



We Help You See it Right..!

**XanMax<sup>®</sup>** - The Next Generation Natural Lutein and Zeaxanthin



KATRA



Katra produces IPR protected Formulations and Bioactives from Natural Sources,  
backed by World Class Research and adhering to International Standards

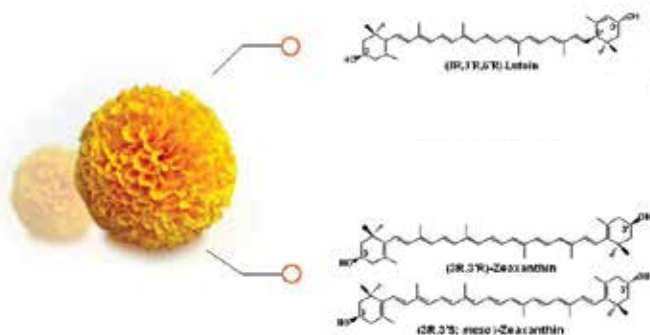
[www.katraphyto.com](http://www.katraphyto.com)

# XanMax<sup>®</sup>

The Next Generation  
Natural Lutein + Zeaxanthin

XanMax<sup>®</sup>

Katra Phytochem's flagship product, **XanMax<sup>®</sup>** is a combination of natural Lutein with Zeaxanthin. It is developed using most eco-friendly patented process to deliver **Maximum Xanthophyll, Maximum Purity, ensuring Maximum Bioavailability** in any dosage form.



Lutein and Zeaxanthin, the carotenoids and 2 major macular pigments of human retina and lens, are responsible for central vision and visual acuity/sharpness. Zeaxanthin is an isomer of Lutein.

These carotenoids help to improve visual performance and protect the macula from harmful UV-B radiation by acting as body's **"Natural Sun-glasses"**.

One of the best commercial sources of pure Lutein and Zeaxanthin is **Marigold Flowers (*Tagetes erecta* L.)**.

**XanMax<sup>®</sup>** ensures optimal Lutein supplementation and in turn sufficient protection for Healthy Vision, Naturally !

**XanMax<sup>®</sup>** can be customized as per customer requirements and hence lends itself to a variety of applications.

## Specialized Offerings



**XanMax<sup>®</sup> 10:1**  
trans-Zeaxanthin enriched ratio  
10mg Lutein + 1mg trans and  
meso-Zeaxanthin



**XanMax<sup>®</sup> 10:0.6**  
Market equivalent ratio  
10mg Lutein + 0.6mg trans-Zeaxanthin



**XanMax<sup>®</sup> 10:1:1**  
Lutein-Zeaxanthin enriched ratio  
10mg Lutein + 1mg trans-Zeaxanthin +  
1mg meso-Zeaxanthin

XanMax<sup>®</sup>  
RESEARCH



**XanMax<sup>®</sup>** 2001 oil, 2004 oil (lutein, transzeaxanthin and meso-zeaxanthin) and 1002 beadlets (lutein, trans-zeaxanthin and meso-zeaxanthin) have been tested for its efficacy using in-vitro models. Those invitro efficacy studies evaluated AMD (agerelated macular degeneration), anti-oxidant, anti-inflam-matory, neuro-protective, cardio-protective and anti-aging properties in **XanMax<sup>®</sup>**, showing positive results. An on-going clinical trial on **XanMax<sup>®</sup>** 2002 oral soft gel capsule aims to show improvement in MPOD (macular pigment optical density) levels in elderly volunteers and there are also on-going efficacy studies aimed to prove **XanMax<sup>®</sup>** bioavailability.



## Distinctive Advantage

- ~ XanMax® is made from **high levels** of natural Lutein and Zeaxanthin
- ~ XanMax® is manufactured through a fully integrated value chain from **Seed-to-Shelf**. This ensures consistent quality, on-time delivery batch after batch
- ~ XanMax® complies with **USP and JECFA** specifications
- ~ XanMax® is manufactured in a state-of-the-art **NSF GMP** compliant manufacturing facility certified **Kosher, Halal, HACCP, ISO 9001**
- ~ XanMax® is **100% Vegetarian** and available in Powder, Oil Suspensions, Cold-Water-Dispersible and Beadlet formats with **good stability and bioavailability**
- ~ XanMax® is manufactured using **global Patented manufacturing process** using safe solvents
- ~ XanMax® is **clinically proven to be effective in increasing MPOD levels, providing optimum macular health**

## Forms and Applications:

XanMax® is available in a variety of forms for applications in Dietary Supplement, Pharmaceutical and Food & Beverage, Sports Nutrition, Cosmeceuticals and Feed Industries

- ~ Powder: As Hard Gel Capsules
- ~ Beadlets : As Tablets, Chews, Hard Gel Capsules
- ~ Oil Suspension: As Soft Gel Capsules and in fatty foods such as cheese, butter and margarine
- ~ Crystals/Concentrate
- ~ Cold Water Dispersible (CWD) Powder and Beadlets



## Our Patents include -

Isolation and Purification of Carotenoids from Marigold flowers

~ US	[US 7,622,599]	2009
~ India	[IN 241175]	2010
~ Europe	[EP 1877371]	2010
~ Japan	[JP 4,848,420]	2011
~ Australia	[AU 2005331246]	2011
~ US	[US 8,481,769]	2013

Process for isolation of Lutein and Zeaxanthin crystals from plant sources

~ US	[US 8,425,948]	2013
~ Japan	[JP 5,795,572]	2015
~ Australia	[AU 2010243214]	2017

A Process for isolation of Carotenoids from plant sources

~ Australia	[AU 2010200636]	2015
~ Japan	[JP 5,794,605]	2015
~ Canada	[CA 2,748,892]	2017
~ Canada	[CA 2,696,259]	2017



## XanMax®

The Next Generation  
Natural Lutein + Zeaxanthin

**Rigorous Scientific Process Validates**

**Safety Purity Efficacy**

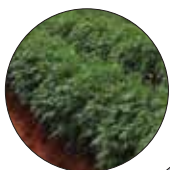


## Katra's distinct advantage

Integrated value chain , since 1996 - Cultivation to Manufacturing of formulated products  
Extensive contract farming operation in India spanning over 6,500 acres  
Network of over 5000 progressive farmers  
Breeding and Captive seed production  
Captive farming with advanced Agronomy  
Eco-friendly, High yield & Patented processing  
World-class manufacturing facility - NSF GMP Certified and USFDA inspected

## Completely Integrated from Seed to Formulation

### SEED TECHNOLOGY



**CONTRACT  
FARMING**

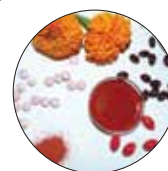
### ENSILAGING & DEHYDRATION



**SOLVENT  
EXTRACTION**



### ISOLATION & PURIFICATION



**BULK FORMULATION**

## Value to our Customers

R&D and Science-driven Products derived from Ayurveda & Ethno-botanical sources  
IP Assured Product Quality, Consistency and Traceability  
Certified products and process meeting International regulatory standards  
Reliable value provider and partner to customers



## Driven by Scientific Research Capabilities



**Validating Safety  
and Efficacy**



**Fremont CA, USA**

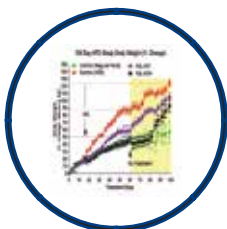
A Joint Venture of Katra  
Headed by an Eminent Scientist - Cambridge Scientist of the Year 2002  
US Congressional Order of Merit  
>100 patents and 200 publications  
10 INDs approved  
Creative Drug Discovery from Natural Botanicals  
30 years of proven track record of drug discovery  
130 man years of scientific expertise



**Anchoring IPR's**



IPR driven gold standard distinctive products  
Fully integrated value chain- "Seed to Shelf"  
State of the art NSF GMP manufacturing facility  
Efficient & Eco Friendly Processes  
Consistent superior quality products



**Authentication Through  
Fingerprinting**



Author of >100 scientific publications, Editor of books  
Has >20 awarded Ph.D. Graduates  
Creative extraction technology for Botanicals  
Advanced organic chemistry skills  
15 years of proven track record in herbal characterization  
Global supplier of herbal reference standards  
150 man years of scientific expertise



**Claim Substantiation  
through Clinical Trials**



**BANARAS HINDU UNIVERSITY**

Banaras Hindu University (BHU) is one of India's premier educational institutions  
University also has an excellent Medical college & separate college for Ayurveda  
Excellent opportunities for Integrating Ayurveda into mainstream medicine seamlessly  
Conducts large scale clinical trials for katra



**We have assembled one of  
the strongest Research Teams  
in Ethno-botanicals & Ayurveda**

**Inventive, Innovative with Industrial Application**

## Katra has a range of other product offerings

### Concentrate

- ▶ **XanMax®** (Lutein Crystals- 75% - 90%)
- ▶ **XanMax®** 80 - SG-1
- ▶ **XanMax®** 80 SG-2 [5:1]
- ▶ **XanMax®** 80 LMZ [5:1]
- ▶ LutEst 75 [Lutein Esters Crystals -75%-90%]
- ▶ Meso Zeaxanthin Crystals - 80%

### Formulated Products

#### **XanMax® (Free Lutein) Products**

##### **Powders:**

- ▶ **XanMax®** 050.3 Powder (Lutein 5% Regular, 5:1, 10:1 Powders-SG & LMZ)
- ▶ **XanMax®** 100.6 Powder (Lutein 10% Regular 5:1, 10:1 Powder)-SG & LMZ
- ▶ **XanMax®** 2001 Powder (Lutein 20% Regular, 5:1, 10:1 Powder-AG & LMZ)
- ▶ **XanMax®** 2501 Powder (Lutein 25% Regular, 5:1, 10:1 Powder-SG & LMZ)
- ▶ **XanMax®** 050.3 Powder CWS-(Lutein 5%, Regular, 5:1, 10:1 CWS Powder-SG & LMZ)
- ▶ **XanMax®** 100.6 Powder CWS (Lutein 10%, Regular, 5:1, 10:1 CWS Powder-SG & LMZ)
- ▶ **XanMax®** 1501 Powder CWS (Lutein 15%, Regular, 5:1, 10:1 CWS Powder-SG & LMZ)

##### **Beadlets:**

- ▶ **XanMax®** 050.3 Beadlets (Lutein 5%, Regular, 5:1, 10:1 Beadlets-SG & LMZ)
- ▶ **XanMax®** 100.6 Beadlets (Lutein 10%, Regular, 5:1, 10:1 Beadlets-SG & LMZ)
- ▶ **XanMax®** 2001 Beadlets (Lutein 20%, Regular, 5:1, 10:1 Beadlets-SG & LMZ)
- ▶ **XanMax®** 2002 Beadlets [Ethanol CO2 Extracted]
- ▶ **XanMax®** 050.3 Beadlets CWS/TG (Lutein 5%, Regular, 5:1, 10:1 Beadlets-SG & LMZ)
- ▶ **XanMax®** 100.6 Beadlets CWS/TG (Lutein 10%, Regular, 5:1, 10:1 Beadlets-SG & LMZ)

##### **Oils:**

- ▶ **XanMax®** 050.3 in Oil (Lutein 5%, Regular, 5:1, 10:1 Oil- SG & LMZ)
- ▶ **XanMax®** 100.6 in Oil (Lutein 10%, Regular, 5:1, 10:1, 1:1 Oil- SG & LMZ)
- ▶ **XanMax®** 2001 in Oil (Lutein 20%, Regular, 5:1, 10:1 Oil- SG & LMZ)

### Pure Colors from nature



**Tomatene®** (tomato extract)

**Capsol®** (paprika extract)

**Annatto** (seed extract)

**Lutol®** (marigold extract)

**Lutesol®** (lutein esters - marigold extract)

**Betol®** (beta carotene)

**Curcuminoids** (turmeric extract)

#### **LutEst ( Lutein Esters) Products**

##### **Powders:**

- ▶ Lutein Esters 5% Powder (LutEst 5 Powder)
- ▶ Lutein Esters 10% Powder (LutEst 10 Powder)
- ▶ Lutein Esters 20% Powder (LutEst 20 Powder)
- ▶ Lutein Esters 40% Powder (LutEst 40 Powder)

##### **Beadlets:**

- ▶ Lutein Esters 10% Beadlets (LutEst 10 Beadlets)
- ▶ Lutein Esters 20% Beadlets (LutEst 20 Beadlets)

##### **Oils:**

- ▶ Lutein Esters 15% in Oil (LutEst 15 Oil)
- ▶ Lutein Esters 20% in Oil (LutEst 20 Oil)
- ▶ Lutein Esters 30% in Oil (LutEst 30 Oil)
- ▶ Lutein Esters 40% in Oil (LutEst 40 Oil)

#### **Zeaxanthin (meso-Zeaxanthin) Products**

##### **Powders:**

- ▶ Zeaxanthin 5% Powder
- ▶ Zeaxanthin 10% Powder
- ▶ Zeaxanthin 20% Powder

##### **Beadlets:**

- ▶ Zeaxanthin 5% Beadlets
- ▶ Zeaxanthin 10% Beadlets
- ▶ Zeaxanthin 10% Beadlets [Ethanol CO2 Extracted]
- ▶ Zeaxanthin 12% Beadlets
- ▶ Zeaxanthin 5% Beadlets - CWS/TG

##### **Oils:**

- ▶ Zeaxanthin 14% In Oil
- ▶ Zeaxanthin 20% in Oil

#### **Other Products**

- ▶ Caromix PF ▶ Circuminoids -95% Powder
- ▶ Lutein Esters 4% Powder [OF] ▶ Lutol 8% WD [FNCG]
- ▶ Lutol 15% WD [FNCG] ▶ Paprika Extract 20% in Safflower Oil
- ▶ Marigold Extract [ free Lutein 1.6% Powder (Saponified)]

## Katra Phytochem (India) Private limited

### Corporate Office

#1134 1st Floor, 100 Feet Road, HAL 2nd Stage, Indiranagar,  
Bengaluru - 560008, Karnataka, India

### Manufacturing Unit

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