CAVACURMIN®
Highly Bioavailable Curcumin Powder
Curcumin is the Key Active Ingredient of Turmeric

- Polyphenol
- Powerful antioxidant
- Hydrophobic
- Intense yellow/orange color
Curcumin Powder is Extracted from the Turmeric Rhizome

**Curcuma longa** Rhizomes

- Solvent Extraction
- Purification
- Drying

Turmeric Extract (= Curcumin powder)
Turmeric Extract – A huge Trend

Number of new publications per year about “curcumin“

- Vast amount of clinical trials
  - > 100 molecular targets identified
  - ~ 3000 preclinical investigations

Growing market
- Belongs to Top 5 herbal/botanical supplements among US adults in 2016 (www.statista.com)

Top 5
## Numerous Studies Show that Curcumin Has Positive Health Effects

### Joint Health
- Curcumin reduces pro-inflammatory cytokines (Kim et al., 2012)
- Turmeric extract treats knee osteoarthritis as effective as ibuprofen (Kuptniratsaikul et al., 2014)

### Sports Nutrition
- Curcumin reduces delayed onset muscle soreness (Sciberras et al., 2015)
- Curcumin slightly attenuates muscle damage (Delecroix et al., 2017)

### Healthy Aging
- Curcumin may be a beneficial intervention agent for the pre-diabetic population (Chuengsamarn et al., 2012)

### Further health effects
- Curcumin protects cells against oxidative stress (Motterlini et al., 2000)
- Hydroxy groups of curcumin may play a significant role in exerting anti-allergic activities (Suzuki et al., 2005)
Curcumin Addresses Consumer Health Concerns Across All Age Groups

Antioxidant & Anti-inflammatory addresses a broad range of health categories

Sports Nutrition  Bone & Joint Health  Healthy Aging  Immune Support

Spans Multiple Consumer Audiences

Millennials (17-38)  Gen X (39-50)  Boomers (51-69)
Curcumin is hydrophobic, thus not soluble in water and has a very poor bioavailability

- Supplying the body with beneficial amounts of curcumin is difficult, due to its poor bioavailability
- Large quantities of pure turmeric extract must be consumed to obtain a useful dose
Curcumin molecules are incorporated into the hydrophobic interior of gamma-cyclodextrin to form a water dispersible complex. After spray drying, a stable powder is produced.
CAVACURMIN®

Inclusion complex

Cyclodextrins: bucket-shaped oligosaccharides

Data
- Contains min. 15% curcumin
- No other additives
- Particle size: max. 100 micron
- Free-flowing, yellow/orange powder
- Easily dispersible in water
CAVACURMIN® is a Curcumin powder that Disperses Easily in Aqueous Systems

Uncomplexed curcumin

CAVACURMIN® dispersion
Anticipated Mechanism for the Uptake of CAVACURMIN® in the Human Body

1. CAVACURMIN® is transported through the stomach into the upper intestinal tract.
2. There, the curcumin molecules are liberated and absorbed into blood stream.
3. The gamma-cyclodextrin is finally degraded by enzymes to glucose …..
4. …..which is then absorbed into the blood.
CAVACURMIN® is Easily Dispersed in Simulated Intestinal Fluid

- Dissolution profiles measured in simulated intestinal fluids (SIF + 0,5% SDS) at 37 °C
- Analysis of curcuminoids in solution via HPLC

CAVACURMIN® dissolves much better than commercial products
After 5 min at least 4 times more CAVACURMIN® is dissolved
CAVACURMIN® Shows Improved Dissolution and Absorption

- Dissolution profiles measured in simulated intestinal fluids (SIF + 0.5% SDS) at 37 °C
- Analysis of curcuminoids in solution via HPLC

- CAVACURMIN dissolves much better than commercial products
- After 5 min at least 4 times more CAVACURMIN® is dissolved

- Absorption measured in vitro via a human Caco-2 cell monolayer (after 2 h)

- Up to 10 times higher absorption of CAVACURMIN® in comparison to commercial products
WACKER Human Clinical Trial Prooves Superior Bioavailability of CAVACURMIN®

Analysis of different innovative formulations of curcumin for improved relative oral bioavailability in human subjects

Martin Purpura¹ · Ryan P. Lowery² · Jacob M. Wilson² · Haider Mannan⁶ · Gerald Münch³,⁵ · Valentina Razmovski-Naumovski³,⁴

Published in February 2017 in the European Journal of Nutrition
Human Clinical Study

Direct bioavailability comparison of 3 different curcumin formulations and a pure curcumin extract

Bioavailability was tested over 12 hours with 1 week wash-out in between trial

Dosage: 376 mg curcuminoids in capsules (5 x more of pure curcumin necessary to enable analysis)

Study Design
- Double blind
- Randomized
- Cross-over
Analysis of Curcuminoids

Cannula Insertion

Consume Product

Tumeric-Free Meal

Tumeric-Free Meal

Overnight fast

Blood Draw

Pre

1 hr

2 hr

3 hr

4 hr

5 hr

6 hr

... 8 hr

... 12 hr

HPLC detection

CAVACURMIN® – Highly Bioavailable Curcumin Powder
The Bioavailability Results from the Area Under the Curve in Comparison to a Standard

After consumption, blood plasma concentration is measured over time.

The Area Under the Curve (AUC) is calculated to represent the absorbed fraction of the sample.

Bioavailability is described as relative AUC in comparison to a standard.

Bioavailability describes to which degree and how fast a substance is absorbed from a preparation and is available at its target site.

\[
f_{rel} = \frac{AUC_1 \times Dosage_2}{AUC_2 \times Dosage_1}
\]
CAVACURMIN® Shows very High Bioavailability

Already 1 hour after ingestion of CAVACURMIN® the curcuminoids concentration in the blood was significantly higher than for all other commercial formulations and remained elevated for 12 hours.
CAVACURMIN® is ~ 40 times more bioavailable than pure turmeric extract
This enables a smaller dosage for the same effect
The dispersibility of CAVACURMIN® Enables Far Better Absorption

When ingesting the same amount of product, ~40 times more curcuminoids are absorbed from the intestine into the blood with CAVACURMIN®.
For CAVACURMIN® a Much Lower Dosage is Possible

CAVACURMIN® is a highly bioavailable formulation ➔ Next generation in delivery of curcuminoids that no longer requires high doses of curcumin to reach sustainable levels of curcumin in the blood plasma.

- Required amount of 500 mg capsules for equivalent curcumin delivery
CAVACURMIN® – Lower Dosage for More Effect

Dosage example
(no recommendation!)

500 mg

15%

75 mg total curcuminoids

40 times higher bioavailability

x 40

equals 3,000 mg pure turmeric extract

1 capsule CAVACURMIN® has the same effect as 6 capsules turmeric extract
What to Consider When Comparing Bioavailability Studies

Have you considered...

... the number of participants to enable statistically significant analyses?

... the type of food that is consumed before and during the whole experiment?

... the comparability of the bioavailability factor?

... the professionality of the study set-up?

WACKER’s CAVACURMIN® Study

... had 12 participants in a cross-over design!

... guaranteed an uninfluenced metabolism by 12h fasting and lipid-free meals!

... used the scientifically sound relative AUC compared to pure turmeric!

... was randomized and double-blind!
CAVACURMIN® is a Safe Choice

Competitor products might...

- contain a long list of additives including antioxidants, dyes, surfactants and flow agents
- use turmeric which is heavily contaminated with lead or other heavy metals
- use emulsifiers from allergenic sources, such as soy lecithin
- be unsuitable for Islamic or Jewish customers?

WACKER’s CAVACURMIN®...

- contains only 2 ingredients (curcumin + carrier) → No E-numbers
- is regularly tested for heavy metals
- is free from all major allergens
- is certified as halal and kosher

▶ CAVAMAX® W8 is a safe carrier with GRAS status
CAVACURMIN®
HIGHLY BIOAVAILABLE CURCUMIN

Curcumin and its derivatives, commonly known as curcuminoids, are biologically active constituents of the herb curcuma longa or turmeric. Curcumin is a powerful antioxidant; it has been shown to exhibit remarkable joint function anti-inflammatory effects.

The bioavailability of diet-derived polyphenols varies greatly and curcumin is known not to be readily absorbed by the body. WACKER developed a solution for increasing the bioavailability of functional ingredients and offers one of the highest bioavailable curcumin formulations: CAVACURMIN®.
Applications

CAVACURMIN® – Highly Bioavailable Curcumin Powder

- Drops/Gummies
- Capsules
- Effervescent tablets
- Dispersible granulate
- Oral spray
- Drink
Summary

**CAVACURMIN®**

- Dispersible in water – multiple application forms
- Highly bioavailable – clinically proven
- Contains natural turmeric extract (no synthetic curcumin)
- No E-Number, only 2 ingredients (curcumin + carrier)

Safe carrier **CAVAMAX® W8**:

- Naturally occurring vegetarian oligosaccharide
- GRAS
- Novel Food status
- FSSC 22000 standard
- Non-allergenic
Thank you!!!

http://www.wacker.com/cavacurmin

The information provided is addressed to an expert audience only and is available worldwide. It may contain statements that do not apply to your country. As claims do not refer to finished products, but solely to ingredients, they may not conform to Regulation (EC) No. 1924/2006. It is up to the marketer of any finished product to ensure that the finished product containing such ingredients and the claims associated therewith are lawful and are in compliance with all valid legislation and regulations of the country or countries where said product is to be sold. The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies’ raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties’ rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.
Back-up Data on Clinical Studies
Set-up of a bioavailability study of CAVACURMIN® in an in vivo rodent model

- In vivo study on bioavailability in rats from after singular oral gavage with three curcumin products:
  - Standard curcumin extract
  - Brand name curcumin (commercial product = ´CP´)
  - CAVACURMIN®

- Single dose study @ 500 mg/kg curcumin in Sprague Dawley rats

- Plasma was analyzed for free curcumin and curcumin metabolites curcumin sulphate and curcumin glucuronide by HPLC (0 – 4h)
High bioavailability of CAVACURMIN® in an in vivo rodent model

Total curcuminoids* (plasma concentration, 0 – 4h) after one oral administration of various curcumin preparations (500mg/ Kg)

*Total curcuminoids: sum of free curcumin, curcumin-sulphates, curcumin-glucuronides;
CP = commercial product
Curcumin has been the main focus of hundreds of clinical studies but lacks bioavailability

**Potency**

- Strong molecular evidence has been published for its potency to target multiple inflammatory diseases. However, naturally occurring Curcumin cannot achieve its optimum therapeutic outcomes due to its **low solubility** and **poor bioavailability**.
  - Reference: Henrotin et al. SpringerPlus 2013. 2:56
    www.springerplus.com/content/2/1/56

- Curcumin has shown significant efficacy in cell culture studies but has shown limited efficacy in clinical studies when administered in conventional oral formulations. **Most trials elicit limited clinical efficacy due to low bioavailability of present Curcumin formulations.**

- One key attribute of Curcumin is its ability to chain-break anti-oxidant activity from hydrogen atoms. **However, bioavailability is limited and efficacious doses have not yet been determined.**
  - Reference: Best Practice & Research Clinical Gastroenterology 25 (2011) 519-534

**Clinical Trial on Curcumin: Vast amount of studies performed**

- A search on [www.clinicaltrials.gov](http://www.clinicaltrials.gov) retrieved 75 **clinical trials** with “Curcumin” and 35 with “turmeric” which focused on cancer therapy, inflammatory conditions, dermatitis, irritable bowel disease, colitis, Alzheimer’s, rheumatology, rheumatoid arthritis, and diabetes.
  - Reference: Henrotin et al. SpringerPlus 2013. 2:56
    www.springerplus.com/content/2/1/56

- **Over 100 molecular targets identified and almost 3000 preclinical investigations** - this compound is, undoubtedly, one of the best investigated natural products to date.

- **Many Curcumin trials are designed to study its curative effects in chronic or inflammatory diseases**: dermatitis, stomatitis, chronic colitis, rheumatisms, based on antioxidative or anti-inflammatory capacities

More on clinical studies (back up)
Clinical Trial on Curcumin: Vast amount of studies performed

**Human clinical trials: effects on arthritis**

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Kuptniratsaikul et al., 2014)</td>
<td>Efficacy and safety of Curcuma domestica extracts compared with ibuprofen in patients with knee osteoarthritis: a multicenter study</td>
<td>Pain in osteoarthritis</td>
</tr>
<tr>
<td>(Madhu et al., 2013)</td>
<td>Safety and efficacy of Curcuma longa extract in the treatment of painful knee osteoarthritis: a randomized placebo-controlled trial</td>
<td>Pain in osteoarthritis</td>
</tr>
<tr>
<td>(Kertia et al., 2012)</td>
<td>Ability of curcuminoid compared to diclofenac sodium in reducing the secretion of cyclooxygenase-2 enzyme by synovial fluid's monocytes of patients with osteoarthritis</td>
<td>Pain in osteoarthritis</td>
</tr>
<tr>
<td>(Pinsornsak and Niempoog, 2012)</td>
<td>The efficacy of Curcuma Longa L. extract as an adjuvant therapy in primary knee osteoarthritis: a randomized control trial</td>
<td>Adjuvant therapy in primary knee osteoarthritis</td>
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<td>(Kuptniratsaikul et al., 2009)</td>
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Clinical Trial on Curcumin: Vast amount of studies performed

**Human clinical trials: effects on gastrointestinal system**

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<tr>
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<tr>
<td>(Durgaprasad et al., 2005)</td>
<td>A pilot study of the antioxidant effect of curcumin in tropical pancreatitis</td>
<td>Effects on tropical pancreatitis</td>
</tr>
<tr>
<td>(Hanai et al., 2006)</td>
<td>Curcumin maintenance therapy for ulcerative colitis: randomized, multicenter, double-blind, placebo-controlled trial</td>
<td>Effects on ulcerative colitis</td>
</tr>
<tr>
<td>(Holt et al., 2005)</td>
<td>Curcumin therapy in inflammatory bowel disease: a pilot study</td>
<td>Effects on inflammatory bowel disease</td>
</tr>
<tr>
<td>(Koosirirat et al., 2010)</td>
<td>Investigation of the anti-inflammatory effect of Curcuma longa in Helicobacter pylori-infected patients</td>
<td>Anti-inflammatory effects: Helicobacter pylori infections</td>
</tr>
<tr>
<td>(Marciani et al., 2013)</td>
<td>Effects of various food ingredients on gall bladder emptying</td>
<td>Effects on gall bladder emptying</td>
</tr>
<tr>
<td>(Suskind et al., 2013)</td>
<td>Tolerability of curcumin in pediatric inflammatory bowel disease: a forced-dose titration study</td>
<td>Effects on inflammatory bowel disease</td>
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</tbody>
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## Clinical Trial on Curcumin: Vast amount of studies performed

### Human clinical trials: effects on metabolism

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Topic</th>
</tr>
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<tbody>
<tr>
<td>(Alwi et al., 2008)</td>
<td>The effect of curcumin on lipid level in patients with acute coronary syndrome</td>
<td>Effects on lipid level</td>
</tr>
<tr>
<td>(Baum et al., 2007)</td>
<td>Curcumin effects on blood lipid profile in a 6-month human study</td>
<td>Blood lipid levels</td>
</tr>
<tr>
<td>(Chuengsamarn et al., 2012)</td>
<td>Curcumin extract for prevention of type 2 diabetes</td>
<td>Prevention of diabetes</td>
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<tr>
<td>(Khajehdehi et al., 2011)</td>
<td>Oral supplementation of turmeric attenuates proteinuria, transforming growth factor-beta and interleukin-8 levels in patients with overt type 2 diabetic nephropathy: a randomized, double-blind and placebo-controlled study</td>
<td>Effects on type 2 diabetic nephropathy</td>
</tr>
<tr>
<td>(Mohammadi et al., 2013)</td>
<td>Effects of supplementation with curcuminoids on dyslipidemia in obese patients: a randomized crossover trial</td>
<td>Blood lipid levels</td>
</tr>
<tr>
<td>(Na et al., 2013)</td>
<td>Curcuminoids exert glucose-lowering effect in type 2 diabetes by decreasing serum free fatty acids: a double-blind, placebo-controlled trial</td>
<td>Blood lipid levels</td>
</tr>
<tr>
<td>(Pungcharoenkul and Thongnopnua, 2011)</td>
<td>Effect of different curcuminoid supplement dosages on total in vivo antioxidant capacity and cholesterol levels of healthy human subjects</td>
<td>Blood lipid level</td>
</tr>
<tr>
<td>(Sahebkar et al., 2013)</td>
<td>Curcuminoids modulate pro-oxidant-antioxidant balance but not the immune response to heat shock protein 27 and oxidized LDL in obese individuals</td>
<td>anti-inflammatory and antioxidant properties of curcumin in obese</td>
</tr>
<tr>
<td>(Yang et al., 2014)</td>
<td>Lipid-lowering effects of curcumin in patients with metabolic syndrome: a randomized, double-blind, placebo-controlled trial.</td>
<td>metabolic syndrome</td>
</tr>
</tbody>
</table>
# Clinical Trial on Curcumin: Vast amount of studies performed

## Human clinical trials: effects on cancer

<table>
<thead>
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<th>Reference</th>
<th>Title</th>
<th>Topic</th>
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<tbody>
<tr>
<td>(Bayet-Robert et al., 2010)</td>
<td>Phase I dose escalation trial of docetaxel plus curcumin in patients with advanced and metastatic breast cancer</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>(Carroll et al., 2011)</td>
<td>Phase IIa clinical trial of curcumin for the prevention of colorectal neoplasia</td>
<td>Colon colorectal neoplasia</td>
</tr>
<tr>
<td>(Cheng et al., 2001)</td>
<td>Phase I clinical trial of curcumin, a chemopreventive agent, in patients with high-risk or pre-malignant lesions</td>
<td>Chemopreventive agent</td>
</tr>
<tr>
<td>(Cruz-Correa et al., 2006)</td>
<td>Combination treatment with curcumin and quercetin of adenomas in familial adenomatous polyposis</td>
<td>Colon adenomatous polyposis</td>
</tr>
<tr>
<td>(Dhillon et al., 2008)</td>
<td>Phase II trial of curcumin in patients with advanced pancreatic cancer</td>
<td>Pancreatic cancer</td>
</tr>
<tr>
<td>(Epelbaum et al., 2010)</td>
<td>Curcumin and gemcitabine in patients with advanced pancreatic cancer</td>
<td>Pancreatic cancer</td>
</tr>
<tr>
<td>(Garcea et al., 2005)</td>
<td>Consumption of the putative chemopreventive agent curcumin by cancer patients: assessment of curcumin levels in the colorectum and their pharmacodynamic consequences</td>
<td>Chemopreventive agent</td>
</tr>
<tr>
<td>(Ghalaut et al., 2012)</td>
<td>Effect of imatinib therapy with and without turmeric powder on nitric oxide levels in chronic myeloid leukemia</td>
<td>Adjuvance therapy in leukemia</td>
</tr>
<tr>
<td>(He et al., 2011)</td>
<td>Upregulation of p53 expression in patients with colorectal cancer by administration of curcumin</td>
<td>Colon, colorectal cancer</td>
</tr>
<tr>
<td>(Kanai et al., 2011)</td>
<td>A phase I/II study of gemcitabine-based chemotherapy plus curcumin for patients with gemcitabine-resistant pancreatic cancer</td>
<td>Pancreatic cancer</td>
</tr>
<tr>
<td>(Wolff et al., 2012)</td>
<td>Preliminary experience with personalized and targeted therapy for pediatric brain tumors</td>
<td>Pediatric brain tumors</td>
</tr>
</tbody>
</table>
CAVACURMIN® for Dietary Supplements

CAVACURMIN® can be claimed as a highly bioavailable formulation of a turmeric extract. ➔ Next generation in delivery of curcuminoids that no longer requires high doses of curcumin to reach sustainable levels of curcumin in the blood plasma.

Europe:

▷ Only nutrition related facts are allowed, no health related!

▷ Statements like “Contains polyphenols. Polyphenols such as curcumin have been investigated for their antioxidant and anti-inflammatory properties since years.” are NOT possible according to European law.

⇒ Because the term antioxidant indirectly refers to health benefit.

▷ BUT: describing the term curcuminoids etc. is allowed
CAVACURMIN® can be claimed as a highly bioavailable formulation of a turmeric extract. Next generation in delivery of curcuminoids that no longer requires high doses of curcumin to reach sustainable levels of curcumin in the blood plasma.

USA:

- A variety of health claims are possible:
  - Ease joint and arthritis pain / Helps with arthritis
  - Maintains healthy joints
  - Powerful anti-inflammatory / Reduces inflammation
  - Antioxidant support
  - Protects DNA against oxidative damage
  - Helps maintain cardiovascular health
  - For cellular health
  - Etc.

- It’s enough to add only the footnote: “These statement have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease, but rather a dietary supplement intended for nutritional support.”
CAVACURMIN® for Dietary Supplements

CAVACURMIN® can be claimed as a highly bioavailable formulation of a turmeric extract. ➔ Next generation in delivery of curcuminoids that no longer requires high doses of curcumin to reach sustainable levels of curcumin in the blood plasma.

Asia:

- Due to our current knowledge a variety of health claims are possible:
  - Keep liver function and digestive function healthy.
  - Prevents mouth inflammation.
  - Support in reducing blood lipids.
  - Stimulates body immunity.
  - Etc.
Applicable Regulatory Statements

<table>
<thead>
<tr>
<th>Claim</th>
<th>CAVACURMIN</th>
</tr>
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<tbody>
<tr>
<td>natural</td>
<td>x</td>
</tr>
<tr>
<td>vegetarian (free from animal material)</td>
<td>✔</td>
</tr>
<tr>
<td>vegan (including self certification)</td>
<td>x</td>
</tr>
<tr>
<td>vegetable sourced /plant sourced</td>
<td>✔</td>
</tr>
<tr>
<td>organic</td>
<td>x</td>
</tr>
<tr>
<td>non GMO</td>
<td>x</td>
</tr>
<tr>
<td>GRAS</td>
<td>x</td>
</tr>
<tr>
<td>health claim</td>
<td>x</td>
</tr>
<tr>
<td>patented</td>
<td>x</td>
</tr>
<tr>
<td>no E number (E number free)</td>
<td>✔</td>
</tr>
<tr>
<td>Kosher</td>
<td>✔</td>
</tr>
<tr>
<td>Halal</td>
<td>✔</td>
</tr>
<tr>
<td>odorless/flavorless</td>
<td>refer to TDS</td>
</tr>
<tr>
<td>allergen-free*</td>
<td>✔</td>
</tr>
<tr>
<td>no additives (artificial flavors, colors, preservatives or sweeteners)</td>
<td>✔</td>
</tr>
<tr>
<td>Novel Food</td>
<td>x</td>
</tr>
<tr>
<td>FSSC 22000</td>
<td>x</td>
</tr>
</tbody>
</table>

(*list of allergens or refer to Directive 2003/89/EC and Directive 2006/142/EC)
CAVACURMIN® complex is a physical mixture of a gamma cyclodextrin and a turmeric (curcumin) extract.

Both components are approved for Food and Dietary Supplement use in the US and Europe:

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamma Cyclodextrin</td>
<td>FDA GRAS notified, GRN 000046</td>
<td>Novel Food</td>
</tr>
<tr>
<td>Turmeric/Curcumin</td>
<td>FDA listed under 21 CFR 182.20</td>
<td>Curcumin (E 100) is authorized as a food additive in the EU</td>
</tr>
<tr>
<td></td>
<td>Essential oils, oleoresins (solvent free), and natural extractives (including distillates)</td>
<td></td>
</tr>
</tbody>
</table>

- Gamma cyclodextrin was evaluated by the Joint FAO/WHO Expert Committee on Food Additives (JECFA). The Committee concluded that there were sufficient data to allocate a ADI 'not specified'. This means gamma cyclodextrin can be consumed without restrictions.

- Curcumin was evaluated by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the EU Scientific Committee. It was concluded that Curcumin is acceptable for food use and an ADI (Acceptable Daily Intake) of 3 mg/kg bw/day was allocated. This is equivalent to a daily intake of 180 mg for a 60 kg person.

- 1 g of CAVACURMIN® contains in average about 160 mg curcumin.
Back-up Data on Marketing Material
CAVACURMIN® – Highly Bioavailable Curcumin Powder
Marketing Material

Saleskit – „the tiger box“

Nutrition Update Issue 6

CAVACURMIN® – Highly Bioavailable Curcumin Powder