

Certificate of Analysis

Customer: Health Product Distributors**Sample Identification:**

Batch #: B-12548

BL ID #: 12-1386

Description: HPDI - Ultimate Protector, powder, 2139-221012-00001

Date Received: 10/29/2012

Results:

Test	Result	Units
Antioxidant power against peroxy radicals	6,312	μmole TE/gram
Antioxidant power against hydroxyl radicals	5,870	μmole TE/gram
Antioxidant power against peroxynitrite	2,474	μmole TE/gram
Antioxidant power against super oxide anion	106,257	μmole TE/gram
Antioxidant power against singlet oxygen	52,052	μmole TE/gram
Total ORAC _{FN} (sum of above)	172,965	μmole TE/gram

* The acceptable precision of the ORAC assay is < 15% relative standard deviation

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

REFERENCES:

- [1] Ou, B. *et al.*, *J Agric and Food Chem*, **2001**, 49 (10): 4619-4626.
- [2] Huang, D. *et al.*, *J Agric and Food Chem*, **2002**, 50 (7): 1815-1821.
- [3] Ou, B. *et al.*, *J Agric and Food Chem*, **2002**, 50 (10): 2772-2777.
- [4] Zhang, L. *et al.*, *Free Radic. Bio Med*, **2007**, 43 (suppl. 1): S17.
- [5] Dubost, N.J. *et al.*, *Food Chem*, **2007**, 105 (2): 727-735
- [6] Zhang, L. *et al.*, *J Agric and Food Chem*, **2009**, 57(7): 2661-2667.
- [7] Ou, B. *et al.*, Method for Assaying the Antioxidant Capacity of A Sample. US Patent 7,132,296 B2.

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