

# terralution

INSPIRED. INNOVATIVE. SUSTAINABLE.



THE SUSTAINABLE  
SINGLE-USE EVOLUTION



  
medicel  
swiss evolution

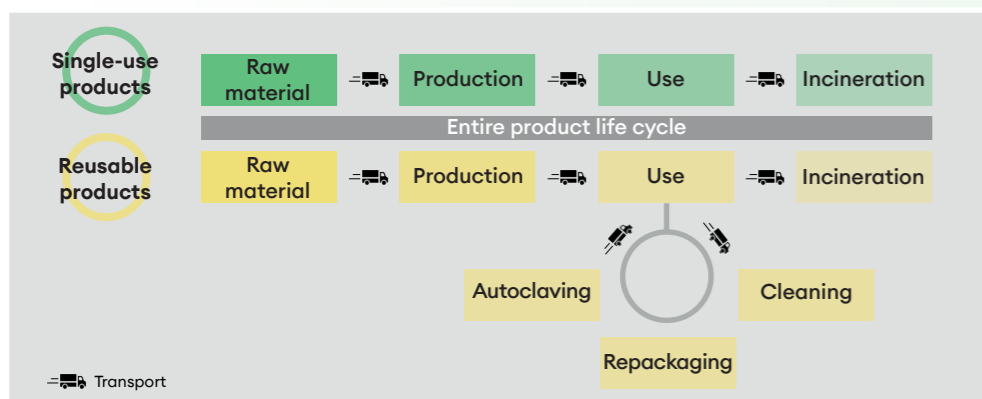
## The sustainable single-use evolution

terralution is the new, climate-conscious product family made by Medcel which is manufactured with environmentally friendly materials and resource-saving production technologies. It features single-use IOL injectors and surgical instruments such as I/A handpieces that fulfil the highest medical requirements for user performance and patient safety.

The use of reusable systems requires production, reprocessing and disposal methods which consume a great deal of energy. The greenhouse gas emissions generated throughout the entire process can be considerable. Although they are disposable, the terralution products are more sustainable than these reusable alternatives made of titanium, as they are made with a strict, all-round eco-design approach.

Over their entire life cycle, the terralution products leave a carbon footprint that is up to 51 per cent lower than that of comparable reusable alternatives<sup>1)</sup>.

## Life Cycle Assessment (LCA) & Cradle-to-Grave



A life cycle assessment (LCA) is an important tool for understanding and evaluating the environmental impact of products more effectively. The cradle-to-grave approach looks at the entire life cycle from raw material procurement (cradle) to disposal at the end of the product's life cycle (grave). This approach enables all-round comprehension of the ecological footprint and the environmental impact of the analysed products. The underlying data was collected and analysed during an LCA study based on standardised calculation methods (DIN ISO 14064-7) by the independent consultancy firm Procycons GbR, which specialises in sustainability studies.

## More is less is more

### Green and clean

With a demonstrably lower carbon footprint than reusable IOL injectors and I/A instruments, terralution is climate-friendly and sustainable<sup>1)</sup>. At the same time, the single-use products uncompromisingly fulfil the highest requirements for safety, cleanliness and purity during every operation.



### Innovative eco-design saves resources

terralution products are made from bio-based, high-performance material. The environmentally friendly blister pack has a lower CO<sub>2</sub> footprint and the size is optimised throughout<sup>2)</sup>. The recyclable box made of grass paper does not require the use of chemicals and only consumes a small amount of water per tonne of raw grass fibre material<sup>3)</sup>. The minimised product and packaging volume saves raw materials, prevents waste and lowers transport emissions.



### Less waste and lower costs

The more compact dimensions of terralution products minimise the space required in the warehouses of distributors, hospitals and surgeries. Logistics, storage and disposal costs are reduced.



### Medcel quality

The terralution design is fully focused on performance and function. The product optimisations inspired by ecological considerations go hand in hand with the proven Medcel application quality.



### Swiss made

As almost all the production steps for terralution products are located in Altenrhein (Switzerland), there is no time-consuming and unnecessary transport during the manufacturing process. Sustainable energy sources such as electricity from local hydro-power stations are also used.



# DUALCEL™

## terralution

DUALCEL terralution is the sustainable injector alternative. The injector has an impressively smaller product design with the same performance features.

A major advantage of DUALCEL terralution is the freedom of use for the surgeon offered by the combination of push and screw. Various loading methods and a wide range of cartridges with the required incision sizes offer maximum flexibility and safety.



OUR ENVIRONMENTAL  
COMMITMENT

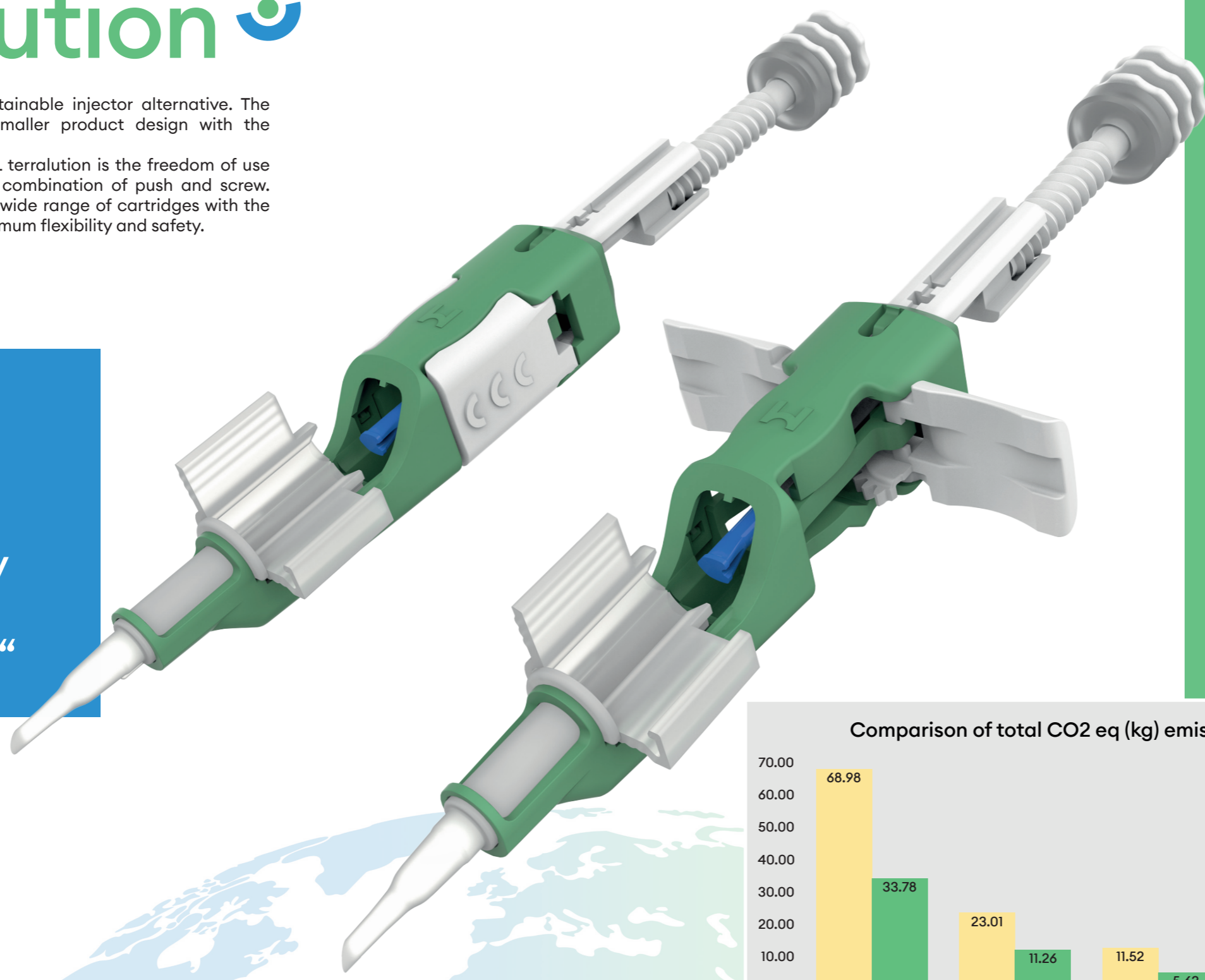
“51% less  
CO2 emissions per  
surgery compared to  
reusable injectors”<sup>1)</sup>

- Lower CO2 emissions per operation vs. single-use alternatives<sup>1)</sup>
- Injector made of bio-based, high-performance material
- Eco-friendly blister pack lowers CO2 emissions<sup>2)</sup>
- Eco-friendly box made of grass paper with energy savings of up to 80%<sup>3)</sup>
- 22% smaller box and blister pack & 25% lower box weight

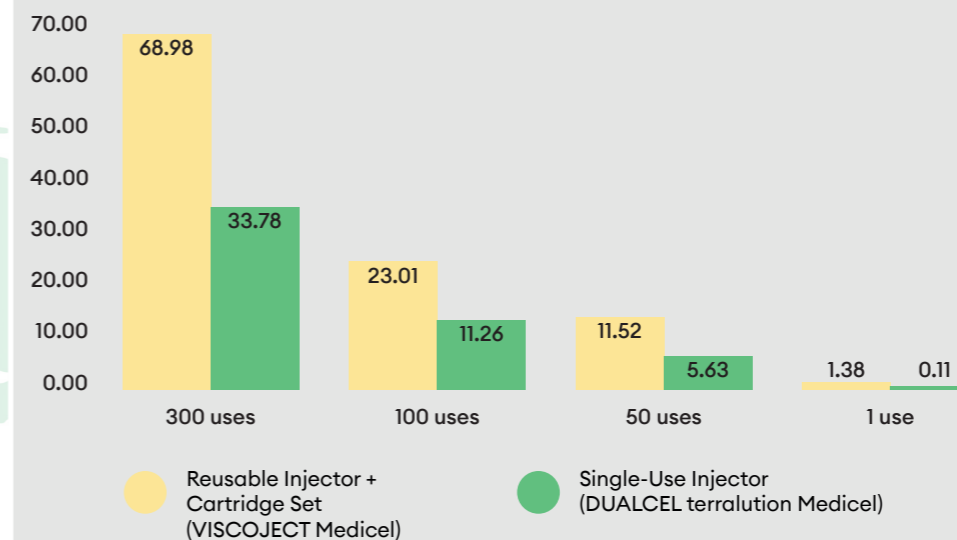


OUR PERFORMANCE  
COMMITMENT

“Proven  
functionality  
and trusted  
IOL-delivery”



Comparison of total CO2 eq (kg) emissions\*



\* Life Cycle Assessment (LCA), Procycons<sup>1)</sup>:  
In this study design, reusable devices will never have a lower footprint than single-use products (linear growth of steam sterilization cycle).

# BICEL™

## terralution

BICEL terralution is the sustainable bimanual I/A that combines the best properties of the Medcel product ranges currently available in one sustainable product.

The track-proven aeroplane shape of the cannulas and the grip structure of the new handpiece design ensure intuitive, comfortable handling and precise control during use. BICEL terralution is compatible with a luer connector and is available with different colour coding in the preferred sizes 23G and 21G.



OUR ENVIRONMENTAL COMMITMENT

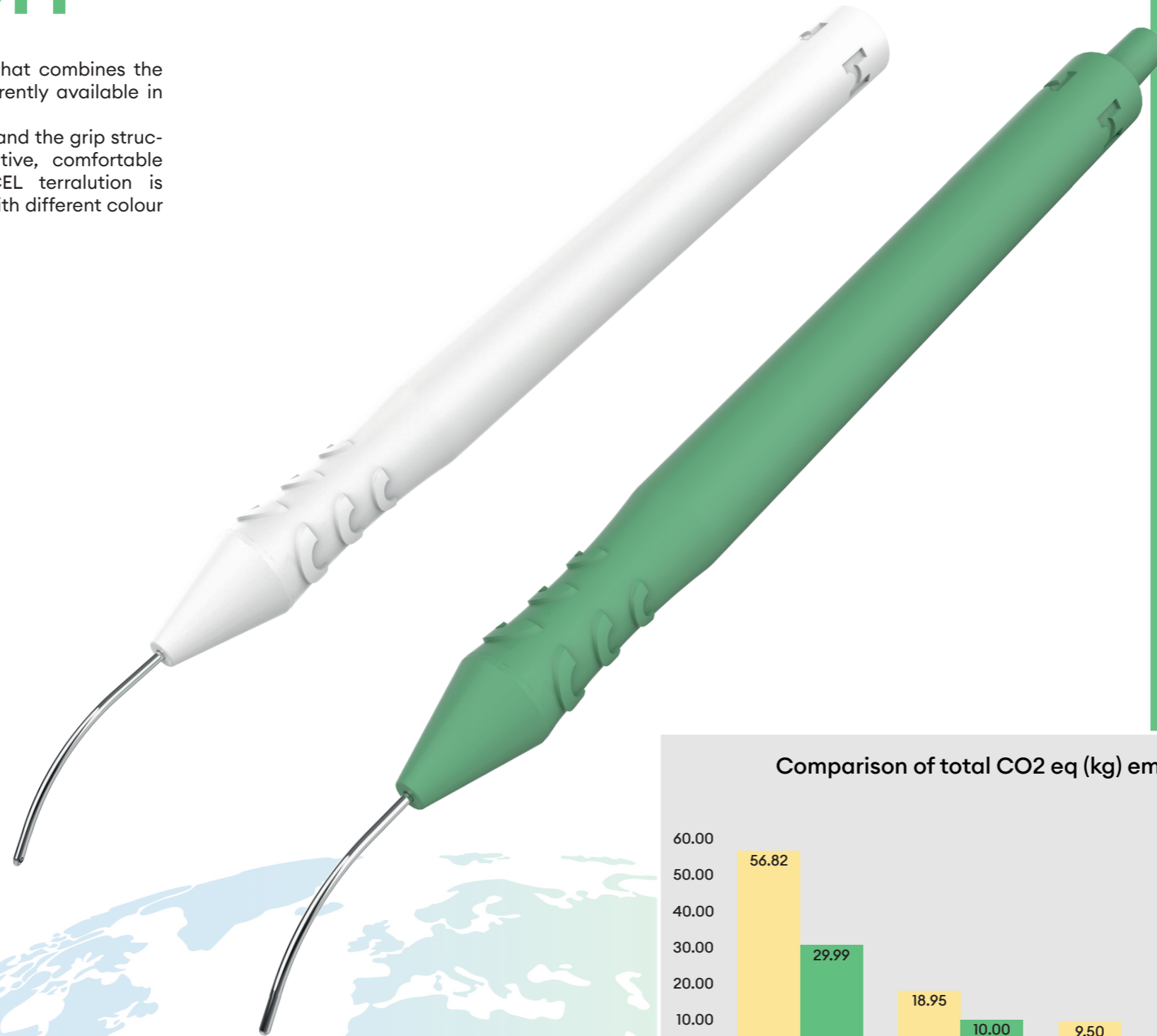
“47% less CO2 emissions per surgery compared to reusable I/A handpieces”<sup>1)</sup>

- Lower CO2 emissions per operation vs. single-use alternatives<sup>1)</sup>
- Handle made of bio-based, high-performance material
- Eco-friendly blister pack lowers CO2 emissions<sup>2)</sup>
- Eco-friendly box made of grass paper with energy savings of up to 80%<sup>3)</sup>
- 36% smaller box and blister pack & 20% lower box weight

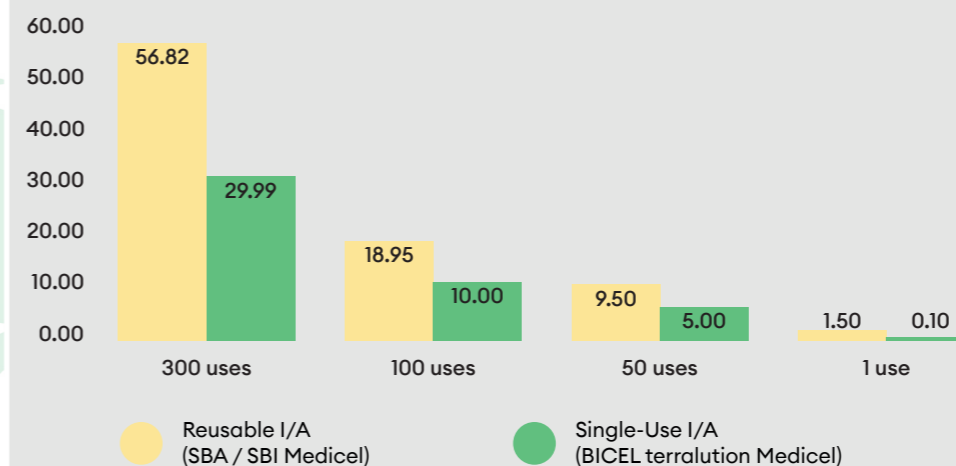


OUR PERFORMANCE COMMITMENT

“New design with proven functionality”



Comparison of total CO2 eq (kg) emissions\*



\* Life Cycle Assessment (LCA), Procycons<sup>1)</sup>: In this study design, reusable devices will never have a lower footprint than single-use products (linear growth of steam sterilization cycle).



www.terralution.ch

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### References

- 1) Life Cycle Assessment (LCA) according to DIN ISO 14064-7 / 14040-4; Procycons GbR, 2024
- 2) MEDPETG brochure, 2024
- 3) Egger Druck & Medien GmbH sustainability brochure, 2024



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