



ikiKale
Bioactive Gkale organic powder



Organic iKiKale Powder

New trends and healthy living with **iKiKale**.

A wish for healthy living and interesting servings are wishes shared by the majority of people. With **iKiKale** favourite healthy dishes are prepared in less than 10 minutes - total.

Freeze-dried iKiKale Powder: For healthy smoothies, on the go, one-hand-eating... For healthy teas, drinks, shots. 4 g per day will cover your needs for a full diet of vitamins and minerals.



Nutritional Benefits

High in:

- Natural vitamins A,C,E,K
- Natural Minerals : K,Ca,P, Fe, Se
- Natural Fibres
- Natural Protein

Health benefits:

- Satiety effect (slenderizing)
- Reducing LDL Cholesterol
- Increasing and maintaining bone-structure in menopause women.
- Improving visual performance – delaying AMD

Organic **ikiKale Flakes and Powder contain NO fillers**, only dehydrated kale leaves bursting with superfood nutrition. A cruciferous vegetable that contains health promoting bioactive compounds, sulfur compounds. **ikiKale** also contains an amazing variety of 45 different flavonoids. It is a natural source of vitamins A, C, K and E as well as valuable minerals. Kale is traditionally used to provide nutritive support to help detoxify and fortify the body. It's a free world - so do combine healthy living with the needs of your biome - or those of your family.

This **Organic freeze dried ikiKale** (Brassica Oleracea var. Acephala convar Sabellica) is the easy and handy way to have the multitude of **vitamins, minerals and functional nutrients** every day. Dissolves 96% in liquid - hot/cold water and cover your daily needs... Easy, convenient in use for any age.

For people who:

- Travelling - or on the go. Just add water or juice
- Have no time to prepare greens for lunch.
- Lack green vegetables in their diet.
- Want to live a healthy life
- Live a stressful life.
- Want to get beauty-from-inside

Easy in use:

- open bag - and pour half of powder in cup or glass, dissolve with a little water and pour up to 25 cl of liquid water, applejuice or milk
- make a smoothie with applejuice, ginger or lemon or fruit to your liking
- sprinkle on your meals
- add in as healthy food component.

Ingredients		
Green Kale (Brassica oleracea var. acephala)		
Nutritional value 100 g	Value	% of DRI
Energy	1210 KJ/ 292 kcal	14.5%
Total fat	6.7 g	9.6%
Saturated	0.8 g	4%
Monounsaturated	0.8 g	-
Polyunsaturated	3 g	-
Carbohydrate	13.8 g	5.3%
Sugars	10.3 g	11.4%
Fiber	47.5 g	190%
Protein	20.4 g	40.8%
Salt	0.06 g	1.0%

DRI (dietary reference intakes) from Regulation (EU) No 1169/2011 (replace Council Directive 90/496/EEC)
DRI of fibre from EFSA 2010: <https://ec.europa.eu/jrc/en/health-knowledge-gateway/promotion-prevention/nutrition/fibre>
All measurements are performed by Eurofins Steins Laboratorium A/S according to standard methods at 2019.06.19.

Microbiological analysis	
Total plate count	3600 CFU/g
E coli	Negative
Coliforms	Negative
Salmonella	Negative

Amino-Acids	Per 100g	Amino-Acids	Per 100g
Serin	1,12g	Lysin	1,53g
Glutamine	3,34g	Histidin	0,563g
Prolin	2,17g	Arginin	1,57g
Glycin	1,19g	Hydroxyprolin	0.132g
Alanin	1,25g	Asparginacid	2,47g
Valin	1,27g	Threonine	1,07g
Isoleucin	0,939g	Omitin	<0,05g
Leucin	1,82g	Tryptophan	0,386g
Tyrosin	0,738g	Cysteine	0,283g
Phenylalanin	1,15g	Methionine	0,416g

Minerals	Value	% of DRI
Potassium (K)	1700 mg	85%
Calcium (Ca)	2500 mg	313%
Phosphorus (P)	350 mg	50%
Magnesium (Mg)	140 mg	37%
Iron (Fe)	7.6 mg	54%
Zinc (Zn)	1.7 mg	17%
Copper (Cu)	0.26 mg	26%
Manganese (Mn)	2.5 mg	125%
Selenium (Se)	Not detectable	0
Chromium (Cr)	7.1 µg	18%
Iodine (I)	Not detectable	0

Vitamins	Value	% of DRI
Vitamin A (β-carotene)	1100 µg	138%
Vitamin D	Not detectable	0
Vitamin E	16.5 mg	138%
Vitamin K	1170 µg	1560%
Vitamin C	307 mg	384%
Vitamin B1 (Thiamin)	0.169 mg	15%
Vitamin B2 (Riboflavin)	0.566 mg	40%
Vitamin B3 (Niacin)	4.21 mg	26%
Vitamin B6 (Prydoxine)	1.38 mg	99%
Vitamin B9/B11 (Folic acid)	243 µg	122%
Vitamin B7 (Biotin)	30.1 µg	60%
Vitamin B5 (Pantothenic acid)	1.84 mg	31%

Storage

dry at ambient temperature

Keepability

2 years from the date of packing

EAN





ikiKale
LC Bioactive Gkale organic



Organic Freeze-Dried ikiKale Flakes

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Freeze-dried ikiKale Granulate:

for Baking it into your bread, mix it with cream or oil for your pasta sauce or pesto, top your pizza, meat, egg, fish, for salads, or prepare your own exquisite meals according to taste, mood and time.



Nutritional Benefits



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EAN





ikiKale
Nutrition and Benefits



Nutrition & Health Benefits of kale

All hail to kale! Seemingly everywhere you turn, kale is a vital vegetable, rich in nutrients, health benefits and delicious flavor.



Health Benefits of kale

- Anti-Inflammatory
- Low Calorie
- Antioxidants
- Low Carb
- Vitamin K
- Calcium
- Vitamin C
- Vitamin A
- Potassium
- Lutein
- Antioxidant activity
- Prebiotic effects
- Maintain bone mass
- Maintain eye health
- Lowering cholesterol
- Anti-obesity and anti-diabetes effects (NEW)

Per calorie, Kale has:

- more Iron than beef
- more Calcium than milk
- 10x more Vitamin C than spinach

What is it good for?

- eyes
- skin
- reduces the risk of heart disease & cancer
- weight loss
- lowers cholesterol
- bones

Antioxidant activity

Anti-aging•Anti-fatigue

Table 3 • Antioxidant activity of six Brassica crops measured in four plant stages with two different antioxidant assay systems (DPPH and FRAP)

DPPH assay

Crop	N	Sprouts (S1) ^a	N	Two months leaves (L2) ^a	N	Three months leaves (L3) ^a	N	Consumed organs (CO4) ^{a,b}
Broccoli	3	2.23b	3	3.27b	3	3.27b	3	3.43b
Cabbage	12	1.89bc	12	3.12b	12	4.54abc	11	1.82d
Cauliflower	3	3.23a	3	4.25a	3	3.16c	3	1.81d
Kale	9	1.91bc	9	2.86b	9	6.40a	9	4.71a
Tronchuda cabbage	6	1.70c	6	2.76b	6	5.87ab	6	3.07bc
Nabicol	9	2.03bc	8	2.95b	8	3.70bc	6	2.24cd
LSD ^c	-	0.44	-	0.70	-	2.18	-	1.15
Total ^d	42	2.17c	41	3.20b	41	4.57a	38	2.85b

FRAP assay

Crop	N	Sprouts (S1) ^a	N	Two months leaves (L2) ^a	N	Three months leaves (L3) ^a	N	Consumed organs (CO4) ^{a,b}
Broccoli	3	5.48b	3	5.16ab	3	7.53a	3	7.40ab
Cabbage	12	4.31c	12	4.30bc	12	6.77ab	11	4.11c
Cauliflower	3	6.75a	3	5.74a	3	7.03ab	3	3.58c
Kale	9	4.57c	9	3.59c	9	8.44a	9	8.91a
Tronchuda cabbage	6	4.08c	6	3.81c	6	6.46ab	6	6.46b
Nabicol	9	4.16c	8	4.61abc	8	5.19b	6	6.71b
LSD ^c	-	0.81	-	1.18	-	2.28	-	2.00
Total ^d	42	4.89c	41	4.54c	41	6.90a	38	6.20b

^a Values followed by the same character within the same column do not differ significantly at $p \leq 0.05$.

^b Consumed organs: heads of broccoli, cabbage and cauliflower, inner leaves of tronchuda cabbage and leaves from kale.

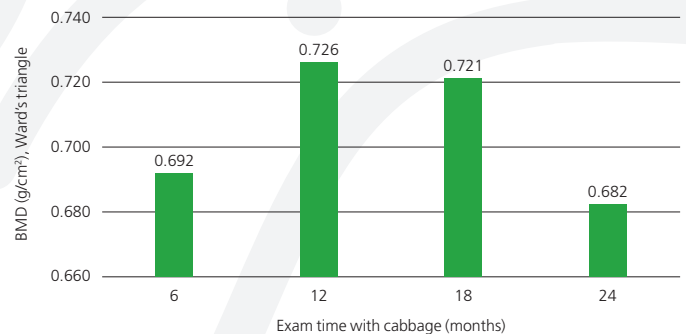
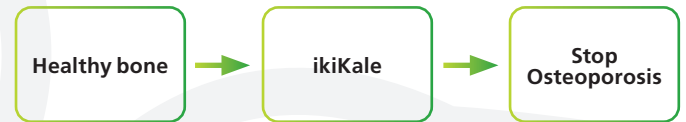
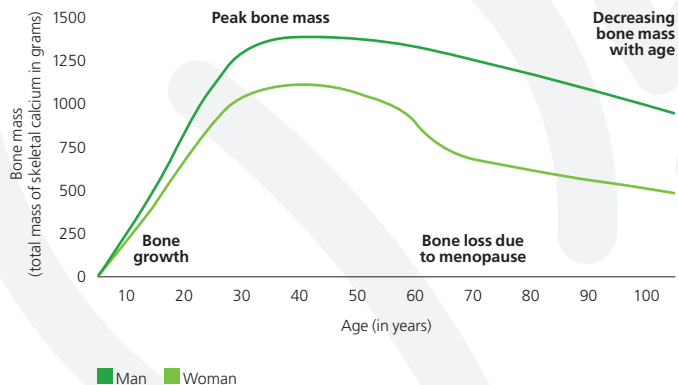
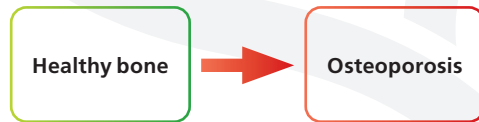
^c Least significant difference.

^d LSD for comparisons among plant stages= 0.44 and 0.56 for DPPH and FRAP assays, respectively at $p \leq 0.05$.

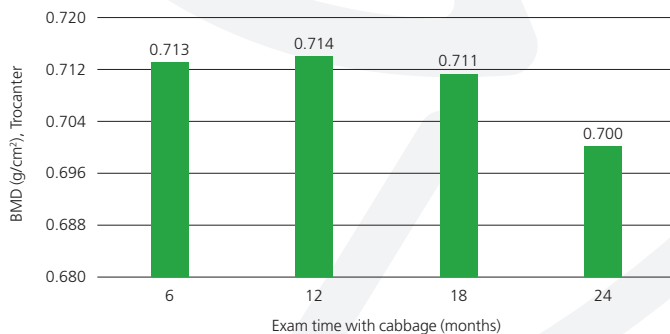
Prebiotic effects

Good bacteria ↑ Bad bacteria ↓

Maintain bone mass



msd (Tukey 5%) = 0.150



msd (Tukey 5%) = 0.113

Maintain eye health

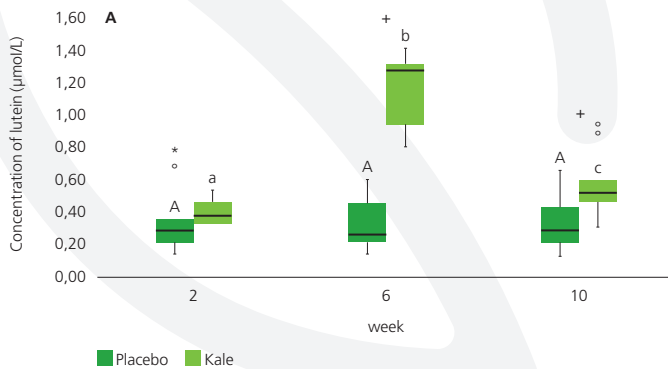
Human macular pigment consists of two carotenoids, **lutein** and **zeaxanthin**, which concentrate in the center of the retina (macula). Lutein and zeaxanthin act like "internal sunglasses".

Age related macular degeneration (AMD)

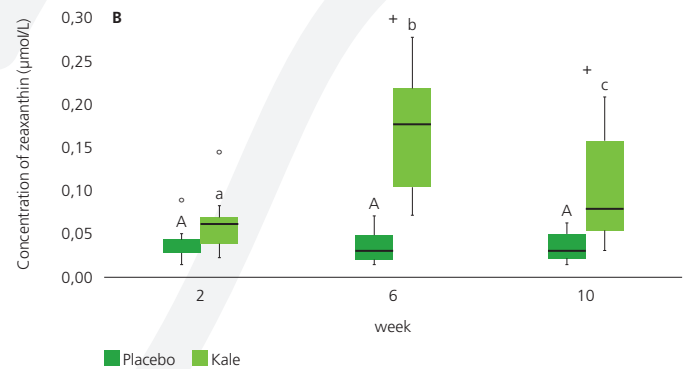


Maintain eye health

Lutein ↑



Zeaxanthin ↑



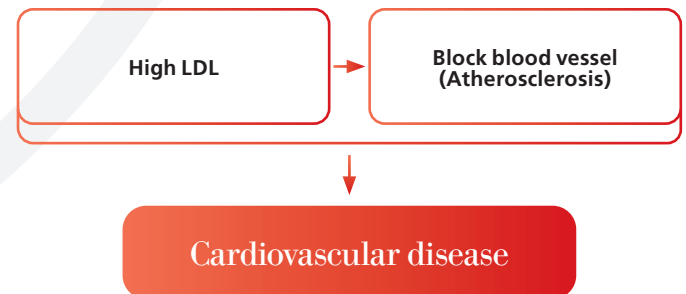
Lowering cholesterol

LDL

Bad cholesterol

HDL

Good cholesterol



Lowering cholesterol

Enteroendocrine cells

HDL

27%

Good cholesterol

Kale

22%

of cholesterol
lowering drug

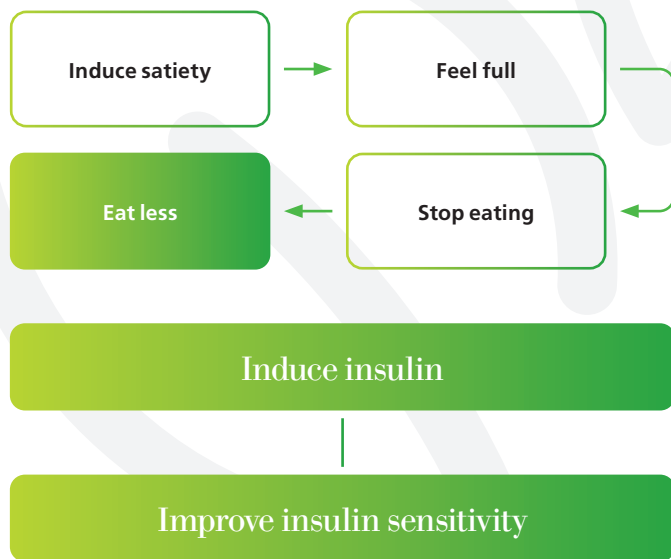
LDL

10%

Bad cholesterol

Anti-obesity and anti-diabetes

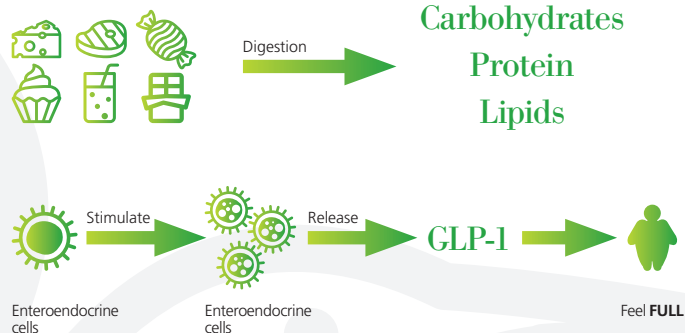
NEW AREA UNDER STUDY



Kale extract from **ikiKale** increased satiety hormone **GLP-1** secretion in **enteroendocrine cells**.

Based on this new finding, we are conducting more comprehensive research in this area now.

They produce **gut hormones** in response to various **stimuli/food components**.



GLP-1

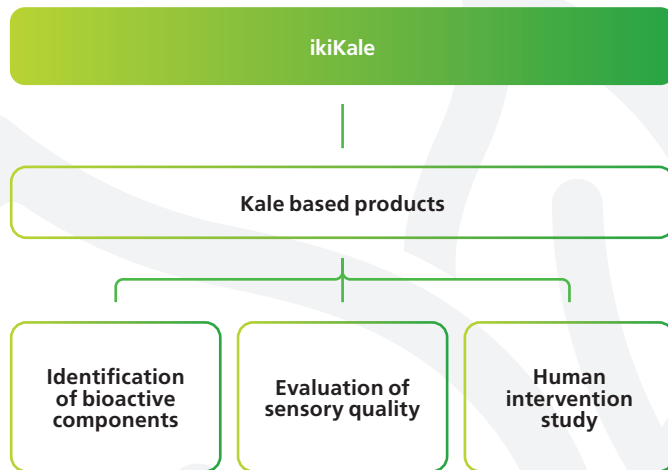
- Energy expenditure (BAT) ↑↑
- Body weight ↓↓↓↓
- Fat mass ↓↓↓
- Lipolysis (WAT) ↑
- Cholesterol ↓↓
- Leptin ↓
- Glucose ↓↓↓↓↓
- Insulin sensitivity ↑↑↑↑
- Satiety ↑↑↑
- Food intake ↓↓↓↓↓
- Lipid content ↓
- Insulin secretion ↑↑↑↑↑

Anti-obesity

Anti-diabetes

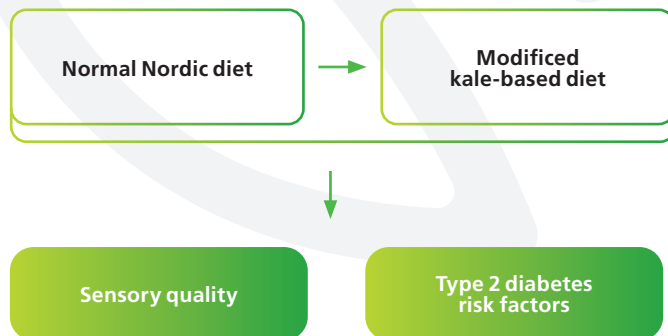
Two ongoing research projects

References



Human Intervention study

Subjects with Type 2 Diabetes



- Overall impression
- Appearance
- Colour
- Flavour
- Bitterness
- ...

- Insulin sensitivity
- Blood lipid profile
- Inflammatory markers
- Liver steatosis

Antioxidant (recovery)

1. Soo Y.K., Sun Y., Soo M., Sye S.P., Yang C.L., 2008. Kale Juice Improves Coronary Artery Disease Risk Factors in Hypercholesterolemic Men. Available at: <http://www.drperlmutter.com/wp-content/uploads/2014/08/1-s2.0-S0895398808600124-main.pdf>
2. T.S. Kahlon, M.H. Chapman, G.E. Smith, 2005. In vitro binding of bile acids by spinach, kale, brussels sprouts, broccoli, mustard greens, green bell pepper, cabbage and collards. Available at: <https://naldc.nal.usda.gov/download/28601/PDF>
3. Talwinder S.K., Mei-Chen M.C., Mary H.C., 2008. Steam cooking significantly improves in vitro bile acid binding of collard greens, kale, mustard greens, broccoli, green bell pepper, and cabbage. Available at: <https://pubag.nal.usda.gov/pubag/downloadPDF.xhtml?id=17425&content=PDF>
4. Birgul V.K., Nurcin K., Fulya B.Y., Asim O., 2011. Effects of kale (*Brassica oleracea* L. var. *acephala* DC) leaves extracts on the susceptibility of very low and low density lipoproteins to oxidation. Available at: <https://pdfs.semanticscholar.org/e362/f64845a5fd879a62ac798531ccca67eb93f.pdf>
5. Kequan Z., Liangli Y., 2005. Total phenolic contents and antioxidant properties of commonly consumed vegetables grown in Colorado. Available at: https://drive.google.com/file/d/1x_oxYVT09NKqQu5-x1DlqzA2QRhX4ZjM/view?usp=sharing
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7. Anna K., Zofia L., 2011. Effect of preliminary processing and method of preservation on the content of selected antioxidative compounds in kale (*Brassica oleracea* L. var. *acephala*) leaves. Available at: <https://drive.google.com/file/d/1tiViuRer1G1TmIVkaN1Zk81IKYJ8aSYD/view?usp=sharing>

References

Lowering cholesterol

1. T.S. Kahlon, M.H. Chapman, G.E. Smith, 2005. In vitro binding of bile acids by spinach, kale, brussels sprouts, broccoli, mustard greens, green bell pepper, cabbage and collards. Available at: <https://naldc.nal.usda.gov/download/28601/PDF>
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Maintain eye health

1. Arnold C., Jentsch S., Dawczynski J., Bohm V., 2013. Age-related macular degeneration: Effects of a short-term intervention with an oleaginous kale extract—a pilot study. Available at: <https://drive.google.com/file/d/1auwxjHKQnITTEUdweKwFUBiyKXWaKCaI/view?usp=sharing>

Anti-Obesity & Anti-Diabetes

1. Yuan Y., Stig P., 2018. Effects of bioactive compounds of Green Gourmet Organic GreenKale on satiety hormone GLP-1 secretion in enteroendocrine STC-1 and HuTu-80 cells. Available at: https://drive.google.com/file/d/1YVy4sLKA4DNnvSeM9GXTcXkXWo_eBcjXW/view?usp=sharing
2. A.C.S. Thorup, H.L. Kristensen, P.B. Jeppesen, 2014. Secondary metabolites from vintage vegetables improve the health status of patients with type 2 diabetes when compared to equivalent modern vegetables. Available at: https://drive.google.com/file/d/1s6jYwUhgGErcjvFtVyxzlKxehOtVK2_f/view?usp=sharing



ikiKale
Market Orientation



Fine Organic FD ikiKale powder

100 % pure GreenKale:

- Raw
- GMO-free
- Organic
- Halalcertified
- Dairy-free
- Lactose-free

24 g fresh GreenKale= 2 g powder

Our vision

In combat of lifestyle diseases we unlocked the code of nature and made an efficient natural weapon based on the ancient medical type Danish Curly Kale into **ikiKale** now ready for the increasing market's needs...

Helping you to stay healthy

Now ready for the market and investors

**Creating the natural gamechanger
to the world's epidemic lifestyle challenges**

Natural

therapeutic treatment for lifestyle diseases

Multifunctional

ingredient in food and beverage

Challenges for Everybody (2016)

650 Million

Adults with **obesity**

422 Million

Adults with **diabetes 2**

340 Million

Kids with **obesity**

1 Million+

Kids with **diabetes 2**

Societal Challenges

Obesity

Worldwide obesity has nearly **tripled**

1975



2016



1980



2014



Diabetes

Worldwide diabetes has nearly **quadrupled**

From **108 M** (1980) to **422 M** (2014)

The number of people with obesity and diabetes will **keep increasing**

Public health expenses **cannot bear any further increases**

Lifetime health will become the **responsibility of individuals**



Natural organic plant-based diet is the solution

Effective and easy in use **ikiKale**

Queen amongst vegetables: Organic Danish ancient medical plant GreenKale

Solution daily oral intake of
ikiKale in food-and beverage applications

4 scientific evidences on health effects of **ikiKale**:

MS Obesity

- Satiety effects
- Slenderizing

Diabetes 2

Patients resume proper production of insulin

LDL cholesterol

Reducing LDL cholesterol

Bone health

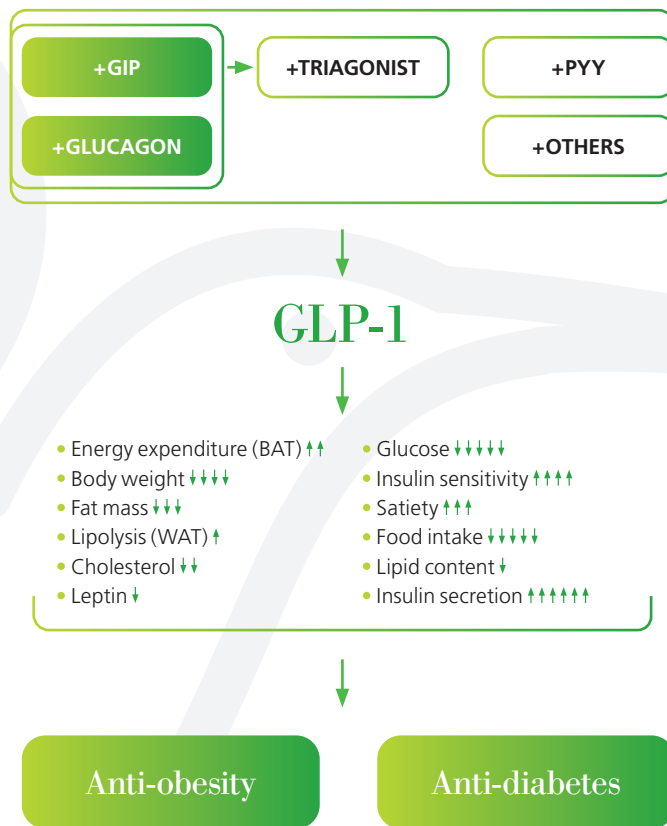
Strengthening bone in elderly citizens

Proven in human cells

ikiKale induces secretion of **GLP-1 hormone**



How it works



- GLP-1 enables proper production of insulin in diabetes2 patients
- Creating Satiety effects in obese people
- Reducing LDL cholesterol

Global Market Size

Production

The global kale powder sales are expected to be almost **doubled**



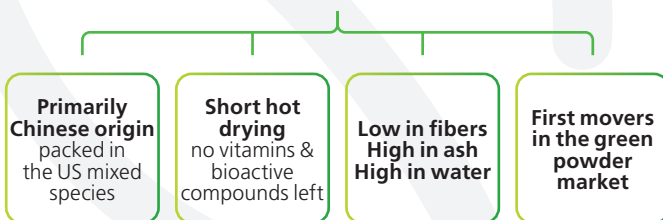
Turnover

The global kale powder revenue are expected to be almost **doubled**



Global Competition green powders of all kinds

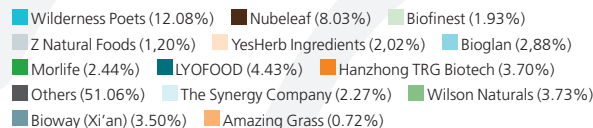
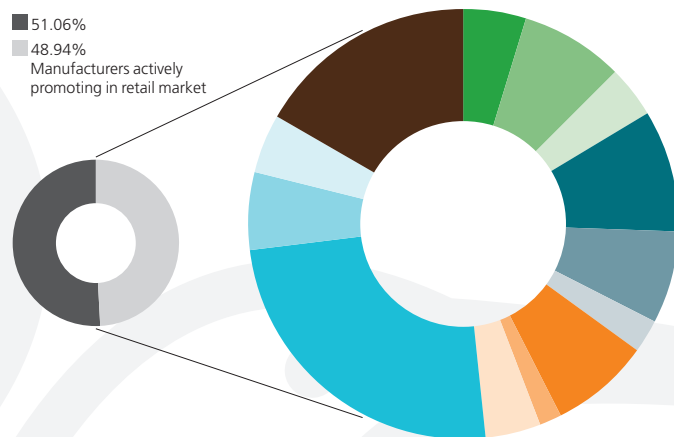
Denomination KALE is generic for all green powders



Main Unique Selling Points of Competitors

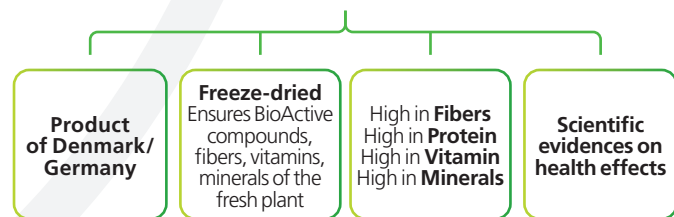


Global Kale Powder Revenue Market Share by Manufacturer in 2017

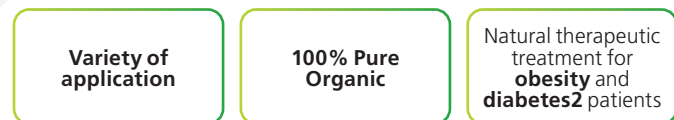


Competitive advantage ikiKale

Scientifically proven effects on lifestyle
DISEASES Danish ancient type of GreenKale



Main Unique Selling Points



Why now

1) ikiKale is now scalable

- Nutritional Claims
- EFSA Health Claims - finalize in 2020
- Diabetes2 live tests freeze-dried GGkale in 2020

2) Nutritional market continues to grow

- Public health expenses under strong pressure

3) Actual, serious negotiations with

- Biopharma companies in Taiwan/China/Vietnam
- Sports nutrition: soccer teams/handball clubs
- Physiotherapist companies/hospitals

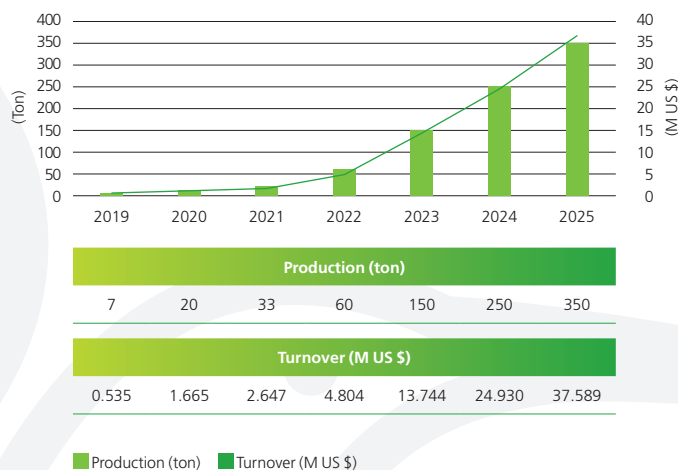
The global kale powder market share in 2018



■ Food & Beverage (68%) ■ Pharmacy (28%) ■ Other applications (4%)

Revenue Model

Quantitative goals - ikiKale



Turnover Production

2019

0.7%

of global market

2025

2.0%

of global market

2019

0.04%

of global market

2025

3.7%

of global market

Qualitative Goals

Finalize live tests diabetes2 in 2020

Attract clients / Commercial partners within 3 segments

therapeutic natural medicine against Diabetes2, MS Obesity, AMD, LDL cholesterol and bone-health (EFSA claims)

Sportsnutrition - recovery

Wellness /organic cosmetics: facial masks, beauty-insideOut/outsideIN

Our Milestones

2015

- **Market research** JP/TW
- Design **prototype**
- Production alliances, prod.sites approved.
- Test productions
- **Import registration** Japan

2016

- Trial orders in **Denmark** and **Japan** food/beverages
- **Taiwan** medical company, eye-health

2017

- **Research project** co-operation with Dupont /AAU
- Test orders in **Malaysia, Dubai** and **Finland**

2018

- **Scientific research** health benefits in co-operation with Aarhus University
- **Scientific** analyst and Japanese assist employed
- **exhibition Foodex Japan**

2019

- **Scientific report Satiety effects** published
- **Tests food matrix** Nordjyllands Regionshospital
- **Sports nutrition** soccer / handball teams
- **1st Approval EFSA** health claims

We search...

Investment of US \$ 0.5 -1 M to create, implement and execute go-to market plans in 3 high potential segments for ikiKal

Health Nutrition

pharmacies, clinics, hospitals, industries

Sports Nutrition

online, distributors, sports-clubs, events, industries

Wellness

cosmetics, beauty inside-out/outside-in



IKIFOOD S.r.l. • VAT: 12326150013
Corso Vittorio Emanuele II, 76 • 10121 Turin • Italy
M. +39 331 207 2321 • info@ikifood.it • www.ikifood.it