

9<sup>th</sup> International Conference of the  
European Industrial Hemp Association  
EIHA

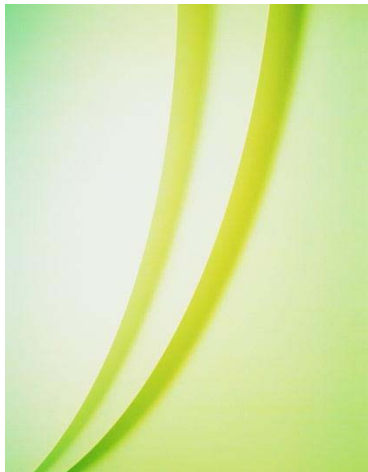
**Juice from Cannabis Plants for  
Food / Beverage, Feed and Biogas**

May 23<sup>rd</sup> 2012, Wesseling

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# The Essence of Cannabis is in the juice of the hemp plant

# What's in the Cannabidiol juice?



Most nutritional and health ingredients are found in the juice from the leafy tops:

Minerals and Trace Elements  
Proteins and Essential Amino Acids  
Inorganic and Organic Carbon

most  
in  
young  
plants

Few Carbohydrates  
Polyphenols  
Cannabinoids  
Some Fatty Acids

most  
in  
older  
plants

The juice contains no fat, is low in calories but rich in calcium and magnesium, it has all essential proteins and many Anti-Oxidants and Cannabinoids.



It is too good to be ignored

# Juice content in hemp plants

Depending on press type but on average

50 % of weight of plant

From twin screw extruder press:

Juice from upper leafy tops weighed 2.2 times more than press remains

Juice from stems weighed 1.5 times more than weight of press remains

Rest humidity in press remains was not determined.

## Water content and solids content:

	water content	solids content
Young leaves	86.7 %	13.3 %
mature leaves	84.7 %	4.3 %

Mature hemp pertains to plants with ripe oil seeds.

# What's in the juice no longer is in the fibers !

Pressing Juice adds control over the quality of the fiber

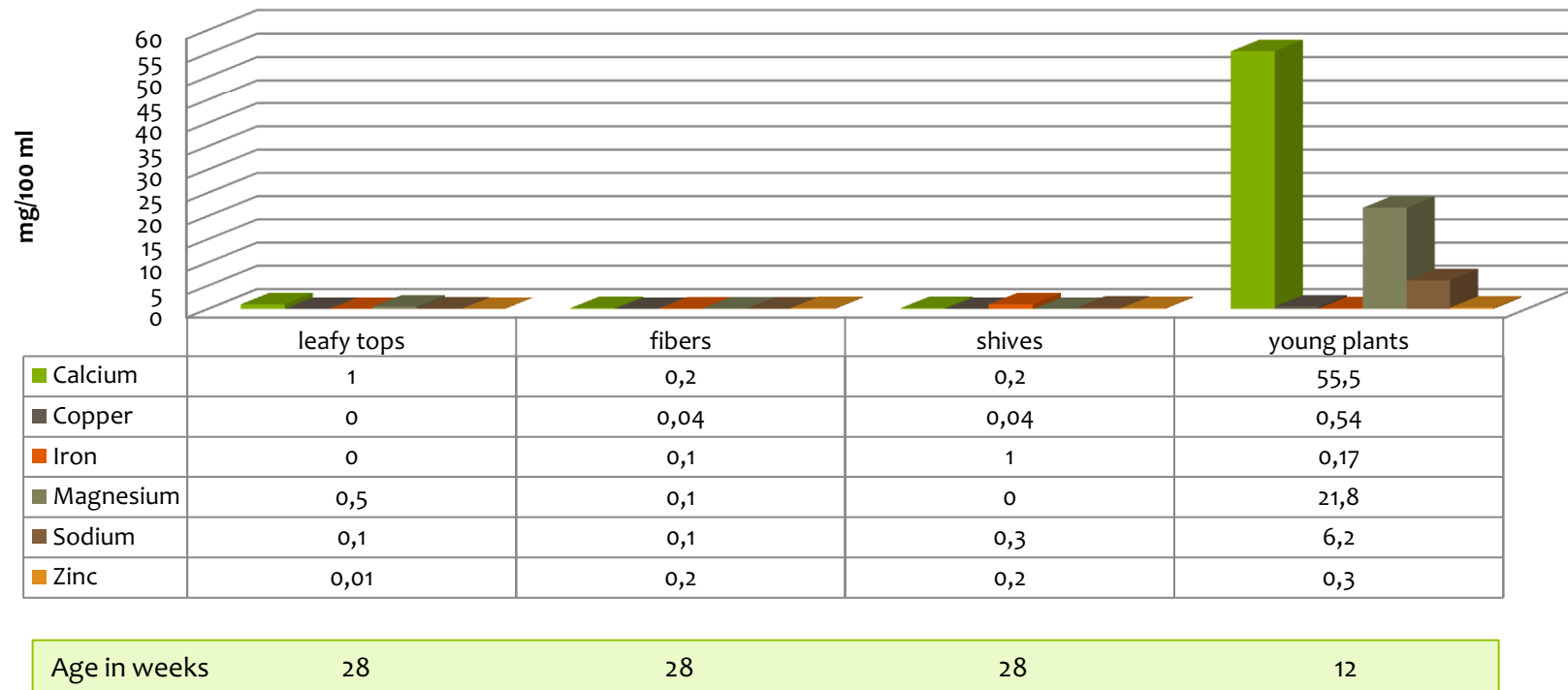
Cannabis Juice nutritional ingredients and the fiber quality are interdependent

- \* Depending on the age of harvested plants
- \* Depending on the pressure exerted in the juice press



Juice pressed from younger plants under higher pressure contain 50 times more minerals than juice from mature plants pressed under low pressure.

# Comparison of Minerals



# Taste and Color

The juice from the leafy tops

dark green, strong Cannabis odor  
salty, bitter, umami

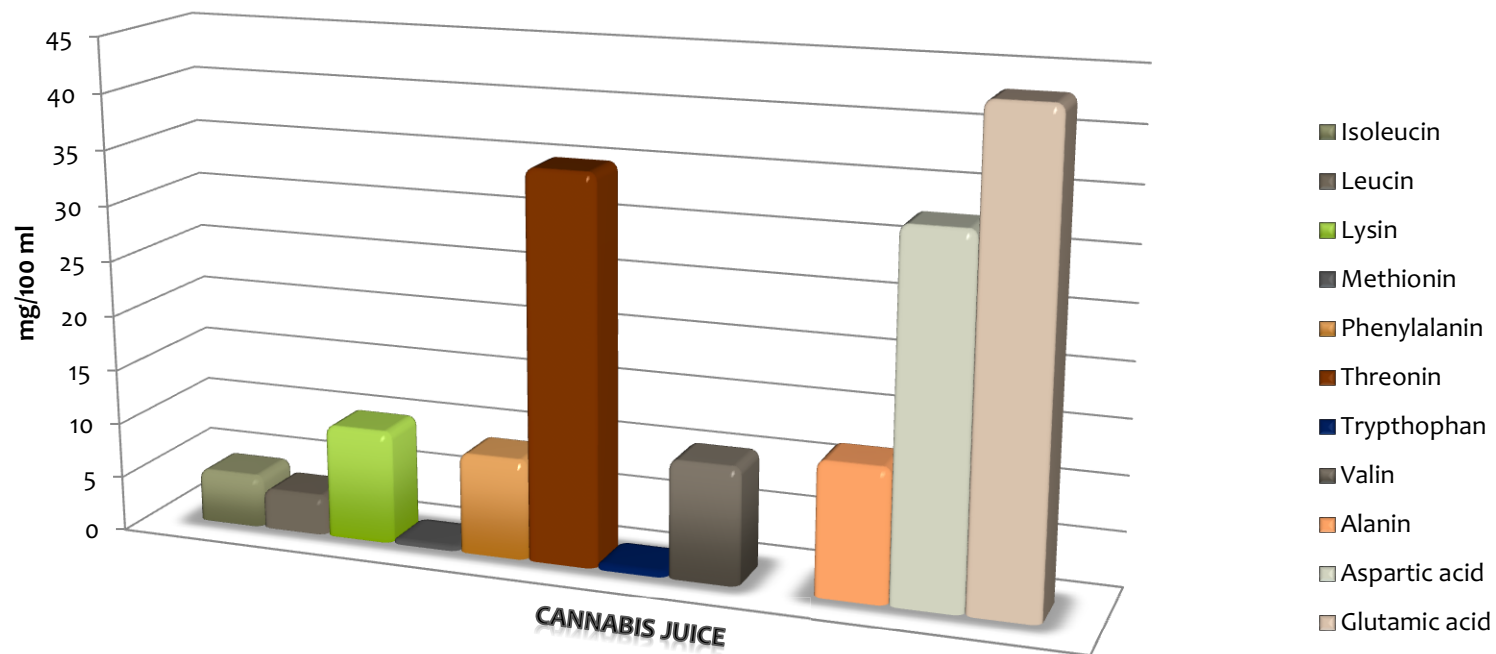
The juice from shives and fibers

light green, grassy odor  
sweet, umami

All tastes can be found in Cannabis juice:

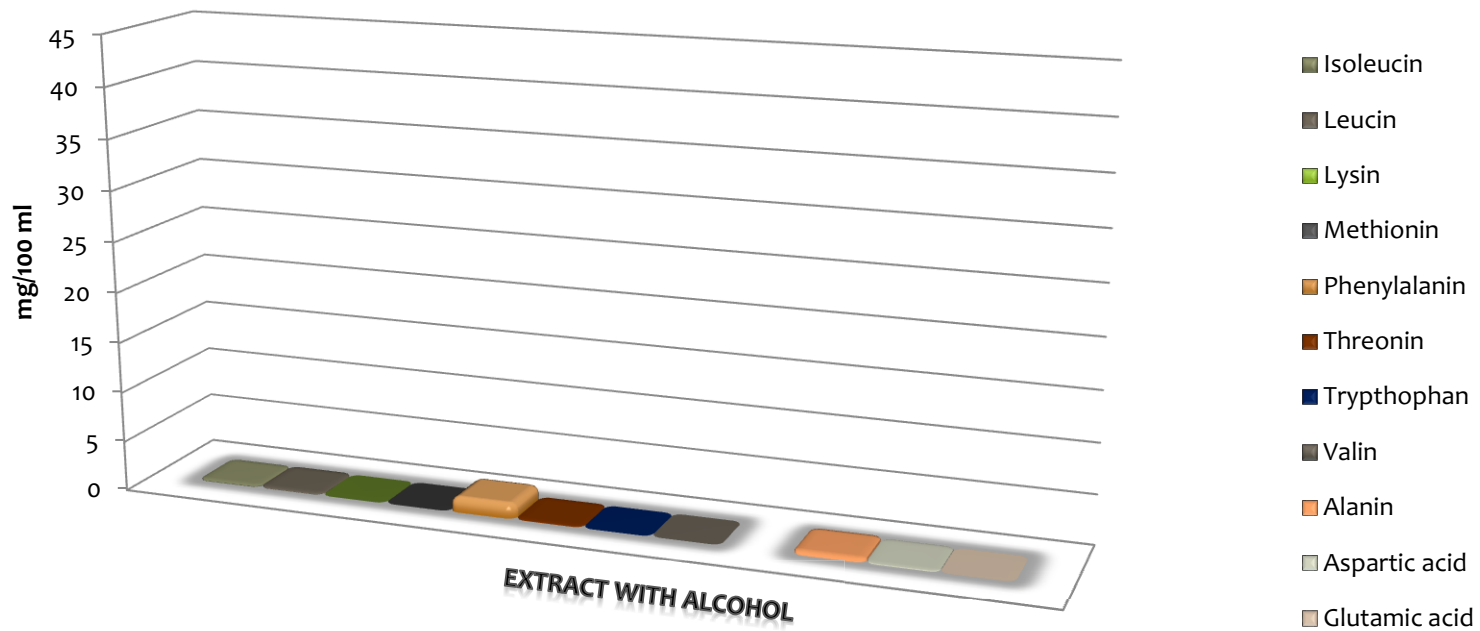
Sweet, sour, salty, bitter, umami: means a full and pleasant taste.  
It occurs where proteins are present, especially glutamic acid.

# Amino Acids in Cannabis Juice

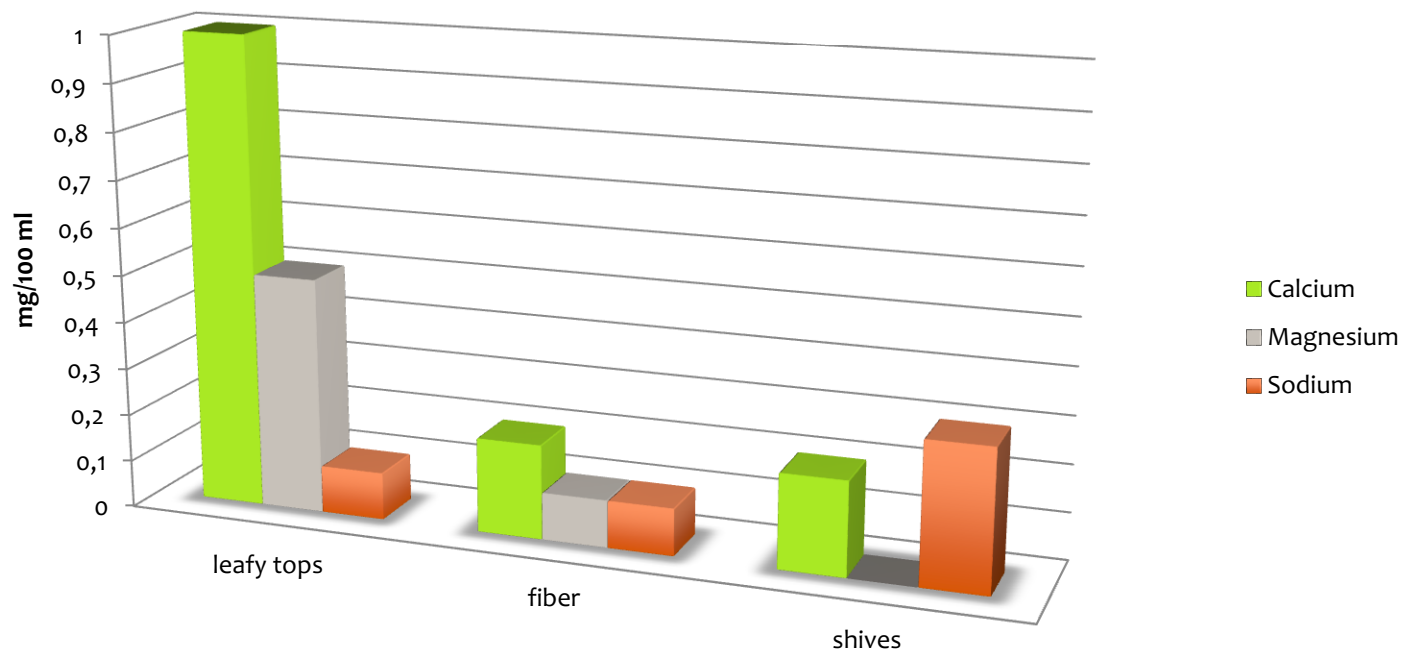




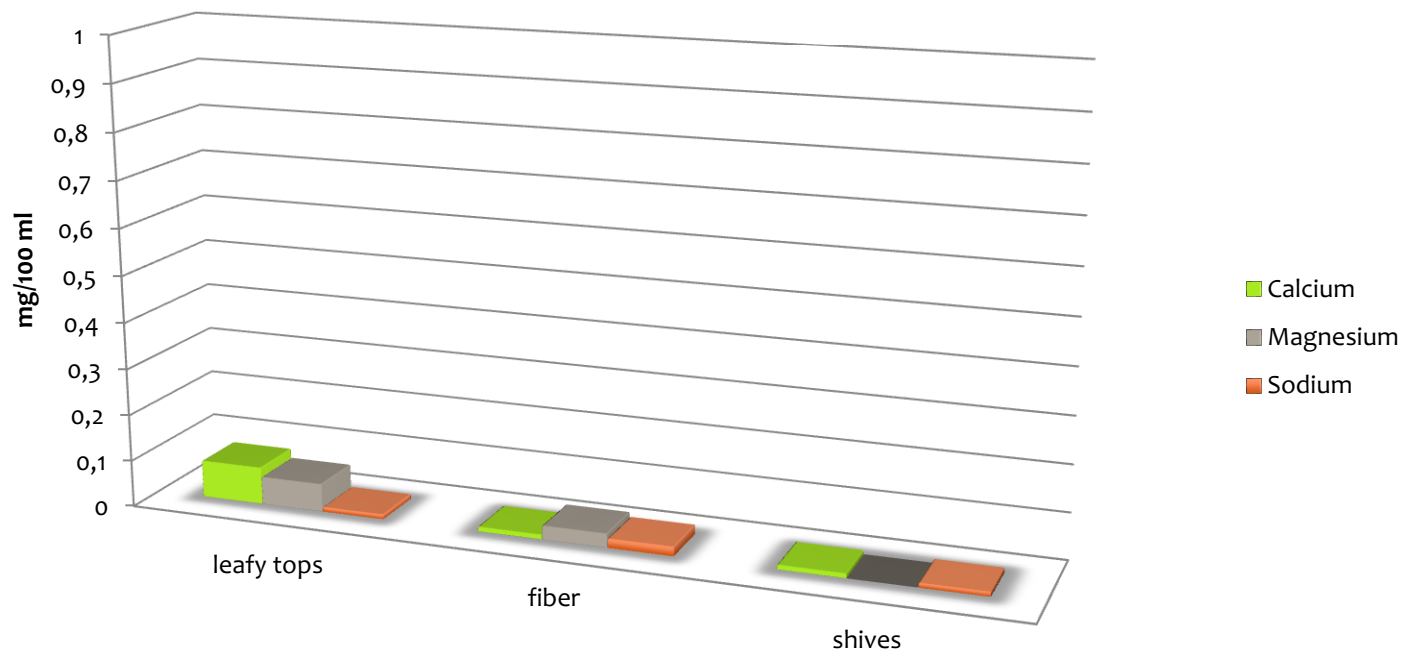
# Amino Acids in Extract With Alcohol



# Minerals in Cannabis Juice



# Minerals in Extract With Alcohol



# Utilizing the Cannabis Juice

## For Humans

The utilization of the Cannabis juice for human consumption is regulated by international patents pending, utility model protection and trademark.

- \* Nutritional supplements
- \* Taste enhancer in food and drinks and mixed with spices
- \* In cosmetics
- \* In medicine



## \* Beverages

- \* Original juice in mixed drinks without alcohol, with or without CO<sub>2</sub>
- \* Beverage mixed with alcohol, with or without CO<sub>2</sub>
- \* Alcohol distillate
- \* Alcoholic drinks brewed from the original juice
- \* Syrup



# Utilizing the Cannabis Juice for other than Human Consumption



## Animal Feed

- \* Fermenting the press remnants of the juice from the leafy tops in a silo and feeding the juice from the hemp fibers and shives

## Chemical Industry

- \* Using the lactic acid from fermenting processes from the juice,
- \* And from the press remnants for the chemical industry

## Fertilizer

- \* Using the juice from the taproots as fertilizer on the field



## Biogas

- \* Using the juice from fibers and shives in biogas plants
- \* Using the press remnants of the juice from the leafy tops
- \* Using the juice from the taproots
- \* Using the press remnants from the taproots

## Leather Industry

- \* Using the evaporation liquids for leather treatment



# Patents, Licenses, Trademark

## OPEN SOURCE

Pressed Cannabis juice for OTHER than human consumption may be used



free of license charges as open source, however, registration with [WWW.GREEN-SNAKE.DE](http://WWW.GREEN-SNAKE.DE) is mandatory.\*

\* The offer made pertains solely to our own rights. The rights of other patent holders, holders of Utility Model Protection and Trademarks are not to be touched by this offer.

# Patents, Licenses, Trademark



## OPEN LICENSE APPLICATION

### World-Patent and Utility Model Protection for Cannabis Juice

- \* Pressing fresh Cannabis juice for human consumption is protected world wide.
- \* Quality is controlled and guaranteed by the quality seal **GREEN SNAKE** registered trademark.
- \* Farmers and Producers of the Juice may apply for License Agreements.

Please contact: [WWW.GREEN-SNAKE.DE](http://WWW.GREEN-SNAKE.DE)

\* The offer made pertains solely to our own rights and patents. The rights of other patent holders, holders of Utility Model Protection and Trademarks are not to be touched by this offer.

# Patents, Licenses, Trademark



## EXCLUSIVE LICENSE APPLICATION

### World-Patent for Beverages and Products Based on Cannabis Juice

- \* Making beverages and products out of Cannabis juice for human consumption is protected by World-Patent and Utility Model Protection for Beverages and Products.
- \* Licenses will be offered on an exclusive basis only to international companies. \*

Please contact: [WWW.GREEN-SNAKE.DE](http://WWW.GREEN-SNAKE.DE)

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# Partial Harvesting

Is a suggested new process of harvesting whereby

- \* only the leafy tops of the hemp plant are cut off and processed for the production of juice and animal feed
- \* the stalks will continue to grow until the desired fiber quality is reached
- \* the plant will develop new leafy tops, given time
- \* a continuous stream of fresh juice can be generated
- \* favorable market prices can determine the time of juice production
- \* a shared use of harvesting machines is spaced out over time



# Pressing hemp juice adds value to the farmer

- \* Fibers and shives ready for dry storage shortly after harvesting
- \* Dry shives and fibers ready for industrial processing
- \* Evaporation liquid for leather treatment
- \* Juice from the stems for biogas or lactic acid for chemical industry
- \* Juice from the leaves and leafy tops for human consumption
- \* Adding water and obtaining juices from a second pressing
- \* Solid remains from pressed leaves safe as animal feed
- \* Juice from taproots as fertilizer
- \* Solid remains from roots for biogas together with animal liquid manure
- \* “partial harvesting” optimizes use of machinery, no cooled storage necessary
- \* Flexible harvesting time depending on market price



**The Essence of Cannabis  
is in the juice of the hemp  
plant**

**Thank You**

Claremont Collection GmbH

[www.claremont-collection.de](http://www.claremont-collection.de)

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