

Where to save CO₂e?



Reduce Your Carbon Emissions

Eppendorf epT.I.P.S.® BioBased

Eppendorf epT.I.P.S.® BioBased are made from 100% renewable feedstock (recycled e.g., from food oil wastes like used cooking oil and residues), applying the ISCC mass balance approach.

To establish comparability, Eppendorf conducted two Product Carbon Footprint (PCF) analyses. One for the Eppendorf epT.I.P.S. 0.1-10 µL M made of fossil-based PP and one for the corresponding tip made of biobased PP.

The PCF were performed under the following conditions:

- > According to GHG Protocol – Product Life Cycle Accounting and Reporting Standard
- > Conducted by independent third party

Data for Carbon Emissions and Emission Savings

The analyses are based on the “cradle to gate” principle to be able to evaluate the values determined independently of the different delivery routes to the customer. Based on the values determined for the 0.1-10 µL M tip, we have calculated the corresponding CO₂e savings for the other tip volumes.

In the following, we show the absolute emission savings per tip determined on the basis of the PCF described above, as well as the emission savings calculated on this basis for further epT.I.P.S. volume sizes.

Calculation based on tip raw material (PP)

1				2	
Tip size	Emission per fossil-based tip – Cradle to Gate [g-CO ₂ -equ]	Emission per biobased tip – Cradle to Gate [g-CO ₂ -equ]	Relative emission saving per tip – Cradle to Gate [%]	Absolute emission saving per tip [g-CO ₂ -equ]	Absolute emission saving per package [g-CO ₂ -equ]
0.1-10 µL M	0.22	0.07	68	0.15	141
3				4	
epT.I.P.S.® BioBased				0.15	71
0.1-20 µL M	N/A	N/A	N/A	0.38	184
2-200 µL	N/A	N/A	N/A	0.40	190
20-300 µL	N/A	N/A	N/A	0.75	358
50-1,000 µL	N/A	N/A	N/A	0.86	412
50-1,250 µL	N/A	N/A	N/A	1.08	521
ep Dualfilter T.I.P.S.® BioBased				0.15	141
0.1-10 µL M	N/A	N/A	N/A	0.17	163
0.5-20 µL L	N/A	N/A	N/A	0.38	369
2-20 µL	N/A	N/A	N/A	0.38	369
2-100 µL	N/A	N/A	N/A	0.40	380
2-200 µL	N/A	N/A	N/A	0.40	380
20-300 µL	N/A	N/A	N/A	0.40	380
50-1,000 µL	N/A	N/A	N/A	0.86	824
50-1,250 µL L	N/A	N/A	N/A	1.08	1,041
ep Dualfilter T.I.P.S.® SealMax® BioBased				0.17	163
0.5-20 µL L	N/A	N/A	N/A	0.38	369
2-100 µL	N/A	N/A	N/A	0.40	380
2-200 µL	N/A	N/A	N/A	0.40	380
20-300 µL	N/A	N/A	N/A	0.86	824
50-1,000 µL	N/A	N/A	N/A		

epT.I.P.S.: 100% biobased polypropylene

Calculation based on total product

Due to differences in packaging (Single-use racks vs. Reloads) and production processes, both final products are only directly comparable to a limited extent.

1				2	
Tip size	Emission per fossil-based tip – Cradle to Gate [g-CO ₂ -equ]	Emission per biobased tip – Cradle to Gate [g-CO ₂ -equ]	Relative emission saving per tip – Cradle to Gate [%]	Absolute emission saving per tip [g-CO ₂ -equ]	Absolute emission saving per package [g-CO ₂ -equ]
0.1-10 µL M	3.09	2.22	28	0.87	833

3			
epT.I.P.S.® BioBased			
0.1-20 µL M	N/A	N/A	N/A
2-200 µL	N/A	N/A	N/A
20-300 µL	N/A	N/A	N/A
50-1,000 µL	N/A	N/A	N/A
50-1,250 µL	N/A	N/A	N/A
50-1,250 µL L	N/A	N/A	N/A
ep Dualfilter T.I.P.S.® BioBased			
0.1-10 µL M	N/A	N/A	N/A
0.5-20 µL L	N/A	N/A	N/A
2-20 µL	N/A	N/A	N/A
2-100 µL	N/A	N/A	N/A
2-200 µL	N/A	N/A	N/A
20-300 µL	N/A	N/A	N/A
50-1,000 µL	N/A	N/A	N/A
50-1,250 µL L	N/A	N/A	N/A
ep Dualfilter T.I.P.S.® SealMax® BioBased			
0.5-20 µL L	N/A	N/A	N/A
2-100 µL	N/A	N/A	N/A
2-200 µL	N/A	N/A	N/A
20-300 µL	N/A	N/A	N/A
50-1,000 µL	N/A	N/A	N/A

0.87	417
2.27	1090
2.34	1122
4.41	2115
5.07	2436
6.41	3076
0.87	833
1.00	961
2.27	2,179
2.27	2,179
2.34	2,243
2.34	2,243
5.07	4,871
6.41	6,153
1.00	961
2.27	2,179
2.34	2,243
2.34	2,243
5.07	4,871

epT.I.P.S.: 100% biobased polypropylene

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1 This data set is the result of the comprehensive Product Carbon Footprint conducted for the 0.1-10 µL M epT.I.P.S. (biobased + fossil-based). The critical review was performed by independent external experts.

3 Validated by 3rd party

The data is depending on the boundaries set for the analysed system. Cradle to Gate: The emissions generated, starting from the collection of the raw material and ending with the final product leaving the warehouse. Distribution + end of life are excluded. As a Life Cycle or Carbon Footprint Analysis required, there are no values for other tip sizes available.

2 Absolute amount of emissions saved when using a 0.1-10 µL M epT.I.P.S. BioBased instead of a fossil-based 0.1-10 µL M epT.I.P.S..

4 These values have been internally computed for the other tip sizes. These values are not validated by an independent 3rd party.

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