

TriElements® Clinical Reference Guide
Not For Distribution or Commercial Use

**MacroMicro™ Cleanse plus
JumpStart Colon Cleanse**

Awarded 4 patents**By the U.S. Government

Scientific Advanced Complete
Dietary Supplement 90 Vegetarian Capsules

MacroMicro Cleanse

Directions: Take 2 capsules daily for maintenance and 4 capsules daily periodically, when a more vigorous cleans/detox is needed. Best taken with food or a large glass of water in divided doses (am & pm). Continue taking after you have finished Jumpstart Colon. Store in a cool dry place

Serving Size: 2 Vegetarian Capsules (vegetable cellulose)
Servings Per Container 30

	Amount Per Serving	%DV
Milk Thistle Extract (seed) (80% silymarin)	150 mg	*
N-Acetyl Cysteine	125 mg	*
Broccoli extract (aerial) (4000 ppm Sulforaphane)	40 mg	*
Alpha Lipoic Acid	60 mg	*
Proprietary Blend: CranXact® Extract** (cranberry, grape, apple) (Standardized to clinical levels of bacteria anti-adhesion activity) blended with special detox/cleansing support ingredients.	545 mg	*
Dandelion (root)		*
Cranberry Extract (seeds and/or fruit)		*
Burdock (root)		*
Grape Extract (seeds)		*
Pomegranate Extract (fruit) (40% Ellagic Acid)		*
Artichoke Extract (leaf) (2% Cynarin)		*
Red Clover (aerial)		*
Mullein (leaf)		*
Ginger (root)		*
Larch Arabinogalactan		*
Apple Extract (skin, seeds, fruit)		*

*Daily Value not established

Other Ingredients: vegetable cellulose, silica

**CranXact U.S. patent #'s 5,474,774, 5,525,341, 5,646,178, 5,650,432. Bacteria anti-adhesion activity levels based on red blood cell hamagglutination assay.

JumpStart Colon Cleanse

Directions: Begin by taking 1 capsule at bedtime and then as needed take up to 3 capsules at bedtime. Take with a large glass of water. Do not exceed recommended dose or use for more than 10 days. (Read Notice and Caution statements on package before using).

Serving Size: 3 vegetarian capsules
Servings Per Container 10

	Amount Per Serving	%DV
Magnesium (as oxide, citrate)	200 mg	50%
Proprietary Blend	1008 mg	*
Cascara Sagrada (bark)		*
Ginger (root)		*
Butternut (root)		*
Dandelion (root)		*
Slippery Elm (bark)		*
Triphala Proprietary Extract blend (fruit)		*
Bibhitaki (Terminalia belerica)		*
Haritaki (Terminalia chebula)		*
Amalaki (Emblica officinalis)		*
Larch Arabinoglaactans		*
Peppermint (leaf)		*
Aloe Vera (inner gel) (200:1 concentrate)		*
Rose Hips		*

*Daily Value (DV) not established

Other Ingredients: Plant derived cellulose, Silica

Purpose of Formula:

Cleanse & Detox

Comprehensive & Advanced: This combination product is uniquely patented and formulated to provide comprehensive support for detoxification and cleansing at the macrobiological and microbiological levels and provide a more balanced approach to the body's phase 1 and phase 2 detoxification systems. It can be used to support daily detox or a short term detox/cleanse program

Macrobiological: It is specially designed to help all of the systems and organs of the body in their detoxification and cleansing functions. It also helps strengthen these systems and organs so they are more capable of performing the detoxification/cleansing functions on their own.

Microbiological: It inhibits the adherence of bacteria to living tissue so they can be safely and naturally voided from the body. It works at the cellular level to enhance energy production in the mitochondria and inhibit associated oxidation. It protects cells from alteration and damage.

Colon Elimination

This formula is designed to gently support a more comprehensive and complete colon elimination process.

Application and Key Benefits:

- Designed to provide a balanced approach to Phase I and Phase II detoxification support. (1,2,3,4)
- Supports the detoxification functions of the liver and also promotes the natural production and recycling of glutathione, a very important endogenous detoxifier and antioxidant. It also protects the liver by inhibiting passage of toxins into liver cells and stimulating regeneration of new liver cells. (5,6,7,8,10,11,12)
- Supports normal bile flow and fat metabolism which helps nutrient absorption and elimination of waste. (9)
- Helps to improve the efficiency of energy production in the mitochondria and prevent associated oxidative cellular damage.(19,20,21,22,23,27,)
- Inhibits Glycation and ‘Glycation End Products’ (AGE’s). (28,29, 30, 31, 32)
- Protects cells from alteration and damage. (10,11,12)
- Supports healthy respiration by helping to thin stubborn mucous (13)
- Helps the body detoxify and protect against chemicals and heavy metal toxins such as mercury and arsenic. (14,15)
- Anti-oxidant support for both fat and water soluble systems (16)
- Provides high levels of bacteria anti-adhesion support (17,18)
- Helps regenerate and recycle Vitamins C, E, Glutathione, and Coenzyme Q10 (20,21,22,23)
- Helps support and protect normal structure and function of blood, colon and kidneys. (24,25,26)
- It is mildly stimulating and purging to the colon, inducing a more rapid and complete elimination. It helps increase the water and electrolyte content of the colon to soften impacted and hardened faecal matter and provide increased volume to help induce peristalsis and accelerated intestinal passage (33,34,35,36,37)

These statements have not been evaluated by the food and drug administration. This product is not intended to diagnose, cure, treat, or prevent disease

1. Valenzuela A, et al. Selectivity of Silymarin on the Increase of the Glutathione Content in Different Tissues of the Rat. *Planta Medica*. 1989;55:1550-52.
2. Belouqui O, et al. N-acetyl cysteine enhances the response to interferon-alpha in chronic hepatitis C: a pilot study. *J Interferon Res*. Aug1993;13(4):279-82.
3. Fahey JW, Talalay P. Antioxidant functions of sulforaphane: a potent inducer of Phase II detoxication enzymes. *Food Chem Toxicol* 1999;37:973-9.
4. Maheo K, Morel F, Langouet S, et al. Inhibition of cytochromes P-450 and induction of glutathione S- transferases by sulforaphane in primary human and rat hepatocytes. *Cancer Res* 1997;57:3649-52.

5. Flora K, et al. Milk Thistle (*Silybum marianum*) for the Therapy of Liver Disease. *Am J Gastroenterol*. 1998;93(2):139-43.
6. Salmi H, et al. Effect of Silymarin on Chemical, Functional, and Morphological Alterations of the Liver. A Double-blind Controlled Study. *Scand J Gastroent*. 1982;17:517-21.
7. Sonnenbichler J, Zetl I. Stimulating influence of a flavonolignan derivative on proliferation, RNA synthesis and protein synthesis in liver cells. In *Assessment and Management of Hepatobiliary Disease*, ed. L Okolicsanyi, G Csomos, G Crepaldi. Berlin: Springer-Verlag, 1987, 265-72.
8. Beloqui O, et al. N-acetyl cysteine enhances the response to interferon-alpha in chronic hepatitis C: a pilot study. *J Interferon Res*. Aug1993;13(4):279-82.
9. *Cardui mariae fructus* (Milk Thistle fruit). Commission E Monograph. Mar1986;Bundesanzeiger:no. 50.
10. Campos R, et al. Silybin Dihemisuccinate Protects Against Glutathione Depletion and Lipid Peroxidation Induced by Acetaminophen on Rat Liver. *Planta Medica*. 1989;55:417-19.
11. Rue YC. Advances in Pharmacological Studies of Silymarin. *Mem Inst Oswaldo Cruz*. 1991;86(Suppl 2):79-85.
12. Dehmlow C, Erhard J, de Groot H. Inhibition of Kupffer Cell Functions as an Explanation for the Hepatoprotective Properties of Silibinin. *Hepatology*. Apr1996;23(4):749-54.
13. Olsson B, et al. Pharmacokinetics and bioavailability of reduced and oxidized N-acetylcysteine. *Eur J Clin Pharmacol* 1988;34:77-82.
14. Flora SJ, et al. Arsenic-induced oxidative stress and its reversibility following combined administration of N-acetylcysteine and meso 2,3-dimercaptosuccinic acid in rats. *Clin Exp Pharmacol Physiol*. Nov1999;26(11):865-9.
15. Ballatori N, et al. N-acetylcysteine as an antidote in methylmercury poisoning. *Environ Health Perspect*. May1998;106(5):267-71.
16. Kagan VE, Shvedova A, Serbinova E, et al. Dihydrolipoic acid--a universal antioxidant both in the membrane and in the aqueous phase. Reduction of peroxy, ascorbyl and chromanoxyl radicals. *Biochem Pharmacol*. Oct1992;44(8):1637-49.
17. Avorn J, Monane M, Gurwitz JH, et al. Reduction of bacteriuria and pyuria after ingestion of cranberry juice. *JAMA* 1994;271:751-4.
18. Zafriri D, Ofek I, Adar R, et al. Inhibitory activity of cranberry juice on adherence of type 1 and type P fimbriated *Escherichia coli* to eucaryotic cells. *Antimicrob Agents Chemother* 1989;33:92-8.
19. Hagen TM, Ingersoll RT, Lykkesfeldt J, Liu J, Wehr CM, Vinarsky V, Bartholomew JC, Ames AB. (R)-alpha-lipoic acid-supplemented old rats have improved mitochondrial function, decreased oxidative damage, and increased metabolic rate. *FASEB J*. 1999 Feb;13(2):411-8.
20. Busse E, Zimmer G, Schopohl B, et al. Influence of alpha-lipoic acid on intracellular glutathione in vitro and in vivo. *Arzneimittel-Forschung*. 1992;42:829-831.
21. Packer L, Witt EH, Tritschler HJ. alpha-Lipoic acid as a biological antioxidant. *Free Radic Biol Med*. Aug1995;19(2):227-50.
22. Stoyanovsky DA, Goldman R, Darrow RM, et al. Endogenous ascorbate regenerates vitamin E in the retina directly and in combination with exogenous dihydrolipoic acid. *Curr Eye Res*. Mar1995;14(3):181-9.
23. Kagan V, Serbinova E, Packer L. Antioxidant effects of ubiquinones in microsomes and mitochondria are mediated by tocopherol recycling. *Biochem Biophys Res Comm*. 1990;169:851-857
24. Gavish D, et al. Lipoprotein (a) Reduction by N-Acetylcysteine. *Lancet*. Jan1991;337:203-204.
25. Shyu KG, Cheng JJ, Kuan P. Acetylcysteine protects against acute renal damage in patients with abnormal renal function undergoing a coronary procedure. *J Am Coll Cardiol* 2002;40:1383-8.
26. Estensen RD, Levy M, Klopp SJ, et al. N-acetylcysteine suppression of the proliferative index in the colon of patients with previous adenomatous colonic polyps. *Cancer Lett* 1999;147:109-14.
27. Hagen TM, Ingersoll RT, Lykkesfeldt J, Liu J, Wehr CM, Vinarsky V, Bartholomew JC, Ames AB. (R)-alpha-lipoic acid-supplemented old rats have improved mitochondrial function, decreased oxidative damage, and increased metabolic rate. *FASEB J*. 1999 Feb;13
- 28 Jacob S, et al. Enhancement of Glucose Disposal in Patients with Type 2 Diabetes by Alpha-lipoic Acid. *Arzneimittelforschung*. Aug1995;45(8):872-74.
- 29 Evans JL, Goldfine ID. Alpha-lipoic acid: a multifunctional antioxidant that improves insulin sensitivity in patients with type 2 diabetes. *Diabetes Technol Ther*. Sep2000;2(3):401-13.
- 30 Estrada DE, Ewart HS, Tsakiridis T, et al. Stimulation of glucose uptake by the natural coenzyme alpha-lipoic acid/thioctic acid: participation of elements of the insulin signaling pathway. *Diabetes*. 1996;45:1798-1804.
- 31.Ziegler D, Schatz H, Conrad F, Gries FA. Effects of treatment with the antioxidant alpha-lipoic acid on cardiac autonomic neuropathy in NIDDM patients: a 4-month randomized controlled multicenter trial (DEKAN study). *Diabetes Care* 1997;20:369-73.
32. Kunt T, et. Al.: Alpha-lipoic acid reduces expression of vascular cell adhesion molecule-1 and endothelial adhesion of human monocytes after stimulation with advanced glycation end products. *Clin Sci (Lond)*. 1999 Jan; 96(1):75-82
33. Leung AY, Foster S. *Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics*, 2d ed. New York: John Wiley & Sons, 1996, 128-30.

34. The Complete German Commission E Monographs—Therapeutic Guide to Herbal Medicines. M. Blumenthal, W.R. Busse, A. Goldberg, J. Gruenwald, T. Hall, C.W. Riggins, R.S. Rister (eds.) S. Klein and R.S. Rister (trans.). 1998. Austin: American Botanical Council; Boston: Integrative Medicine Communications.
35. Bradley PR (ed). British Herbal Compendium, vol 1. Bournemouth, Dorset, UK: British Herbal Medicine Association, 1992, 112–4.
36. Yamahara J, Huang QR, Li YH, et al. Gastrointestinal motility enhancing effect of ginger and its active constituents. *Chem Pharm Bull* 1990;38:430–1.
37. Plant monographs extracted from *The Eclectic Materia Medica, Pharmacology and Therapeutics* by Harvey Wickes Felter, M.D. (1922)