02
TOTAL	MJ	**4,60E+00**	3,91E+00	4,32E-01	9,43E-02	4,26E-02	7,45E-03	3,44E-02	1,35E-01	-5,60E-02
Use as energy carrier	MJ	**2,66E+01**	1,03E+01	8,27E+00	2,81E+00	2,66E-01	9,10E-02	1,89E+00	3,84E+00	-9,07E-01
Used as raw materials	MJ	**9,93E-01**	9,20E-01	1,97E-02	3,92E-02	4,80E-03	7,46E-04	1,28E-02	1,04E-02	-1,48E-02
TOTAL	MJ	**2,76E+01**	1,13E+01	8,29E+00	2,85E+00	2,70E-01	9,17E-02	1,90E+00	3,85E+00	-9,22E-01
Secondary material	kg	**1,30E-03**	0,00E+00	0,00E+00	1,30E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,10E-04**	6,88E-05	0,00E+00	0,00E+00	2,26E-05	1,90E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,52E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,52E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**4,45E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,60E-03	3,99E-04	0,00E+00	3,85E-02
Materials for energy recovery	kg	**5,41E-05**	0,00E+00	0,00E+00	0,00E+00	5,41E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 54. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 2 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,47E+00**	7,10E-01	2,63E-01	1,08E-02	1,97E-02	1,40E-03	1,20E-01	3,62E-01	-1,54E-02
GWP Biogenic	**kg CO_2 eq**	**4,14E-01**	9,31E-02	5,09E-03	4,73E-04	4,73E-02	1,59E-05	9,24E-04	2,68E-01	-1,07E-03
GWP LU-LT	**kg CO_2 eq**	**3,83E-02**	3,80E-02	1,31E-04	1,01E-05	6,68E-05	-5,99E-07	7,02E-05	7,49E-05	-2,99E-05
GWP Total	**kg CO_2 eq**	**1,92E+00**	8,41E-01	2,68E-01	1,13E-02	6,70E-02	1,41E-03	1,21E-01	6,31E-01	-1,65E-02
AP	**kg SO_2 eq**	**1,59E-02**	1,02E-02	1,64E-03	5,23E-05	1,29E-04	8,20E-06	2,12E-03	1,80E-03	-1,40E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,53E-05	1,92E-04	3,10E-06	2,43E-04	3,46E-04	-4,13E-05
POCP	**kg C_2H_4 eq**	**5,65E-04**	3,69E-04	7,81E-05	2,97E-06	6,83E-06	3,25E-07	6,91E-05	4,72E-05	-8,32E-06
Abiot elem	**kg Sb eq**	**1,21E-05**	1,19E-05	1,34E-07	4,80E-08	3,44E-08	1,95E-09	7,18E-08	9,91E-08	-1,87E-07
Abiot F	**MJ**	**2,11E+01**	8,92E+00	7,05E+00	2,60E-01	2,18E-01	1,90E-02	1,80E+00	3,67E+00	-8,25E-01
WSP	**m^3**	**1,21E+00**	1,21E+00	7,73E-04	1,54E-04	9,22E-05	1,27E-06	2,01E-04	2,10E-04	-5,38E-04
HT	**kg 1,4-DB eq**	**2,39E+01**	2,38E+01	6,60E-02	5,50E-03	8,22E-03	3,90E-04	5,17E-02	4,01E-02	-4,14E-03
Ecotox W	**kg 1,4-DB eq**	**6,10E+00**	5,96E+00	5,04E-02	2,81E-03	2,75E-02	6,46E-04	1,32E-02	3,85E-02	8,74E-03
LU	**m^2a**	**6,44E-01**	6,11E-01	1,55E-02	1,22E-03	4,20E-03	5,73E-05	9,49E-03	5,05E-03	-2,79E-03
ByP	**kg**	**6,38E-02**	6,37E-02	0,00E+00	0,00E+00	6,69E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 54. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 2 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**6,96E-01**	1,80E-01	3,65E-01	3,95E-03	1,65E-02	2,26E-03	2,28E-02	1,13E-01	-7,38E-03
Used as raw materials	MJ	**3,84E+00**	3,73E+00	6,69E-02	5,72E-03	2,61E-02	1,03E-04	1,12E-02	2,19E-02	-1,37E-02
TOTAL	MJ	**4,54E+00**	3,91E+00	4,32E-01	9,67E-03	4,26E-02	2,36E-03	3,40E-02	1,35E-01	-2,10E-02
Use as energy carrier	MJ	**2,40E+01**	1,03E+01	8,27E+00	2,73E-01	2,66E-01	2,31E-02	1,89E+00	3,84E+00	-8,66E-01
Used as raw materials	MJ	**9,58E-01**	9,20E-01	1,97E-02	3,81E-03	4,80E-03	1,58E-04	1,34E-02	1,04E-02	-1,41E-02
TOTAL	MJ	**2,50E+01**	1,13E+01	8,29E+00	2,77E-01	2,70E-01	2,32E-02	1,90E+00	3,85E+00	-8,80E-01
Secondary material	kg	**2,01E-04**	0,00E+00	0,00E+00	2,01E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**3,61E-05**	2,25E-05	0,00E+00	0,00E+00	7,39E-06	6,21E-06	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**8,24E-05**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,24E-05	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**3,30E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,01E-04	1,31E-04	0,00E+00	3,24E-02
Materials for energy recovery	kg	**1,77E-05**	0,00E+00	0,00E+00	0,00E+00	1,77E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 55. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 3 L (I).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
GWP Fossil	**kg CO_2 eq**	**1,56E+00**	7,10E-01	2,63E-01	9,94E-02	1,97E-02	5,21E-03	1,21E-01	3,62E-01	-1,55E-02
GWP Biogenic	**kg CO_2 eq**	**4,17E-01**	9,31E-02	5,09E-03	3,58E-03	4,73E-02	5,79E-05	9,17E-04	2,68E-01	-1,24E-03
GWP LU-LT	**kg CO_2 eq**	**3,84E-02**	3,80E-02	1,31E-04	9,02E-05	6,68E-05	-1,88E-06	7,15E-05	7,49E-05	-3,01E-05
GWP Total	**kg CO_2 eq**	**2,02E+00**	8,41E-01	2,68E-01	1,03E-01	6,70E-02	5,26E-03	1,21E-01	6,31E-01	-1,67E-02
AP	**kg SO_2 eq**	**1,64E-02**	1,02E-02	1,64E-03	4,82E-04	1,29E-04	3,07E-05	2,20E-03	1,80E-03	-1,40E-04
EP	**kg PO_4^{3-} eq**	**5,82E-01**	5,80E-01	5,58E-04	1,42E-04	1,92E-04	1,11E-05	2,49E-04	3,46E-04	-4,15E-05
POCP	**kg C_2H_4 eq**	**5,93E-04**	3,69E-04	7,81E-05	2,71E-05	6,83E-06	1,19E-06	7,15E-05	4,72E-05	-8,34E-06
Abiot elem	**kg Sb eq**	**1,25E-05**	1,19E-05	1,34E-07	4,65E-07	3,44E-08	7,89E-09	6,54E-08	9,91E-08	-1,88E-07
Abiot F	**MJ**	**2,33E+01**	8,92E+00	7,05E+00	2,37E+00	2,18E-01	7,18E-02	1,80E+00	3,67E+00	-8,25E-01
WSP	**m^3**	**1,22E+00**	1,21E+00	7,73E-04	1,45E-03	9,22E-05	5,10E-06	2,00E-04	2,10E-04	-5,40E-04
HT	**kg 1,4-DB eq**	**2,40E+01**	2,38E+01	6,60E-02	5,18E-02	8,22E-03	1,55E-03	5,20E-02	4,01E-02	-4,17E-03
Ecotox W	**kg 1,4-DB eq**	**6,13E+00**	5,96E+00	5,04E-02	2,66E-02	2,75E-02	2,25E-03	1,30E-02	3,85E-02	8,72E-03
LU	**m^2a**	**6,50E-01**	6,11E-01	1,55E-02	8,95E-03	4,20E-03	2,55E-04	8,60E-03	5,05E-03	-3,44E-03
ByP	**kg**	**2,17E-01**	2,17E-01	0,00E+00	0,00E+00	2,28E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00

*GWP: Global warming potential; GWP LU-LT: GWP Land use and land transformation; AP: Acidification Potential; EP: Eutrophication *potential; POCP: Formation potential of trophospheric ozone; Abiot elem: Abiotic depletion potential - Elements; Abiot f: Abiotic Depletion Potential -Fossil fuels; WSP: Water Scarcity Potential; HT: Human toxicity; Ecotox W: Freshwater aquatic eco-toxicity; LU: Land use; ByP: By-products.*

Table 56. Functional unit: 1 liter of Bertolli extra virgin olive oil bottled in PET 3 L (II).

Category	Unit	Total	Upstream module			Core module		Downstream module		
			Olive fruit production	Electricity and fuel production	Packaging production	Olive oil extraction	Olive oil packaging	Distribution	Use	End-of-life
USE OF RESOURCES										
Use as energy carrier	MJ	**7,34E-01**	1,80E-01	3,65E-01	3,61E-02	1,65E-02	7,72E-03	2,33E-02	1,13E-01	-7,41E-03
Used as raw materials	MJ	**3,88E+00**	3,73E+00	6,69E-02	4,09E-02	2,61E-02	3,93E-04	1,11E-02	2,19E-02	-1,84E-02
TOTAL	MJ	**4,61E+00**	3,91E+00	4,32E-01	7,70E-02	4,26E-02	8,11E-03	3,44E-02	1,35E-01	-2,58E-02
Use as energy carrier	MJ	**2,63E+01**	1,03E+01	8,27E+00	2,49E+00	2,66E-01	8,58E-02	1,89E+00	3,84E+00	-8,67E-01
Used as raw materials	MJ	**9,91E-01**	9,20E-01	1,97E-02	3,67E-02	4,80E-03	6,33E-04	1,28E-02	1,04E-02	-1,41E-02
TOTAL	MJ	**2,73E+01**	1,13E+01	8,29E+00	2,53E+00	2,70E-01	8,65E-02	1,90E+00	3,85E+00	-8,81E-01
Secondary material	kg	**7,45E-04**	0,00E+00	0,00E+00	7,45E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3 eq.	**1,23E-04**	7,65E-05	0,00E+00	0,00E+00	2,52E-05	2,12E-05	0,00E+00	0,00E+00	0,00E+00
WASTE PRODUCTION AND OUTPUT FLOWS										
Hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste disposed	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for reuse	kg	**2,81E-04**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,81E-04	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**3,55E-02**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,74E-03	4,45E-04	0,00E+00	3,33E-02
Materials for energy recovery	kg	**6,03E-05**	0,00E+00	0,00E+00	0,00E+00	6,03E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

9. ADDITIONAL INFORMATION

DEOLEO plays an important role with sustainable agriculture, due to this is the key to achieve quality. Producing olive oil using sustainable and responsible practices can result in higher quality end products. That is why they establish strong links that are beneficial to farmers, through which we encourage more responsible farming techniques.

The company´s vision tries to implement year by year best productive practices at all stages of the olive oil obtention chain to assurance the sustainability of their fields.

So, DEOLEO would show through its data the benefit of this practices.

According to the article "Net CO_2 storage in Mediterranean olive and peach orchards" published by *A. Sofo et al*, we have assessment the balance between the total GWP emissions of our generic functional unit and the CO_2 fixation through senescent leaves and pruning material.

To evaluate the carbon fixation of an olive grove, the age of the tree, the leaf products and pruning material incorporated into the soil as annual dry matter have been considered. The following table shows the carbon capture values of each of the inputs in the agronomic system for a young (less than 10 years) and mature (more than 10 years) plantation:

Table 57. Fixed CO_2 by senescent leaves and prunning material on young and mature olives orchard.

Orchard	Plant organ	Dry matter (t ha/year)	Fixed CO_2 (t ha/year)
Young	Senescent leaves	0.50	0.91
	Pruning material	1.00	1.83
	Total	1.50	2.74
Mature	Senescent leaves	0.91	1.67
	Pruning material	4.30	7.87
	Total	5.21	9.54

Fuente: A. Sofo et al, (2005)[5].

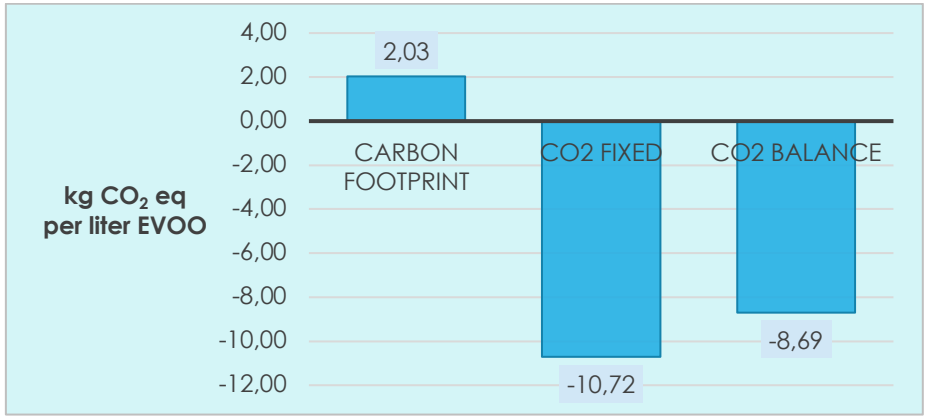
[5] *Net CO2 storage in mediterranean olive and peach orchards. Adriano Sofo a,*, Vitale Nuzzo a, Assunta Maria Palese a, Cristos Xiloyannis a, Giuseppe Celano a, Paul Zukowskyj b, Bartolomeo Dichio*

The fixed CO_2 by a mature olive orchard, show in this publication is 9.54 t ha-1 year-1, while for a young olive orchard is around 2.74 t ha-1 year-1. (Table 60).

To assess the EVOO's carbon storage of DEOLEO, it is noted that DEOLEO buys both olive oil from young and mature olive orchard to meet their annual olive oil needs. The term mature olive grove applies to the amount of oil from traditional olive orchard (between 100 - 200 trees/ha) and the term young olive orchard to oil from intensive and super-intensive olive groves (200 – 400 trees/ha and >1,000 trees/ha). Based on this approach, the representation of the different production systems for each country of study from which DEOLEO olive oil comes has been applied.

This data is compared, and the following figure is obtained:

Figure 2. DEOLEO's Olive Oil Carbon Footprint



The Carbon Footprint is 2.03 kg CO_2 equivalent for 1 liter of bottled extra virgin olive oil, compared to a carbon fixation of -10.72 kg CO_2/L olive oil. Thus, the carbon balance amounts to -8.69 kg CO_2 per liter of DEOLEO olive oil.

10. INFORMATION RELATED TO SECTOR EPDS

- The selection of the production sites in this EPD have been the specific production sites of the functional unit: agronomic farms, mil, and packer of DEOLEO GLOBAL S.A.U.
- This EPD covers average values for an entire product category. Table 2 shows the percentage of representativeness per each packaging over the functional unit. The functional unit is an average of different types of packaging; hence, this product is not available for purchase on the market.

11. REFERENCES

- Product Category Rules 2010:07 v 3.0, publication date 31-03-2020 for the CPC 21537 product group "Virgin Olive Oil and its fractions".
- ISO 14040:2006 - Environmental management - Life cycle analysis - Principles and frame of reference.
- ISO 14044:2006 - Environmental management - Life cycle analysis - Requirements and guidelines.
- ISO 14025:2006 - Environmental labels and declarations - Type III environmental declarations - Principles and procedures.
- EPD International (2017) General Programme Instructions for the International EPD® System. Version 3.01, dated 2017-12-11. www.environdec.com

12. DIFFERENCES VERSUS PREVIOUS VERSIONS OF THE EPD

There are no previous versions of this EPD.

13. DECLARATION VALIDITY

The validity established for this environmental statement to DEOLEO, is a 5-year period starting from the date of the verification report (until February 2028).

This Environmental Product Declaration can only be compared to that which relates to the same product category within the same recognition scheme.

14. Verification

This verification has been made under PCR 2010:07 v3.0 and the Environdec´s Program General Instructions 3.01. published in December 2017.

The declaration is complete and contains:

- Product definition and physical data related to manufacturing.
- Details of inputs and their origin.
- Description of how the product is manufactured.
- Data on the conditions of use, and the final phase of life.
- Results of the evaluation of the life cycle.
- Evidence, verification and testing.

Independent verification according to ISO 14025:2006			
☐	EPD process certification	EPD verification	X
Procedure for follow-up of data during EPD validity involves third party verifier:			
☐	Yes	No	X

Third party verifier:

Anxo Mourelle Álvarez

Approved by: The International EPD® System Technical Committee, supported by the Secretariat

Coruña - Spain, March 2023