

FROM BIRCH TREE

Xylitol

Xylitol has a delicious, sweet taste

Xylitol is found widely in nature, most of the fruits and vegetables that we eat on a daily basis have small amounts of xylitol. Xylitol has a delicious, sweet taste, and no unpleasant aftertaste ! Xylitol has about a third the calories as table sugar, and is a healthy alternative for diabetics. Not only does it make an excellent sugar substitute, but it aids in the prevention of dental caries, and reduces plaque formation.

Xylitol tastes just like sugar

Xylitol is a naturally occurring carbohydrate, that looks and tastes just like regular table sugar. It is a 100% natural sweetener that can be extracted from any woody fibrous plant material. Xylitol also occurs naturally in our bodies - in fact, an average size adult manufactures up to 15 grams of xylitol daily during normal metabolism. Pure xylitol is a white crystalline substance that looks and tastes like sugar.

Xylitol clean you mouth of bacteria

Xylitol is most effective when used in small amounts (in the form of gum, mints, or candy) after meals and snacks. This way, you clean your mouth of bacteria right after eating. We encourage Xylitol users to aim for five Xylitol uses per day to ensure the best dental results (use Xylitol 5 times per day).



Quick guide through presentation

Agenda

Page 8-15

Medical benefits

A photograph showing the silhouettes of several people standing on a cliff edge, looking out over a sunset or sunrise over the ocean. The sky is a mix of purple, orange, and blue.

Page 16-21

**Dental & Eco
benefits**

A photograph of a bright blue sky filled with soft, white cumulus clouds. The lighting is bright and airy.

Page 22-24

Nutrition Facts

A photograph of tall, golden-brown grasses in the foreground, with a body of water and a hazy horizon in the background under a bright sky.

Page 25-26

**Pricing &
Shipment**

A photograph of a person's profile in silhouette, holding a white mug. The background is a warm, golden sunset or sunrise, with the sun low on the horizon, creating a strong backlight effect.

**NO Sugar – NO Aspartam – NO Sorbitol –
NO GMO – NO Gluten**

Top Benefits of xylitol for diabetics and non-diabetics

Xylitol is an effective sugar substitute for Diabetics

TOP Things we must know about our xylitol

Xylitol vs. sugar

Xylitol serves as an effective sugar substitute for diabetics and non-diabetics. Xylitol use also provides excellent dental benefits. Using xylitol has many benefits:

- Delicious sweet taste... with no unpleasant aftertaste
 - Helps reduce the development of dental caries
 - Reduces plaque formation
- 1) Increases salivary flow to aid in the repair of damaged Tooth Enamel
 - 2) Provides one third fewer calories than sugar
 - 3) May be Useful as a Sugar Alternative Especially for People With Diabetes

Top Benefits of our xylitol

...and

Xylitol Dental Benefits

Studies using xylitol as either a sugar substitute or a small dietary addition have demonstrated a dramatic reduction in new tooth decay, along with arrest and even some reversal of existing dental caries. This xylitol benefit is long-lasting and possibly permanent.

Low decay rates persist even years after the trials have been completed.

It's 100% natural

Xylitol is not an artificial substance, but a normal part of everyday metabolism. Xylitol is widely distributed throughout nature in small amounts.

It's safe

In the amounts needed to prevent tooth decay (less than 15 grams per day), xylitol benefits and is safe for everyone. The World Health Organization has given xylitol its safest rating for food additives



It's convenient to use

Xylitol can be conveniently delivered to your teeth via chewing gum, tablets, or even candy. You don't need to change your normal routine to make room for Xylitol

It tastes great!

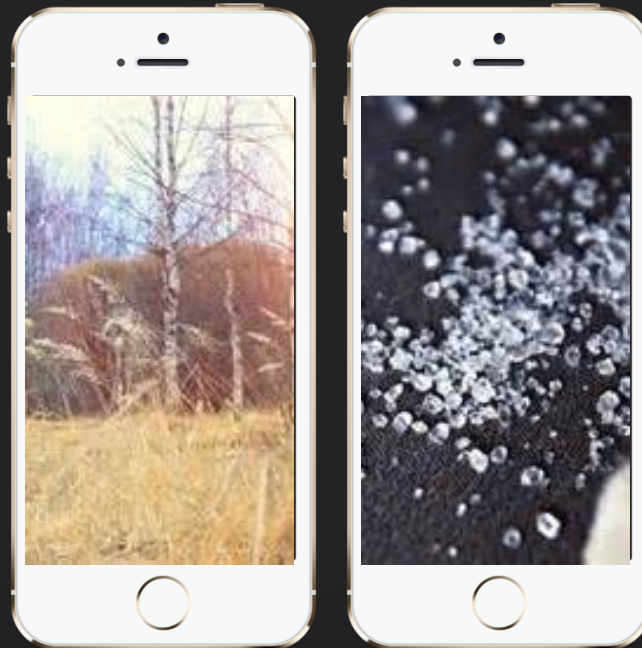
One of the best xylitol benefits is its great taste! Xylitol is a health regimen that doesn't require iron willpower or discipline. Xylitol tastes so good, using it becomes automatic, for both adults and children

Top Benefits of xylitol

...and more

History Of Xylitol

During World War II, Finland was suffering from a sugar shortage and with no domestic supply of sugar, they searched for, and rediscovered, an alternative - xylitol. It was only when xylitol was stabilized that it became a viable sweetener in foods. Researchers also discovered xylitol's insulin-independent nature (it metabolizes in the body without using insulin).



Main Content Header

The glycemic index is a numerical index that ranks carbohydrates on their rate of glycemic response or how quickly they convert to glucose in the body. The higher the number, the more quickly the carbohydrates break down thus causing a spike in blood sugar.

(www.glycemicindex.com)

Glycemic Index of Sweeteners

Xylitol 7	Honey 62
Agave Nectar 15	White Sugar 68
Barley Malt Syrup 42	High Fructose Corn Syrup 100
Maple Syrup 54	Glucose 100
Blackstrap Molasses 55	

Xylitol

FROM BIRCH TREE

A naturally occurring sweetener with all the taste and sweetness but only half the calories of sugar, Xylitol leaves no aftertaste and protects teeth from cavities

Medical Benefits of Xylitol

Modern Diabetes Management



Diabetes

& High-Fat Diet

One of the most common afflictions of modern life is diabetes. Perhaps this is because of an increase in high-fat diets around the world, or a globalization of fast food, or the generally high-paced life that doesn't allow people to eat properly, but the problem remains.

Solutions

Insulin Level

Therefore, any solution that can help manage diabetes, which is an inability of the body to properly maintain insulin and glucose levels throughout the body, is very important.

Xylitol

Balance of insulin and glucose

Xylitol is a chemically processed form of sugar, meaning that the body cannot break down the carbohydrates into simple sugars and flood the bloodstream with it, thereby throwing off the balance of insulin and glucose

Diabetic Patients

Normal Foods

This means that diabetic patients can consume xylitol in all of their normal foods without the fear of huge luges or spikes in blood sugar levels. This is the oldest and most commonly used application of xylitol, and has helped millions of diabetic patients around the world

Medical Benefits of Xylitol

Xylitol & Antibacterial Abilities



Xylitol vs. Alkalinizing Agents

One of the basic chemical applications of xylitol is as an alkalinizing agent.



Xylitol decrease the acidity in the mouth

It increases the alkalinity and decreases the acidity in the body and mouth



Xylitol prevent bacteria growth

Alkalinity is not a good situation for bacteria, because it cannot grow in that 2 condition.



Xylitol fight calories

Therefore, xylitol has been long praised for its ability to wipe out bacterial infections and colonies of all kinds throughout the body

Medical Benefits of Xylitol

Xylitol & Dental Health

In a similar vein to the antibacterial qualities explained above, xylitol has been shown to be very good for oral health. Some of the world bacterial strains, like Streptococcus bacilli, can be neutralized by xylitol, thereby preventing infections in the mouth. Also, xylitol has been found to reduce plaque, as well as caries and cavities.

Numerous studies conducted around the world has shown xylitol to be far better as a deterrent to cavities than normal sugars that are often found in toothpastes. Normal sugars increase acidity, which makes them counterproductive in mouthwashes and toothpastes, but xylitol is ideal for that purpose.



Medical against of Xylitol

Xylitol contra Bad Breath and pro Weight Loss



Bad Breath

Xylitol has even been connected with a reduction in halitosis, which is a fancy word for “bad breath”. Halitosis is a bacterial infection that results in that foul smell that seems almost impossible to get rid of. Xylitol-based chewing gum is often recommended by doctors and dentists alike to get your breath back to its peak freshness!

Weight Loss Aid

One of the side effects of xylitol is that it slows down the digestive process slightly, mainly in terms of the time the stomach takes to empty. This means that people who eat xylitol-based foods will feel full for longer, similar to the effects you have after eating a high-fiber meal. When your stomach is full, you are less likely to snack or overeat in a given meal, maintaining a healthy, balanced caloric intake and helping to aid in any dieting or weight loss efforts.

Medical Benefits of Xylitol

Xylitol fight year infections and sinusitis

One of the most interesting effects of adding xylitol to your diet is its effect on ear infections. These commonly afflict children, but are also known to affect adults as well. Xylitol has antiviral and antibacterial effects, which are often the immune attackers that result in ear infections, but only 8-10 grams of xylitol resulted in a 30% decrease in the prevalence of ear infections.

Clearing up those painful conditions for children and adults is a recent development in the xylitol legend. Many people have begun turning to Neti Pots to clear up their sinus infections and conditions in recent years. Xylitol has those important antibacterial qualities, so adding some of this replacement sweetener to your Neti recipe can speed up the healing process and keep your sinuses clear





Medical Benefits of Xylitol

Xylitol As a Bone Booster

Although this is still a relatively new area of xylitol research, some researchers in Canada have shown promising results of xylitol increasing bone mineral density in various species. While human testing and studies are still underway, the signs look very promising for xylitol as a bone booster. This might be due to a higher absorption rate of other minerals when coupled with xylitol, but whatever the exact mechanism is, improving the strength, durability, and healing speed of bones is extremely valuable, particularly as we get older and begin suffering from common afflictions like osteoporosis. Most likely, this effect is due to the alkalizing effect of xylitol; acidity in the body actually leeches calcium from the system, making bones weaker

High Absorption Rate

Strength & Durability

Speed of Bones

Medical Benefits of Xylitol

Xylitol and Gastrointestinal Effects

01

Since xylitol is somewhat similar to dietary fiber in its basic function within the gut, it has also been found to have similar side effects as dietary fiber

Dietary Fiber



02

Xylitol efficiently converts into short fatty acid chains that increase gut function and efficiency, thereby reducing stagnation in the digestive tract

Reduce Stagnation



03

Reducing gastrointestinal conditions, including ulcers, constipation, diarrhea, hemorrhoids, and even certain types of cancer associated with the gut

No Hemorrhoids



04

Xylitol also slows down the growth of *Candida Albicans*, a very serious yeast infection, which is connected to ulcers and cancer

No Ulcers and Cancer



05

It also eliminates the bacteria you may have picked up in certain foods, like *H. pylori* bacteria or other dangerous strains, and effectively neutralizes them before they can do any real damage

Quasi architecto



Medical Benefits of Xylitol

Xylitol provides a general boost to the immune system



Boost the immune system from top to bottom in human system

As mentioned earlier, the antibacterial and antiviral capacity of xylitol make it an important weapon that fights against infections in various parts of the body, like the sinuses, mouth, throat, and stomach. Xylitol provides a general boost to the immune system from top to bottom in your system, and increases the general efficiency of your system by alkalizing it and providing the energy for other metabolic processes



Xylitol directly boosts the infection-fighting power of our entire body

- Finally, although the evidence has not been completely verified, early studies have shown
- That Xylitol directly affects the amount of white blood cells that are in the body, meaning
- that this sugar substitute directly boosts the infection-fighting power of our entire body

Xylitol is a food - not a drug; therefore, there are no label claims for any medical benefit on xylitol products.

Dental Benefits of Xylitol

Xylitol & Dental Health



Tooth decay happens when bacteria in your mouth consume the sugars we eat. When you eat food containing ordinary sugar (sucrose), it gives bacteria on your teeth energy, allowing them to multiply and start making acids that can eat away the enamel on the teeth. This “acid attack” causes tooth decay and cavities to begin to form

Xylitol is a natural sweetener derived from the fibrous parts of plants. It does not break down like sugar and can help keep a neutral pH level in the mouth. Xylitol also prevents bacteria from sticking to the teeth. This is how it protects the teeth from tooth decay

With the dental benefits of Xylitol, the acid attack that would otherwise last for over half an hour is stopped. Most people are not aware of this benefit because such a claim makes xylitol into a drug, crossing a boundary not allowed by the Food and Drug Administration.

Dental Benefits of Xylitol

Xylitol - Less Bacteria, Less Acid – Healthier Teeth

Bacteria growth is greatly reduced

Because the bacteria in the mouth that are causing cavities are unable to digest xylitol, their growth is greatly reduced. The number of acid producing bacteria may fall as much as 90%.

After Xylitol Bacteria do not stick well on the surface of the teeth

- No acid is formed because the pH of saliva and plaque does not fall.
- After taking xylitol, the bacteria do not stick well on the surface of the teeth and as a result, the amount of plaque decreases



Dental Benefits of Xylitol

Xylitol Repairing Damaged Enamel



Stimulated saliva

Research has shown that the use of xylitol also helps repair damage to the enamel. Saliva in itself protects the mouth and teeth. Stimulated saliva in particular contains all the components needed to repair early cavities.



Xylitol helps of enamel that are weak

The dental benefits of xylitol also include saliva. Saliva that has xylitol is more alkaline than saliva stimulated by other sugar products. After taking xylitol products, the concentration of basic amino acids and ammonia in saliva and plaque may rise, and plaque pH rises as well. When pH is above 7, calcium and phosphate salts in saliva start to move into those parts of enamel that are weak



Xylitol vs. sugar

If sugar is only taken a couple of times a day, the saliva can do the job alone. But most people take sugar so often that the mouth's own defensive tools are not enough.



Dental Benefits of Xylitol

Therefore, soft, calcium-deficient enamel sites begin to harden again. While reversing a rising trend of negative health and high health-care costs won't happen overnight, improving your own health can begin sooner than later, and the dental benefits of xylitol can have a significant influence on that trend.



Xylitol cleared for anti-caries health claims

The Panel on Dietetic Products, Nutrition and Allergies of the European Food Safety Authority (EFSA) has agreed that the wording 'xylitol chewing gum reduces the risk of caries in children' reflects the scientific evidence for caries reduction. Following an application from the LEAF company of Finland, who manufacture chewing gum, the Panel was asked to deliver an opinion on the scientific substantiation of a health claim related to xylitol chewing gum/pastilles and reduction of the risk of tooth decay.

The scope of the application was proposed to fall under a health claim referring to disease risk reduction. After considering the high number of studies, subjects and observation years presented, as well as the consistency of the results and the magnitude of the effect, the Panel considered that a cause and effect relationship has been established between the consumption of chewing gum sweetened with 100% xylitol and the reduction of the risk of tooth decay in children.

The scientific justification of the claim is related to the consumption of 2-3 g of chewing gum sweetened with 100% xylitol at least three times per day after meals. This quantity of chewing gum sweetened with 100% xylitol can easily be consumed as part of a balanced diet

Dental Benefits of Xylitol

Xylitol and Xylitol is partner with ToothFriendly International in order to obtain the certification “tooth friendly tested”



EU Regulation on Nutrition and Health Claims

The validity of this test is generally recognized in the dental profession and is cited by reference in the US Code of Federal Regulations and in the EU Regulation on Nutrition and Health Claims.

Food Products and Safe Teeth Label

Only products that are demonstrably safe for teeth may carry the Toothfriendly label. Foods, medicinal products and food ingredients can be considered safe for teeth if they are neither cariogenic nor erosive. These “Toothfriendly” properties are determined in a standardized in vivo plaque-pH telemetry test conducted by independent University Dental Institutes. Toothfriendly products may not lower plaque-pH below 5.7. The acid exposure of the teeth may not exceed 40 $\mu\text{mol H}^+$ min.

Inappropriate Products

Confectionery products: 1) Chewing gums 2) Hard candies 3) Soft candies 4) Gummies & Jellies 5) Chocolates 6) Beverages 7) Fluoridated salts

Non-food products which promote oral health

Non-food products which promote oral health in a relevant and demonstrable way may also carry the Toothfriendly label. Examples of such products include specially formed pacifiers or inter-dental brushes. Non-food products will be evaluated on case-to-case basis by an independent scientific Advisory Board:

1) Pacifiers 2) Children's toothpastes

EcoProduction and Xylitol

Our xylitol is the most carbon-friendly xylitol on the market**UNIQUE PRODUCTION PROCESS**

Xylitol sustainable xylitol solution is attractive to manufacturers and consumers alike. Our unique production process involves considerably lower energy (85% lower) and materials consumption than conventional processes.

90% REDUCTION IN CARBON FOOTPRINT

Integrated with the inherently sustainable use of paper and pulp side stream feedstock - itself derived from sustainable forestry - this contributes to a 90% reduction in carbon footprint.

An independent life cycle assessment (LCA) by EarthShift LLC compared the total environmental impact of the two different xylitol manufacturing processes: the Wood Based integration concept versus industry standard Biomass Hydrolysis. The study concluded that our xylitol production has a carbon footprint of just 10% of the biomass process. The production's impact on land, water and ozone layer is negligible. Across all measured biomarkers, this process was 86-99% lower than xylitol manufactured from corncobs using biomass hydrolysis.

IN SUMMARY

In summary, our xylitol is the most carbon-friendly xylitol on the market. This fundamental competitive advantage provides our customers with a documented differential to add value to their products.

Nutrition Facts

International food standard : Codex Alimentarius E 967 – HS code 290549 (Other Polyhydric Alcohols)

Approximate Composition Per 100G	Approximate Composition Per 100G	Approximate Composition Per 100G	Approximate Composition Per 100G	Approximate Composition Per 100G
Energy	Sugars	Total Fat	Dietary Fibre	Iron
300 Kcal (1000 kJ)	Max. 0.2g	None	None	Typically Absent
Protein	Polyols	Saturated Fats	Sodium	Zinc
None	Max. 98.5g	None	Max. 0.004g	Typically Absent
Total Carbohydrate	Starch	Cholesterol	Calcium	Alcohol
Min. 99.8g	None	None	Typically Absent	None

Analysis for every batch (appearance)

Test	Result	Specification	Unit
Appearance (while crystalline powder)	Conforms	Conforms	-
pH10 w/v%	5.8	5.0 – 7.0	-
Xylitol on d.s.	99.6	98.5 – 101.0	%
Other polyols on d.s.	<0.2	<1.0	%
Moisture	0.03	<0.20	%
Particle size	-	-	-
>2.4 mm	0	0	%
<0.15 mm	5	0 – 7	%

Analysis for every batch (guaranteed values)

Test	Result	Specification	Unit
Meeting Point	92.0 – 96.0	-	C'
Colour (ICUMSA)	<=15	-	%
Reducing Sugars	<=0.2	-	%
Conductivity ash	<=0.10	-	%
Arsenic	<=0.5	-	mg/kg
Heavy Metals	<=1	-	mg/kg
Lead	<=0.3	-	mg/kg
Nickel	<=1	-	mg/kg
Chloride	<=40	-	mg/kg
Sulphate	<=50	-	mg/kg

Product pricing 2015-2016



Prices in € (EXW Geneva – Switzerland)

Official prices 2015	Barcode	Distributor	Shop	Retail Prices
Xylitol 1kg	7640168620011	9.1	13.00	19.9
Xylitol 500g	7640168620030	5.6	8.00	11.5
Xylitol 250g	7640168620035	3.15	4.5	6.5
Xylitol 50x4g Box	7640168620042	3.6	5.25	7.5
Xylitol Gum Fruits 70g	7640168620035	2.20	3.18	4.9
Xylitol Gum Citrus 70g	7640168620042	2.20	3.18	4.9
Xylitol Gum Mint 70g	7640168620059	2.20	3.18	4.9

Shipment specifications



Dimension box = 30x22x20 cm; the Gums are sold within a display “ready to sell” so 1 box = 3 displays x 12 units = 36 units

Product	Unit/Box	Boxes/Layer	Layers/Palet, EUR	Total Units
Xylitol 1kg	6	14	6	504
Xylitol 500g	12	14	6	1008
Xylitol 250g	25	14	6	2100
Xylitol 50x4g Box	9	14	6	765
Xylitol Gum Fruits 70g	36	14	6	3030
Xylitol Gum Citrus 70g	36	14	6	3030
Xylitol Gum Mint 70g	36	14	6	3030

10 FACTS ABOUT DIABETES ACCORDING TO WHO

Xylitol, Diabetes and WHO – Factology 01



About 347 million people worldwide have diabetes

There is an emerging global epidemic of diabetes that can be traced back to rapid increases in overweight, including obesity and physical inactivity

Diabetes is predicted to become the 7th leading cause of death in the world by the year 2030

Total deaths from diabetes are projected to rise by more than 50% in the next 10 years

There are two major forms of diabetes

Type 1 diabetes is characterized by a lack of insulin production and type 2 diabetes results from the body's ineffective use of insulin.

A third type of diabetes is gestational diabetes

This type is characterized by hyperglycemia, or raised blood sugar, with values above normal but below those diagnostic of diabetes, occurring during pregnancy. Women with gestational diabetes are at an increased risk of complications during pregnancy and at delivery. They are also at increased risk of type 2 diabetes in the future.

10 FACTS ABOUT DIABETES ACCORDING TO WHO

Xylitol, Diabetes and WHO – Factology 02

1

Type 2 diabetes is much more common than type 1 diabetes

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium,

2

Type 2 diabetes is much more common than type 1 diabetes

Type 2 accounts for around 90% of all diabetes worldwide. Reports of type 2 diabetes in children – previously rare – have increased worldwide. In some countries, it accounts for almost half of newly diagnosed cases in children and adolescents.

3

Cardiovascular disease is responsible for between 50% and 80% of deaths in people with diabetes

Diabetes has become one of the major causes of premature illness and death in most countries, mainly through the increased risk of cardiovascular disease (CVD).

4

In 2012 diabetes was the direct cause of 1.5 million deaths 80% of diabetes deaths occur in low- and middle-income countries

In developed countries most people with diabetes are above the age of retirement, whereas in developing countries those most frequently affected are aged between 35 and 64.

5

Diabetes is a leading cause of blindness, amputation and kidney failure

Lack of awareness about diabetes, combined with insufficient access to health services and essential medicines, can lead to complications such as blindness, amputation and kidney failure.

6

Type 2 diabetes can be prevented

Thirty minutes of moderate-intensity physical activity on most days and a healthy diet can drastically reduce the risk of developing type 2 diabetes. Type 1 diabetes cannot be prevented.

Just call ZOLGAS

Strong partnership can be born now



TRY ALL OUR BUSINESS OPPORTUNITIES at www.zolgas.ch



ABOUT

Zolgas Consulting

Zolgas Consulting specializes in the representation, trading, purchasing and selling of commodities such as quinoa, bananas, cocoa, coffee, rice, mangoes and other agro commodities products



Zolgas Consulting

Our Mission

Zolgas Consulting provides advice services in the fields of Strategy, Commercial Transactions, Business Development, Analytics, Operational handling and management. Based in Switzerland, we are a specialized partner serving International Commodity Businesses. Our clients include Commodity Trading Companies, Producers, Distribution Companies, Utilities, Industry, among others. Thanks to our rich experience and global network we support research of business and provide new business opportunities

From commercial transaction services to our Client's Business Requirements

We Offer

From commercial transaction services, strategy development, we provide custom-made solutions to our client's business requirements for their commodity activities.

Production Process

Commodities are carefully treated by professional personnel from the private sector, as well as government and inspection bodies.

Those different stakeholders certify the product quality. Commodities are processed in laundries and packing areas certified by the Ministry of Agriculture, the Centre for Export and Investment before being taken to the supply center and their exportation. The food processing plants meet all strict sanitary conditions required by the forementioned international bodies. These plants are inspected during the whole packing process by governmental inspectors, the commodities are packed, put onto pallets based on the request of our clients.

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