

**AstaReal®  
astaxanthin**

**A Nutrient for Mitochondria  
(the cell's powerhouse)**



**Backed by science, Astaxanthin:** <sup>3</sup>

- ✓ Protects mitochondria from free radical damage
- ✓ Increases ATP energy production
- ✓ Improves muscle mass and strength
- ✓ Boosts endurance and power
- ✓ Improves blood flow
- ✓ Reduces inflammation



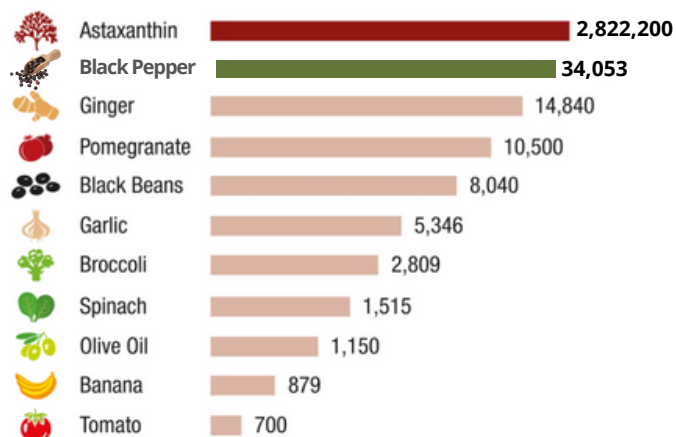
**OPTIXANTHIN™**  
*Feel the difference*

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[www.optixanthin.com.my](http://www.optixanthin.com.my)

OPTI-CAP astaxanthin extract from microalgae Haematococcus Pluvialis is recognized as safe (GRAS) by the USFDA.  
Optixanthin OPTI-Cap is a traditional medicine.  
MAL: 16035044T

## ORAC of Superfoods - USDA <sup>4</sup> (μmol TE/100g)



- ORAC (Oxygen Radical Absorbance Capacity) developed by the US Department of Agriculture (USDA), provides an overall measurement of the food's total antioxidant capacity.
- The higher the ORAC score, the greater is the food's total antioxidant capacity.

## References:

- (1) Gharaei R, Alyasin A, Mahdavinhezad F, Samadian E, Ashrafnezhad Z, Amidi F. Randomized controlled trial of astaxanthin impacts on antioxidant status and assisted reproductive technology outcomes in women with polycystic ovarian syndrome. J Assist Reprod Genet. 2022 Apr;39(4):995-1008.
- (2) F. H. Comhaire, Y. El Garem, A. Mahmoud, F. Eertmans, F. Schoonjans. Combined conventional/antioxidant "Astaxanthin" treatment for male infertility: a double blind, randomized trial. Asian J Androl 2005; 7 (3): 257-262. DOI: 10.1111/j.1745-7262.2005.00047.x
- (3) AstaREAL® improves muscle endurance, LINJALSTHLM | ASTAREAL EDI.2.1211
- (4) S. Bhagwat, D.B.Haytowitz, and J.M.Holden. USDA Database for the Oxygen Radical Absorbance Capacity (ORAC) of selected Foods. Nutrient Data Laboratory, Beltsville Human Nutrition Research Center, Beltsville, MD 20705.



**OPTIXANTHIN™**  
*Feel the difference*



**Natural,  
Clinically Proven  
Approaches to  
Family Health**

**Food-based Nutritional Supplement**

# Causes of Oxidative Stress & Infertility:



Alcohol



Smoking



Pollution & Radiation



Diabetes & Obesity



Systemic Infection



Cancer

## Consequences

- Low sperm count
- Reduced sperm motility
- DNA damage to sperm
- Weak sperm-oocyte adhesion
- Hormone Imbalance



**Formulated with Astareal®  
Astaxanthin & Bioperine® Piperine**  
Regains balance and control.



## Natural Astaxanthin Improves Family Health<sup>1,2</sup>

**200%**

increase sperm-oocyte fusion capability, by improving the fluidity of sperm membrane.

**75%**

reduction in sperms' reactive oxidative stress.

**33%**

increase in sperm velocity & sperm concentration.

**54.4%**

total pregnancy rate.

**Increased MII oocyte & high-quality embryo rate.**

**Increased antioxidant enzyme, catalase (CAT) and Total Antioxidant Capacity (TAC).**

*(1) Results based on a double-blind, randomized controlled trial, involving 30 men with infertility of > 12 months. Parameters were evaluated after 3 months of 16mg/day of Astaxanthin treatment.*

*(2) Results based on a double-blind, randomized controlled trial, involving female with polycystic ovary syndrome (PCOS). Parameters were evaluated after 40 days of 8mg/day of Astaxanthin treatment.*