

# THIRD PARTY CELL-BASED ASSAYS CORE CONTINUES TO IMPRESS.

Here at Rain, we take responsible testing very seriously. It is a non-negotiable mandate that we provide valid, third-party testing on our products which sets the highest standards for product performance and quality assurance.

We have recently completed a series of tests on CORE which reflect this commitment. These tests actually form a kind of road map to the unique attributes and performance of CORE.

## 67% HIGHER PAC'S

Proanthocyanidins (PACs) are a large and important family of plant-based compounds. They have been shown to have exceptional antioxidant characteristics, as well as anti-inflammatory and immune support functions. High concentrations are found in fruits and other plant sources such as grapes, cocoa, and cranberries.

Given its unique seed-based formulation, we expected that CORE might have a high concentration of PACs. We were right. Test results show that the concentration of PACs in CORE is 1.67 times greater than the USDA's average for the top 20 fruits, based on PACs levels.

PACs are just one of the compound families found in CORE's unique seed matrix. These powerful antioxidants certainly contribute to CORE's impressive ORAC5.0 values.

## 3X THE COMPREHENSIVE ANTIOXIDANT PROTECTION OF THE MOST CONSUMED FRUITS AND VEGETABLES.\*

\*USDA AVERAGE PER SERVING OF MOST COMMONLY CONSUMED FRUITS AND VEGETABLES IN THE U.S.



## CELLULAR IMMUNE RESPONSE

### Cellular Immune Support Assay

The Cellular Immune Assay (IL-1 $\beta$ ) determines the inhibition potential of a test material on expression/production level of IL-1 $\beta$  in human cells. IL-1 $\beta$  serves as a biomarker for immune response.

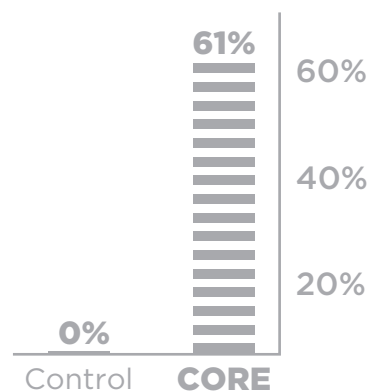
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\* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

Cytokines are regulatory proteins produced by the immune system and function as cellular mediators of immune responses and inflammatory reactions. The assay used measures cellular inhibition of interleukin-1 beta (IL-1 $\beta$ ) via treatment of the test material, CORE.

Human cells are first treated with or without a test material to allow for natural absorption of the material into the cells. The cells are stressed with an inflammation inducer, which would normally stimulate IL-1 $\beta$  production then further developed into immune-mediated inflammation through series of cellular signaling. If an IL-1 $\beta$  inhibitor presents in the cellular environment, the material inhibits IL-1 $\beta$  production and the degree of inhibition is assessed by level of decreased IL-1 $\beta$  production.

The cellular immune support assay demonstrates that CORE inhibits IL-1b, a key biomarker for immune response. In fact, safe concentrations of CORE can inhibit up to 67% of IL-1b. Antioxidants are known to support immune function, and it turns out that protection against singlet oxygen is especially important, as there is a strong link between singlet oxygen and the production of IL-1b.



IL - 1b Inhibition (uG per mL)

Source: Brunswick Labs, Bell Advisory

## ORAC & SINGLET OXYGEN

There are five predominant reactive species found in the body: peroxy radicals, hydroxyl radicals, peroxynitrite, super oxide anion, and singlet oxygen. ORAC5.0 provides a measure of the total antioxidant power of a food/nutrition product against the five predominant reactive species.

The ORAC result is expressed as micromole trolox equivalency (Q mole TE) per gram.

- Measures antioxidant performance against 5 primary radicals
- The industry standard for broad-spectrum antioxidant testing

Like Soul, CORE delivers balanced antioxidant protection against all 5 primary radicals. In fact, 1.5 fl. oz. of CORE deliver 3 times the comprehensive antioxidant protection of the most consumed fruits and vegetables, based upon data from the USDA and Brunswick Labs.



**8X**  
protective  
power  
against  
singlet  
oxygen.

### Singlet Oxygen

The CORE ORAC value for SOAC, or the singlet oxygen radical, is worth noting. 2 fl. oz. of CORE have over 8 times the protective power of the USDA's top fruits and veggies against singlet oxygen, which is known to be damaging to our immune systems.

## RESULT

These results represent an important body of pre-clinical evidence. They also reflect Rain's ongoing commitment to better understanding CORE's healthful attributes and setting the highest independent testing standards in the industry.



WORLD LEADER IN SEED NUTRITION.