

# SLIDERSTRAW

THE CONCEPT AND THE VISION

Brainchildren GmbH | Berlin Germany

# SINGLE-USE PLASTIC IS A GLOBAL PROBLEM

**Humankind is up to its neck in refuse. Billions of pieces of plastic are floating in our seas and oceans – and disposable plastic straws are one of the causes.**

For a long time now, fish have not been the only thing swimming in our seas in countless numbers. A very particular species has been multiplying for years: common plastic waste. Drinking straws are among the most frequently occurring form of waste found in the sea, with a staggering **36.4 billion** currently tumbling about in our waters along with single-use plastic bottles, packaging and cups. This waste is causing long-term ocean pollution, the consequences of which are difficult to predict.

# WANTED: THE BEST DRINKING STRAW IN THE WORLD

**A new, smart drinking straw must do more than just be cheap and colourful. It must change our mindset.**

The question: Is it possible to design a sustainable version of the popular drinking straw? In order to find a solution, we first took a look at the alternatives that are already out there. There are actually quite a few. These can be divided roughly into two large groups: **disposable and reusable.**

## Disposable drinking straws

Let's start with alternative disposable drinking straws. Whether a disposable drinking straw is made from paper, pasta dough or straw, its production always entails wasting valuable raw ingredients and energy. For example, trees are felled to produce paper straws, while grains are used for purposes other than their normal purpose to produce pasta straws. In addition, these alternatives regularly produce masses of waste.

**So single use is no use!**

## Reusable drinking straws

Reusable drinking straws are considerably more practical. They can be made from glass, steel or even bamboo. They can be used multiple times, conserving resources and preventing unnecessary waste. However, all conventional reusable drinking straws have one problem: They cannot be cleaned hygienically and without residue. Although many come with little brushes, these do not guarantee a thorough cleaning.

# SUMMARY

Greatest **disadvantages of disposable drinking straws:**

- waste production and pollution
- poor environmental footprint and high CO<sub>2</sub> emissions
- waste of resources

Greatest **disadvantage of reusable drinking straws:**

- poor hygiene due to difficult cleaning

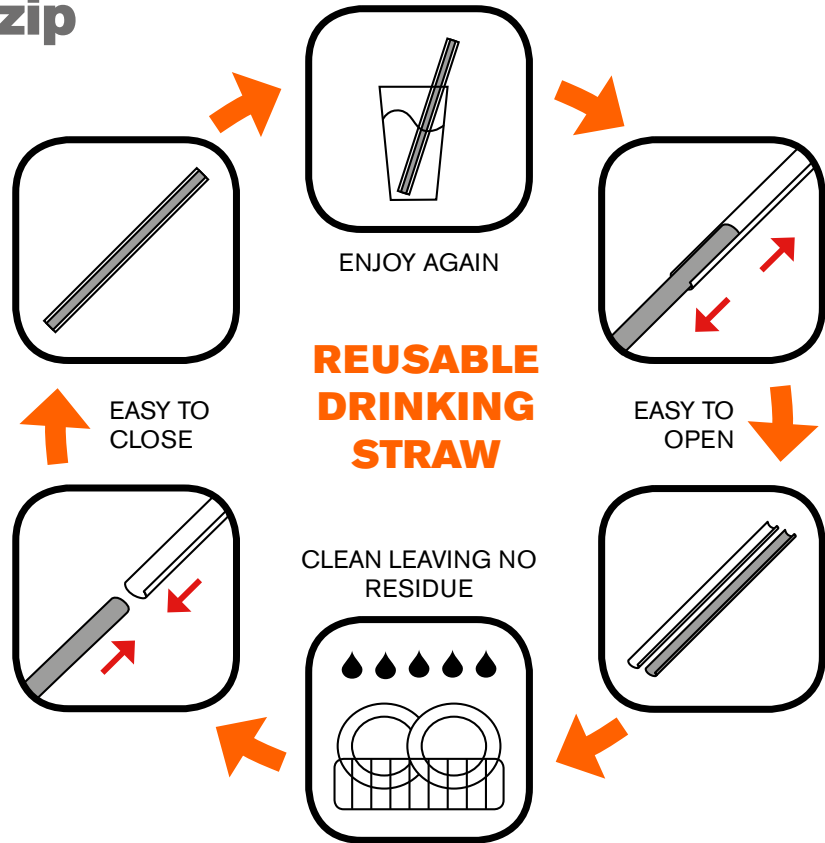
# **SOLUTION**

**Reusable instead of disposable  
and  
hygienic cleaning through the  
“OPEN TO CLEAN” principle.**

# The “OPEN TO CLEAN” Prinzip

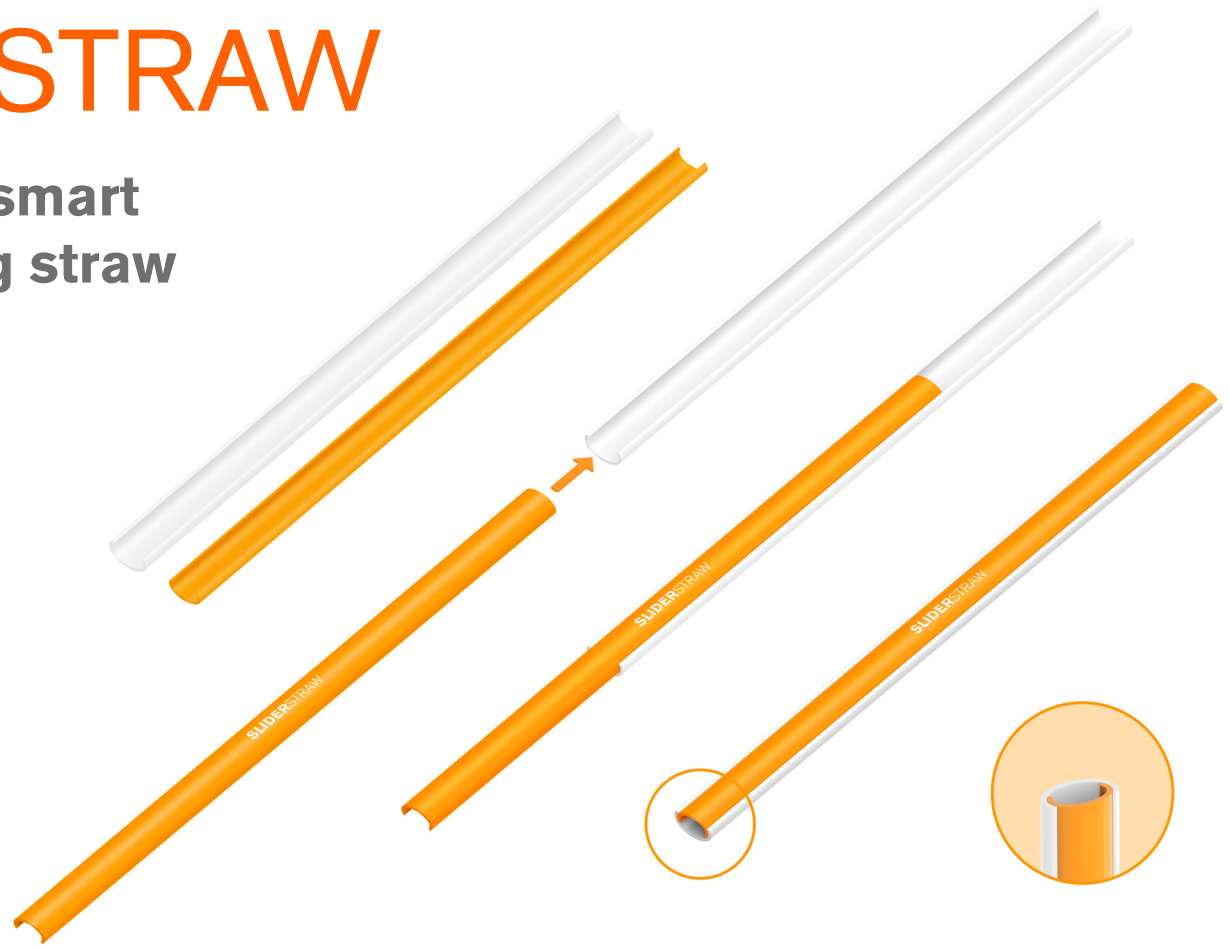
- Simply divide into 2 halves
- Clean without leaving any residue behind
- Enjoy time and time again

100 % hygienical  
100 % sustainable



# SLIDERSTRAW

The world's first smart  
reusable drinking straw





# SLIDERSTRAW



# 2 X AWARDED

The prestigious Red Dot and iF Design expert juries agree: the sustainable SLIDER STRAW concept received two awards for the highest design quality and innovative strength immediately after its market launch.

**RED DOT DESIGN AWARD**  
DESIGN ZENTRUM  
NORDRHEIN-WESTFALEN



red**dot** award 2019  
winner

**IF DESIGN AWARD**  
INTERNATIONAL DESIGN FORUM

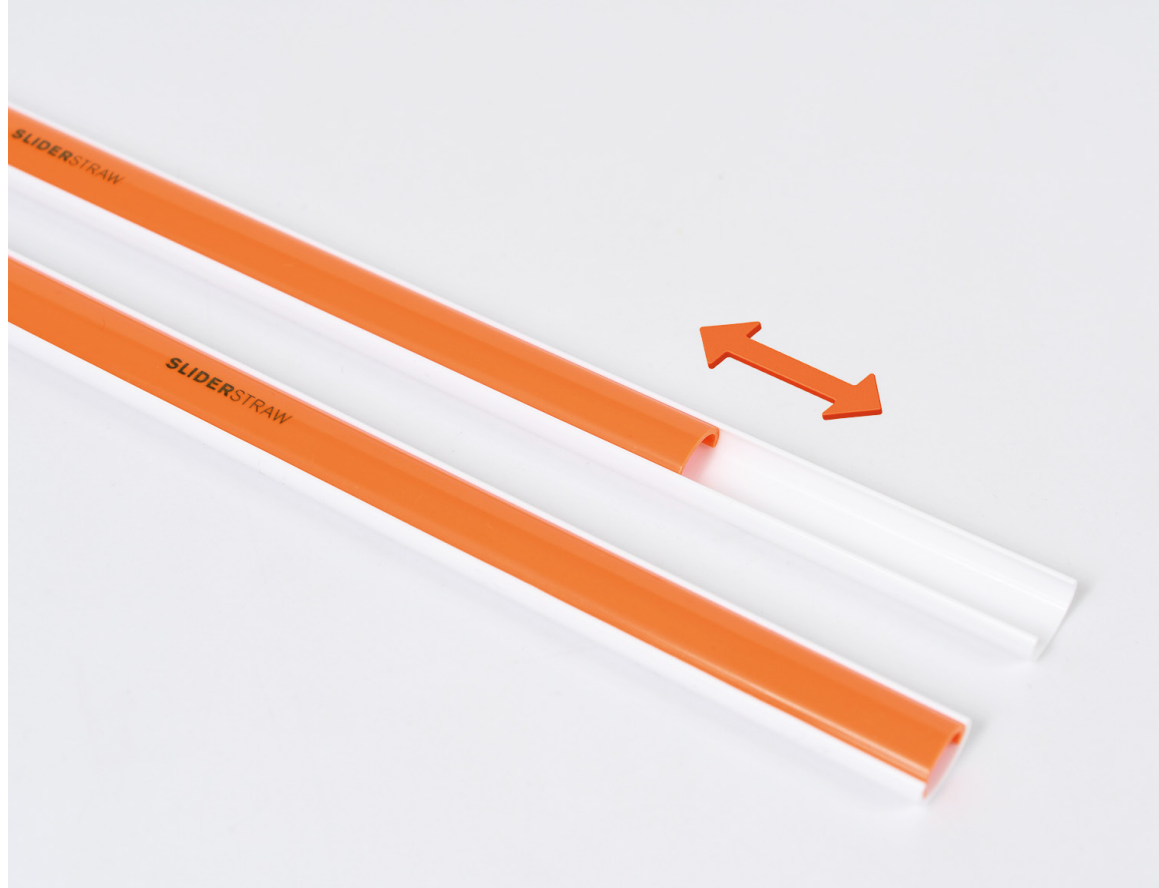


# SLIDERSTRAW

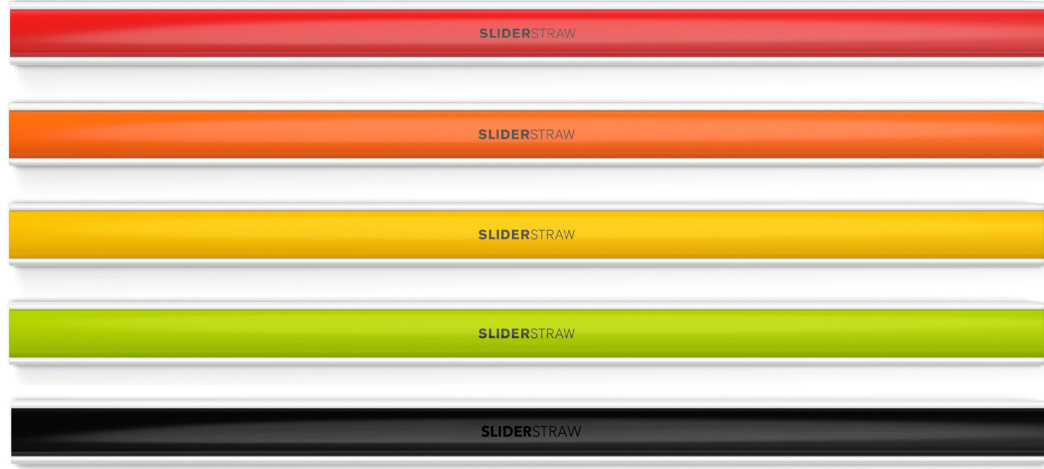
The SLIDER STRAW is available in various materials for all kind of applications:

1. Plastic: For events, fast food chains and stadiums
2. Silicone: For nursery schools, family holidays and at home
3. Stainless steel and silicone: For restaurants and at home

# PLASTIC



# PLASTIC CLASSICO SIZE/COLORS



215 mm



150 mm

**PLASTIC**

**ICYCO**

**SIZE/COLORS**

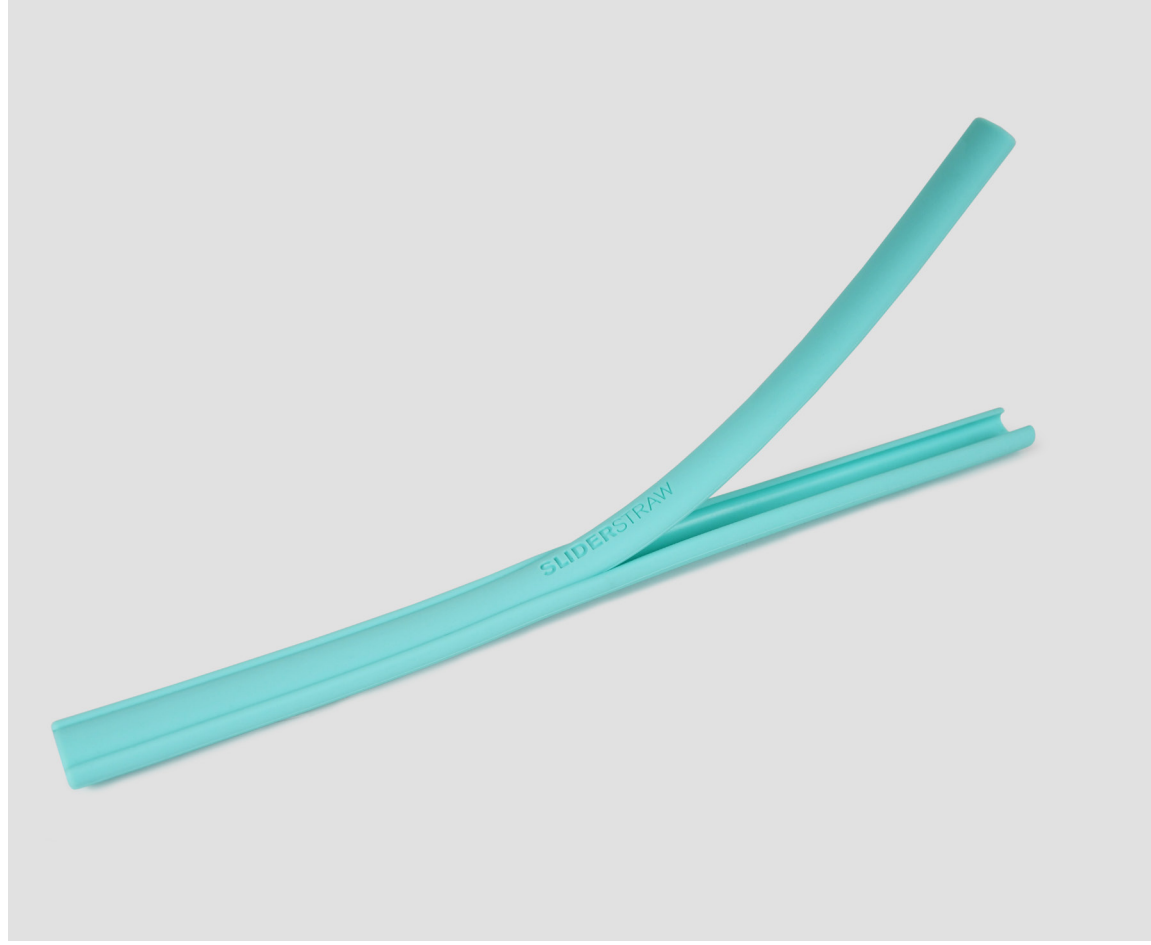


**150 mm**



**215 mm**

# SILICONE



**SILICONE**

**SILICO**

**SIZE/COLORS**



150 mm



215 mm

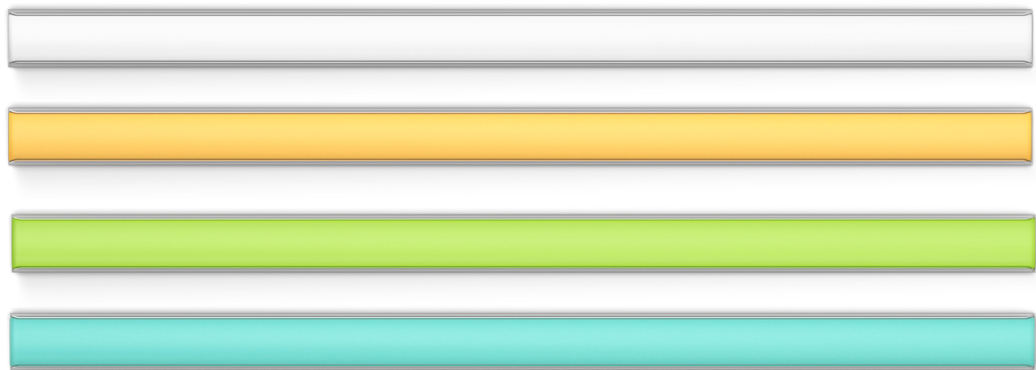




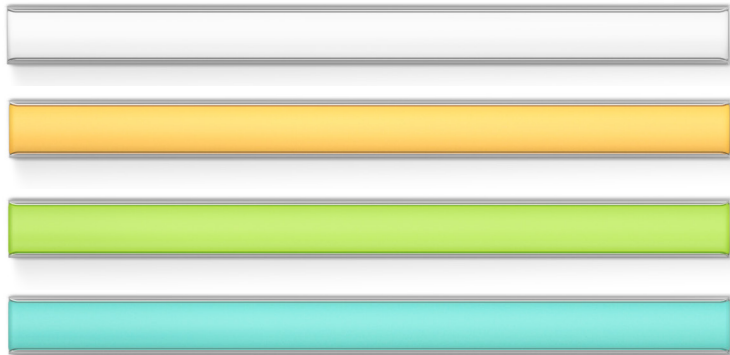
# STAINLESS STEEL / SILICONE



**STAINLESS STEEL /  
SILICONE  
CHICO  
SIZE/COLORS**



215 mm



150 mm

# PLASTIC

**WE PRINT YOUR COMPANY LOGO ONTO OUR PLASTIC SLIDERSTRAWS FOR ANY ORDER OF 250 PCS OR MORE.** (max. H 10 mm x B 50 mm)



**FOR ORDERS OF 2000 PCS OR MORE, YOU CAN GET YOUR SLIDERSTRAW DRINKING STRAWS IN YOUR INDIVIDUAL COMPANY COLOURS.**



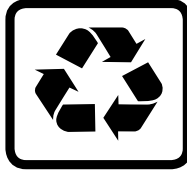
Example

# PLASTIC (TRANSLUCENT)

**WE LASER ETCH YOUR COMPANY LOGO ONTO OUR PLASTIC SLIDERSTRAWS FOR ANY ORDER OF 250 PCS OR MORE.** (max. H 8 mm x B 50 mm)



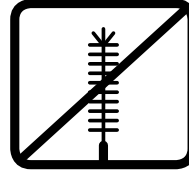
Example



ECOFRIENDLY



FOOD SAFE



NO BRUSH NEEDED



UNBREAKABLE



DISHWASHER SAFE

Simply slide apart and wash as normal,  
manually or in the dishwasher,  
**leaving absolutely no residue!**

# ALTERNATIVE STRAWS: A BRIEF OVERVIEW

There are other alternative straw concepts in addition to SLIDER STRAW – both disposable drinking straws and reusable drinking straws. Here is a concise overview. Learn more about alternative drinking straws made from bioplastic, paper, straw, wheat, glass and metal and read for yourself why these concepts are not true alternatives.

# DISPOSABLE ALTERNATIVES

The disposable alternatives all have the following in common: they eventually end up in the bin, leave a carbon footprint and most of them waste a lot of resources and therefore cause pollution.

## **Bioplastic drinking straws – a double-edged sword**

Disposable drinking straws made from bioplastic sound great.  
But are bioplastics really a clean solution?

Bioplastic sounds good. But very few people know what the term actually means. Unlike organic food, the definition of bioplastics is not so easy to understand. In principle, there are two basic groups: plastic made from biological raw materials and plastic that is biodegradable. Unfortunately, a material only needs to fulfil one of these criteria to be considered bioplastic. Few bioplastics manage both. As a result, the idea of disposable drinking straws made from bioplastic is to be approached with caution: just because it says “bio” on the label does not mean it is really “bio”.

Bio-based plastics often only consist partially of renewable raw materials, such as corn, potatoes or sugar cane. Since the proportion of biomass is not clearly defined, bioplastic also always contains chemical additives such as stabilisers – i.e. contents that are in no way “bio”. For technical reasons, biodegradable plastic often consists of up to 70 percent crude oil and just 30 percent renewable raw materials. The huge use of plants to produce plastic is, of course, anything but sustainable; production consumes a large amount of energy, valuable resources and gigantic areas of land for cultivation. As part of the process, chemicals are often used as fertilisers and over-fertilisation often occurs during mass production.



In addition, many bio-based plastics do not biodegrade easily. Long-term studies by Imogen Napper and Richard Thompson of the University of Plymouth show that so-called biodegradable plastic bags do not necessarily deteriorate any faster than their conventional counterparts. When buried in the ground or disposed of in the sea, some of these seemingly eco-friendly alternatives remain completely intact for as long as three years.<sup>1</sup>

This is why the German Environment Agency speaks of false promises in this regard – biodegradable plastics are difficult to break down, even in large industrial composting plants. Their biodegradability is, of course, much worse in domestic compost heaps. It is clear, then, that bioplastic disposable drinking straws only present new plastic waste problems.

<sup>1</sup> Source: University of Plymouth

## **Paper drinking straws – the good disposable solution?**

They don't cost much, and they are colourful and compostable. But can you buy paper straws without a second thought?

Large quantities of wood are required to produce paper straws. Countless trees need to be felled and energy needs to be generated to fuel production and transport. As a result, the environmental footprint of disposable paper straws is even many times worse than that of crude oil-based disposable straws.

The element is particularly problematic is the thing holding the paper straws together: the adhesive and the paper coating. These must be treated with chemicals during production. Since the straws quickly soften in a drink and in the mouth, these components can then be absorbed by the body while drinking. The way in which paper straws quickly become soggy also detracts considerably from the enjoyment of your drink.

In addition, paper disposable drinking straws generate huge quantities of waste, which unfortunately is not always recycled in an environmentally friendly manner – and often ends up on the street or in a waste incineration facility. Disposable drinking straws made from paper do not solve the waste problem – they simply delay it.

## Straw drinking straws – a new take on an old idea

Growing straws in fields sounds tempting. But can these single-use straws ultimately deliver what they promise?

They have given their name to an entire product category: a symbol for a product that is thrown carelessly away after being used just once. Straws are currently undergoing a renaissance. The first drinking straws were originally made from straw. The raw material was usually rye. The Sumerians were the first people to use straws – 4,000 years before our time. The good thing about straw is that it is a completely degradable, renewable product. Straws made from straw are limited in diameter due to how they grow. This means that a certain degree of additional effort is required when using them to drink. This is especially noticeable if you wish to use them to drink thick smoothies or iced coffee. In these cases, you need to use a lot more effort, which can reduce drinking pleasure. There is also the issue of these straws softening in the drink and the slight aftertaste of straw.

However, the environmental footprint is much more relevant: production of these straws wastes many resources. Cultivating grain especially for straw production causes urgently needed food to be sold off for a lifestyle product. Large amounts of fertilisers, fuel and energy are needed to grow, harvest, clean and sort the quantities of grain and process it to form drinking straws.

## **Edible straws – really good enough to eat?**

You cannot eat plastic drinking straws. However, you can eat straws made from grain or apple peelings. The only question is: do people actually do it?

Edible drinking straws – sounds like a plan. After all, this type of straw shouldn't produce any waste at all. In theory. Some bars even use pasta in drinks, while others produce edible straws using a recipe that includes grains and press residues from fruit juices. Both are good approaches for getting around the craziness of plastic waste. Environmental footprints show that these edible drinking straws actually have more negative effects on the environment than crude oil-based plastic straws because of the energy-intensive processing used to manufacture them.

In conclusion: edible drinking straws are more harmful to the environment than conventional plastic straws – and not everyone likes how they taste. Many people just want to enjoy their drink, and not their straw.

# REUSABLE ALTERNATIVES

There are actually many reusable drinking straws on the market. These are made from glass, bamboo, stainless steel, silicone, etc. But why do we continue to use disposable straws everywhere nevertheless? And why are these alternatives failing to prevail against disposable straws? Why do we use disposable straws in restaurants or at home, but not disposable cutlery?

The answer is relatively simple: Reusable drinking straws are very difficult to clean. When they are washed in a dishwasher, the water does not penetrate deeply enough into the straws, leaving the middle section unwashed. Over time, dirt and bacteria accumulate inside the straw, and it develops into its own “microcosmos”.

## **Bamboo drinking straws – sensitive exotics**

They are a real eye-catcher in a glass. But ultimately, exotic bamboo drinking straws are, like so many things, a matter of taste.

Many suppliers emphasise the purely natural element when advertising these straws. However, what they fail to mention are the long distances the bamboo has to travel from Asia to end up in our drinks at some point. This reduces the eco-friendly element somewhat.

In addition, cleaning these straws is a cumbersome task: bamboo straws cannot be cleaned in a dishwasher as this causes them to warp. This means each straw needs to be cleaned by hand using a small brush, and even then, they do not end up completely clean and free of residue. This is why bamboo straws are also not permitted in restaurants by law. And another drawback: bamboo has an annoying taste of its own and gradually takes on the colour of the drink.

## **Glass drinking straws – disadvantages that are crystal clear**

Glass drinking straws allow you to look deep inside. This is both a blessing and a curse.

The transparency of glass makes it easy to see dirt. Unfortunately, similarly to bamboo and metal drinking straws, glass drinking straws are also difficult to clean. Contrary to manufacturer promises, dishwashers often fail to remove all residues from inside the straw. This means that you may sometimes discover remnants of the previous drink in your glass straw. In order to combat this issue, many manufacturers provide a slender brush that should be used to clean the inside of every single straw by hand. However, cleaning the straws manually with the brush provided is extremely time-consuming, not very effective and simply not a reasonable task for those working in the busy restaurant trade. The bacteria and germs that cannot be seen are even worse. These make it nigh on impossible to reuse the straws – especially in the restaurant sector. The problem is not the material, then, but rather the difficulty of the cleaning process.

## **Metal drinking straws – great on the outside, grim on the inside**

Stainless steel drinking straws look elegant – at least from the outside. But how do they look on the inside after use?

Metal drinking straws are reusable products. This means that they have a decisive advantage over disposable plastic drinking straws. So far, so good. But when it comes to cleaning them, stainless steel drinking straws really lose their sheen. In principle, you can only guess how the inside of the little metal stick looks after a few weeks of use. In addition, due to the nature of their production, the interior surfaces of the straws cannot be polished as smooth as the outside. The finish is rough and, when viewed under a microscope, full of grooves and small craters.

Drink residues accumulate in these over time: a fertile breeding ground for bacteria, dirt and germs.



# PROPERTY RIGHTS

indication number	reference number	kind of property rights	date of application	title
DE 5287	20 2018 002 707	utility models	31.05.2018	straw
DE 5294	10 2018 005 018	patent application	14.06.2018	straw
DE 5295	40 2018 000 597	registered DE design	19.06.2018	straw
HA 5376	005920014	registered community design	18.12.2018	straw

The PCT-application for the international patent is in process.

The patent DE 5294 has been granted.

# CERTIFICATES

## PLASTIC

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(EU) Nr:10/2011  
LFGB Test bestanden



## SILICONE

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(EU) Nr: AP(2004)5  
LFGB Test bestanden



## STAINLESS STEEL

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(EU) FCM  
LFGB Test bestanden



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