

# Raspberry NECTA™

**NOURISHING | HYDRATING | PROTECTING**

Raspberry NECTA™ is a nourishing, hydrating, skin-smoothing active oil, naturally loaded with antioxidants and essential fatty acids for protection against free radical damage.

MADE FROM  
**UPCYCLED  
RASPBERRY  
SEEDS**

1KG OF RASPBERRY NECTA™  
CONTAINS THE OIL OF  
**100,000**  
UPCYCLED RASPBERRIES;  
A BY-PRODUCT OF  
THE JUICING INDUSTRY

IDEAL FOR  
**SKINCARE**  
APPLICATIONS



# Raspberry NECTA™

## AN ULTRA-NOURISHING FATTY ACID RICH ACTIVE OIL MADE FROM 100,000\* UPCYCLED RASPBERRIES

Red raspberry seeds are shown to contain high levels of essential fatty acids (EFAs), particularly omega-3 (a-linolenic) and omega-6 (linoleic) which are crucial to skin function and appearance. Red raspberry seeds also provide a natural source of vitamin E, which helps to prevent damage induced by free radicals and reactive oxygen species. Boasting higher levels of tocopherols than many known seed oils, Raspberry NECTA™ is an ideal choice for antioxidant-rich formulations that fight free radicals.

\*Based on 1kg oil.

## BENEFITS

- Standardised level of natural vitamin E
- Increased hydration (in vivo)
- Increased barrier function & integrity, due to high levels of EFAs
- Natural defence against free radical damage
- An effective emollient, leaving skin feeling soft and hydrated
- Contains nearly 20% more tocopherols than standard raspberry seed oil
- Sustainably sourced and produced

## A NEW APPROACH

The raspberries used to make Raspberry NECTA™ are a waste product of the juice production industry. The oil is extracted from the seeds of the waste pulp, which is upcycled into a luxurious, sustainable active.



**INCI Name:** Rubus Idaeus Seed Oil 100%

**Appearance:** Yellow liquid

**Suggested Use Level:** Unrestricted, 1 - 3% recommended

**Suggested Application:** Skincare (Face & Body), Hair Care, Colour Cosmetics, Lip Care

**Degree of Naturality ISO 16128:** NOI 1 | NI 1

**COSMOS:** Conforms



COSMOS APPROVED



# Raspberry NECTA™ & CRUSH™ UPCYCLING PROCESS



100,000 raspberries



## PRODUCT 1: THE JUICE

Raspberries are pressed into approx. 230kg of juice



This creates 100kg of leftover berry pulp which would usually go to waste



The pulp is dried and the seeds are separated



## PRODUCT 3: THE NECTA™

Oil is extracted from the seeds via cold pressing = 1kg Raspberry NECTA™



## PRODUCT 2: THE SKINS

This process results in leftover raspberry skins (fibres) which are sold to the nutritional industry



This process results in waste seed cake. The seed cake goes through a colour stabilisation process before being dried & ground



## PRODUCT 4: THE CRUSH™

Finally, the material is sieved to size grade = 5kg Raspberry CRUSH™



## A POWERFUL ANTIOXIDANT FOR SKIN DEFENCE

### A NATURAL SOURCE OF VITAMIN E

Vitamin E is an integral part of the skin's antioxidant defences, primarily providing protection against free radicals that may come in contact with the epidermis.

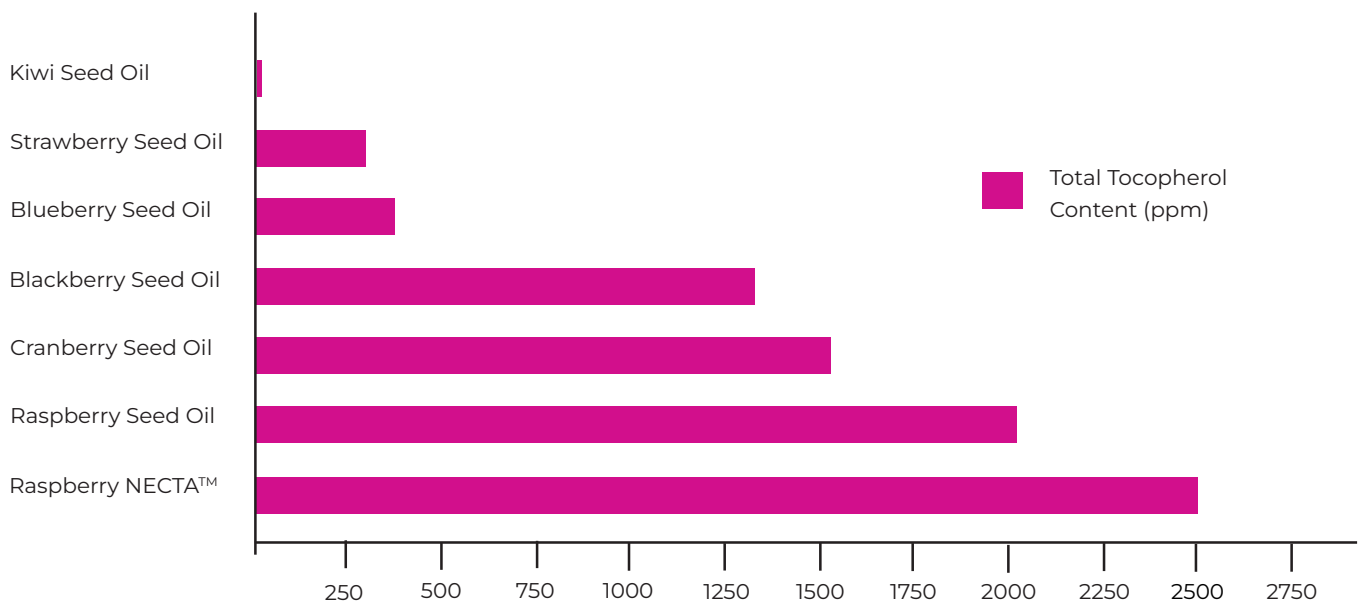
Tocopherols are the most abundant form of vitamin E in the body; however, the level of cutaneous vitamin E depends on its oral intake or topical delivery. When applied topically, vitamin E accumulates not only in cell membranes but also in the extracellular lipid matrix of the stratum corneum, working to prevent damage induced by reactive oxygen species.

Studies show that raspberries contain just over 200mg/100g total tocopherol content, significantly outweighing other seed oils (see Figure 1).

Raspberry NECTA™ on the other hand, contains up to 250mg/100g tocopherol content; nearly 20% more than ordinary raspberry seed oils.

**Raspberry NECTA™  
CONTAINS NEARLY 20% MORE  
TOCOPHEROLS (MG/100G)  
THAN ORDINARY  
RASPBERRY SEED OIL**

**FIGURE 1. TOTAL TOCOPHEROL CONTENT OF RASPBERRY NECTA™ VS. OTHER SEED OILS**



Source: Van Hoed. Berry Seeds: A Source of Specialty Oils With High Content Of Bioactives And Nutritional Value. Faculty of Bioscience Engineering Ghent University Coupure Links 653, 9000 Ghent. 2008.

## EFFICACY DATA

### ORAC TEST

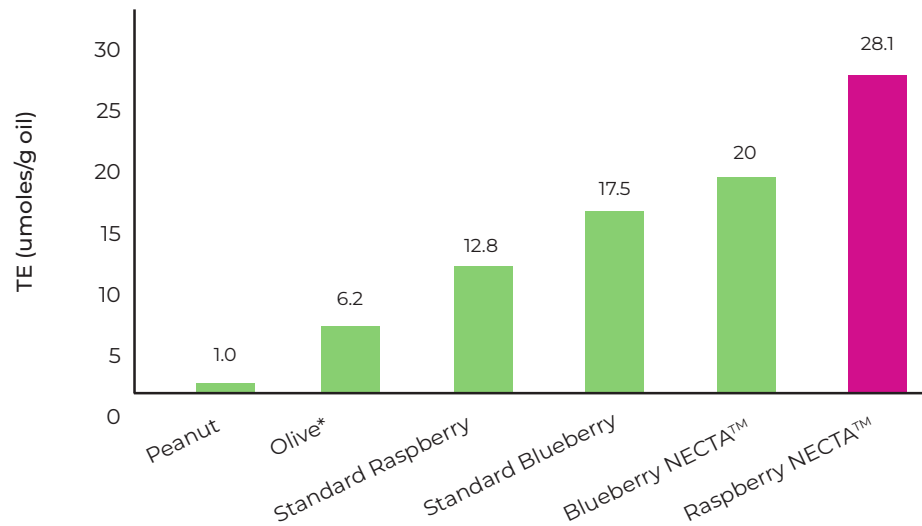
Raspberry NECTA™ was tested using the ORAC method in order to measure antioxidant capacities in biological samples *in vitro*.

### RESULTS

Raspberry NECTA™ demonstrated significant antioxidant activity, especially when compared with standard raspberry seed oil (+120%) and standard blueberry seed oil (+61%).

**FIGURE 2. ORAC VALUES OF COLD-PRESSED OILS**

TE stands for the trolox equivalents.



ORAC values for Raspberry from J. PARRY. Fatty Acid Composition and Antioxidant Properties of Cold-Pressed Marionberry, Boysenberry, Red Raspberry, and Blueberry Seed Oils. J. Agric. Food Chem (2005). ORAC values for Peanut and Olive from Ninfali et. al (2001); Antioxidant Capacity of Extra-Virgin Olive Oils. ORAC values for Standard Blueberry, Blueberry NECTA™ and Raspberry NECTA™ from own ORAC studies.

\*Results based on a name brand olive oil with the highest ORAC value.

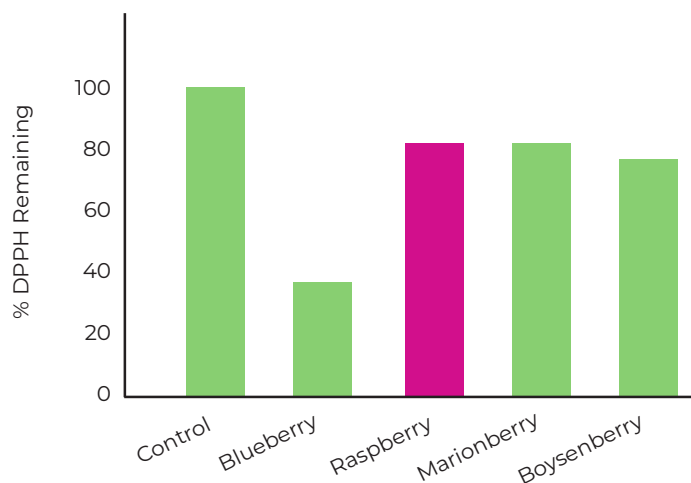
### DPPH ASSAY

DPPH is a stable radical with a deep purple color and an absorbance at 517nm. On accepting hydrogens from donors (antioxidants), DPPH changes from purple to yellow; the resulting decolorisation is stoichiometric with respect to the number of electrons taken up. The color change and absorbance data show how much of the radical has been quenched.

### RESULTS

Raspberry demonstrated strong antioxidant activity, especially in comparison to standard blueberry oil.

**FIGURE 3. DPPH ASSAY**



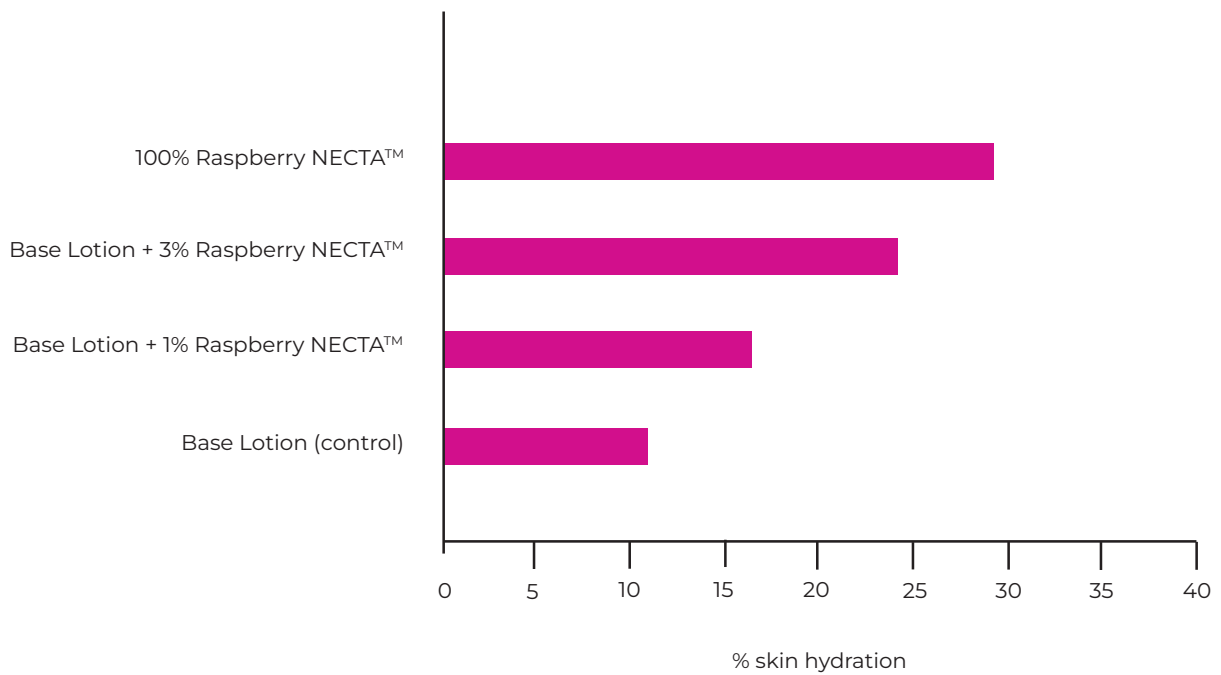
DPPH values for Blueberry, Red Raspberry, Marionberry and Boysenberry from Parry et. al.



## NOURISHING & HYDRATING

Raspberry NECTA™ has been proven to increase skin hydration after 2hrs of product application.

**FIGURE 4. % SKIN HYDRATION AFTER 2HRS OF PRODUCT APPLICATION**





## ESSENTIAL ACIDS FOR HEALTHY SKIN

Omega-3 and omega-6 essential fatty acids (EFAs) are crucial to skin function and appearance.

Rich in EFAs, raspberries are an excellent free radical scavenger, helping to protect the skin from daily environmental stress and prevent skin damage.

# 3

### ALPHA-LINOLENIC ACID (OMEGA-3)

- Omega-3 fatty acids help the skin retain moisture, regulate oil production, and maintain elasticity.
- Together with omega-6, these fatty acids also influence the skin-soothing response of the skin.

**Red raspberry seed oils extracted by cold-pressing, showed high concentrations of alpha-linolenic acid, n-3 fatty acid.** The extra virgin cold-pressed seed oil had 32.4%  $\alpha$ -linolenic acid, which was the highest value compared with Boysenberry, Marionberry, Blueberry, Cranberry, Watermelon, Melon (cucumis melo), Melon (colocynthis citrullus L.), Goldenberry, Grape, Mango, Cherry and Date.<sup>1</sup>

# 6

### LINOLEIC ACID (OMEGA-6)

Omega-6 has a particular role in structural integrity and barrier function of the skin, and can be extremely useful in the treatment of cutaneous disorders. They also work to nourish and protect the skin without being too heavy.

Based on studies, the levels of **omega-6 fatty acids in Raspberry oil are higher compared with blueberry seed oil**, cranberry seed oil, kiwi seed oil and strawberry seed oil.

### OMEGA-6 CONTENT OF COLD-PRESSED SEED OILS (g/100g) <sup>2</sup>

Kiwi: 17.55  
Cranberry: 37.68  
Strawberry: 42.22  
Blueberry: 42.51  
Raspberry: 53.67

#### References

1. U. Kiran et al. Study of fatty acid composition of fruit seed oils. International Journal of Academic Research and Development ISSN: 2455-4197, Vol 2; Issue 5; September 2017; Page No. 36-40.
2. Van Hoed. Berry Seeds: A Source of Specialty Oils With High Content Of Bioactives And Nutritional Value. Faculty of Bioscience Engineering Ghent University Coupure Links 653, 9000 Ghent. 2008.



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