

Nutra-BRL



Applications

- Microbial Support
- Antioxidant Support
- Immune Support
- Healthy Inflammatory Response Support

Introduction

NutraMedix Nutra-BRL is a proprietary blend of hydro-ethanol extracts from **Samento® cat's claw bark** (*Uncaria tomentosa*), **stevia leaf** (*Stevia rebaudiana*) and **Banderol® otoba bark** (*Otoba parvifolia*). Nutra-BRL is designed to assist with comprehensive microbial support.¹

Samento® cat's claw bark (*U. tomentosa*) belongs to the Rubiaceae family and is traditionally used for health promotion by indigenous tribes of the Peruvian Amazon. Ongoing research continues to validate its health-supporting effects.¹ Cat's claw exists in two chemotypes, one of which contains more tetracyclic oxindole alkaloids (TOA) and the other of which contains more pentacyclic oxindole alkaloids (POA). **Samento cat's claw** is made from the bark of the rare pentacyclic chemotype. Samento not only meets but exceeds the standards of the U.S. Pharmacopoeia (USP 42), requiring no less than 0.3% of POAs and no more than 0.05% TOAs.² Samento cat's claw is verified by independent third-party HPLC testing to be free of TOAs, with levels in trace amounts or undetectable.³

Cat's claw includes other active constituents in the form of esters, glycosides, organic acids, procyanidins, sterols, and triterpenes.⁴ Cat's claw may assist with microbial support,⁵⁻⁷ immune system support,⁴ healthy inflammatory response support,^{8,9} cardiovascular support,¹⁰ neurological

support,¹¹⁻¹³ blood glucose and metabolic support,^{14,15} and antioxidant support.¹⁶

Stevia leaf (*S. rebaudiana*) belongs to the Asteraceae family, is native to Brazil and Paraguay, and is used as a dietary supplement as well as a sweetener. The constituents responsible for the sweet taste are steviol glycosides, including stevioside, rebaudioside A-F, steviolbioside, isosteviol, and dulcoside A, of which stevioside and rebaudioside A are the most abundant.^{17,18} Steviol glycosides are approximately 250-300 times sweeter than sucrose.¹⁸ Stevia also contains phytosterols such as stigmasterol, beta-sitosterol, and campesterol, as well as flavonoids, diterpenes, triterpenes, vitamins, and minerals.^{17,18}

Stevia may help with microbial support,¹⁹⁻²¹ inflammatory response support,²² and antioxidant support.²³⁻²⁵ It may also assist with cardiovascular and metabolic support, helping maintain blood pressure,²⁶⁻²⁸ lipids,²⁹⁻³² and blood glucose levels³³⁻³⁸ already within the normal range. Stevia may also maintain satiety and support healthy eating habits.^{25,39-41}

Banderol® otoba bark (*Otoba parvifolia*) belongs to the Myristicaceae family.⁴² It is sustainably harvested from the Amazon basin ecosystem and has been used by indigenous groups in the region for hundreds of years. Our proprietary hydroethanolic extraction and enhancement process maximizes the bioavailability of iso-

flavones and other beneficial constituents.⁴² Banderol is traditionally used for microbial support.^{7,43-46} It may also help with healthy inflammatory response support.⁴⁷

NutraMedix Nutra-BRL is made at our U.S. manufacturing facility using a specialized proprietary extraction process that optimizes the constituents of the herbs in their original, unprocessed state to obtain broad-spectrum concentration. Because NutraMedix's extracts are made in our own facility, we control all aspects of quality, including stringent ID testing, microbial testing, and heavy-metal testing. NutraMedix rigorously follows current good manufacturing practices (cGMP), as do our suppliers.

Microbial Support

Cat's claw bark (*U. tomentosa*) may assist with a broad range of microbial support.⁵⁻⁷ **Stevia leaf** (*S. rebaudiana*) may help with diverse types of microbial support, including a variety of morphological forms.^{19-21,48} **Otoba bark** (*O. parvifolia*) may also help with diverse microbial support for various types and morphological forms.⁴⁴⁻⁴⁶ Independently, all three assist with microbial support.^{5-7,19-21,44-46} In combination, they exhibit more robust support.⁷

Antioxidant Support

Stevia leaf (*S. rebaudiana*) contains flavonoids and polyphenols that may contribute antioxidant support to help with normal oxidative stress.^{23,48} Stevia leaf may also help maintain superoxide dismutase (SOD) levels already within the normal range, contributing antioxidant support.²⁵

Immune Support

Samento cat's claw (*U. tomentosa*; pentacyclic chemotype) may help support immune system homeostasis. Research suggests that POAs help maintain lymphocyte proliferation-regulating factor levels,⁴⁹ CD4⁺ CD25⁺ Foxp3⁺, and Th2 levels already within the normal range.¹⁴ It should be noted that TOAs inhibit the effect of POAs on lymphocyte-proliferation-regulating factor in a dose-dependent manner, and TOA-free *U. tomentosa* is required for adequate immune support.⁴ The specific POA mitraphylline may help

support healthy neutrophil function and maintain levels of Th1, Th2, and Th17 already within the normal range.^{50,51} Mitraphylline may also help support healthy apoptosis.⁵²

Healthy Inflammatory Response Support

Samento cat's claw (*U. tomentosa*; pentacyclic chemotype) may help maintain and support a healthy inflammatory response.^{8,9} Cat's claw may help support NF-kappaB levels already within the normal range in a dose-dependent manner,^{53,54} supporting both TNF-alpha and IL-1beta already within the normal range.⁵⁴ Cat's claw and its most prevalent POA alkaloid, mitraphylline, may help maintain levels of IL-1alpha, IL-2, IL-4, IL-6, IL-8, and IL-17 already within the normal range,⁵⁵⁻⁵⁸ in addition to supporting healthy function of the MAP kinase pathway.^{54,58}

Stevia (*S. rebaudiana*) may help with healthy inflammatory response support.²² Stevioside and its metabolite steviol may assist with cytokine support, helping maintain healthy levels of TNF-alpha, IL-1beta, IL-6, and NF-kappaB already within the normal range.²² It may also help maintain levels of cytokine-governing lipopolysaccharides already within the normal range.⁴⁸

Banderol otoba bark (*O. parvifolia*) may help support a healthy inflammatory response. NutraMedix Banderol has been studied in mice, in which its inflammatory response support was found comparable to the positive control.⁴⁷

Safety and Cautions

All three herbs are generally well tolerated. With **cat's claw** (*U. tomentosa*), gastrointestinal effects such as nausea, vomiting, constipation or diarrhea have been reported.⁵⁹ With **stevia** (*S. rebaudiana*), nausea and dizziness have occurred, though at a similar rate to placebo, and usually resolving after the first week of use.⁶⁰ With **otoba**, a mouse study using 500 times the human dose of NutraMedix Banderol showed no evidence of side effects or toxicity.⁶¹

Cat's claw (*U. tomentosa*) should be avoided in those taking immunosuppressants, as it may interfere with immunosuppressant therapy.⁵⁹

Both **cat's claw** and **stevia** (*S. rebaudiana*) may inhibit P450 CYP3A4 enzymes and therefore may slow the metabolism of drugs metabolized by CYP3A4.^{59,60} **Otoba** (*O. parvifolia*) inhibits the uptake transporters OATP1B1 and OATP1B3, so caution is warranted with medications that are substrates or inhibitors of OATP1B1 and OATP1B3.⁴³

Stevia (*S. rebaudiana*) may theoretically increase pharmaceutical lithium levels due to increased diuresis and decreased lithium excretion.⁶⁰ Stevia may theoretically have additive effects when taken concurrently with antidiabetic or antihypertensive

medications.⁶⁰ While TOA-containing **cat's claw** (*U. tomentosa*) may have additive effects with antihypertensives and anticoagulants,^{59,62-64} as a reminder, **Samento cat's claw is TOA-free, with levels in trace amounts or undetectable.**

Safety is not documented in breastfeeding or pregnant women, or in children under age 3, due to insufficient safety research.

***This statement has not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.**

References

- ¹Muhammad, I., Dunbar, D.C., et al. (2001). *Phytochemistry*, 57(5), 781-785.
- ²Convention USP, editor. United States Pharmacopeia and National Formulary (USP 42-NF 37). 42nd ed. Rockville (MD): Convention, United States Pharmacopeial; 2018.
- ³Vilchez, L. (2019). Informe Tecnico N IT050-2019 Samento-Stevia Liquid Extract.
- ⁴Batiha, G. E.-S., Magdy Beshbishy, A., et al. (2020). *Applied Sciences*, 10(8), 2668.
- ⁵Ccahuana-Vasquez, R.A., Santos, S.S., et al. (2007). *Brazilian Oral Research*, 21(1), 46-50.
- ⁶Yepes-Perez, A.F., Herrera-Calderón, O., et al. (2021). *Evidence-Based Complementary and Alternative Medicine: eCAM*, 2021, 6679761.
- ⁷Datar, A., Kaur, N., et al. (2010). *Townsend Letter*, 7, 1-4.
- ⁸Aquino, R., De Feo, V., et al. (1991). *Journal of Natural Products*, 54(2), 453-459.
- ⁹Mur, E., Hartig, F., et al. (2002). *The Journal of Rheumatology*, 29(4), 678-681.
- ¹⁰Horie, S., Yano, S., et al. (1992). *Life Sciences*, 50(7), 491-498.
- ¹¹Snow, A.D., Castillo, G.M., et al. (2019). *Scientific Reports*, 9(1), 561.
- ¹²Mohamed, A.F., Matsumoto, K., et al. (2000). *The Journal of Pharmacy and Pharmacology*, 52(12), 1553-1561.
- ¹³Frackowiak, T., Baczek, T., et al. (2006). *Zeitschrift für Naturforschung. C, Journal of Biosciences*, 61(11-12), 821-826.
- ¹⁴Domingues, A., Sartori, A., et al. (2011). *Phytotherapy Research*, 25(8), 1229-1235.
- ¹⁵Araujo, L., Feitosa, K.B., et al. (2018). *Scientific Reports*, 8(1), 11013.
- ¹⁶Sandoval, M., Okuhama, N.N., et al. (2002). *Phytomedicine*, 9(4), 325-337.
- ¹⁷Goyal, S.K., Samsheer, G., Goyal, R.K. (2010). *International Journal of Food Sciences and Nutrition*, 61(1), 1-10.
- ¹⁸Momtazi-Borojeni, A.A., Esmaili, S.A., et al. (2017). *Current Pharmaceutical Design*, 23(11), 1616-1622.
- ¹⁹Theophilus, P.A., Victoria, M.J., et al. (2015). *European Journal of Microbiology & Immunology*, 5(4), 268-280.
- ²⁰Preethi, D., Sridhar, T.M., et al. (2011). *Journal of Ecobiotechnology*, 3(7), 5-10.
- ²¹Kedik, S.A., Yartsev, E.I., et al. (2009). *Pharmaceutical Chemistry Journal*, 43(4), 198-199.
- ²²Boonkaewwan, C., & Burodom, A. (2013). *Journal of the Science of Food and Agriculture*, 93(15), 3820-3825.
- ²³El-Mesallamy, A., Mahmoud, S.A., et al. (2018). *Acta Scientiarum Polonorum. Technologia Alimentaria*, 17(3), 289-297.
- ²⁴Dusek, J., Carazo, A., et al. (2017). *Food and Chemical Toxicology*, 109(Pt 1), 130-142.
- ²⁵Nordentoft, I., Jeppesen, P.B., et al. (2008). *Diabetes, Obesity & Metabolism*, 10(10), 939-949.
- ²⁶Chan, P., Tomlinson, B., et al. (2000). *British Journal of Clinical Pharmacology*, 50(3), 215-220.
- ²⁷Melis, M.S. (1997). *Phytomedicine*, 3(4), 349-352.
- ²⁸Lee, C.N., Wong, K.L., et al. (2001). *Planta Medica*, 67(9), 796-799.
- ²⁹Adisakwattana, S., Intrawangso, J., et al. (2012). *Food Technology & Biotechnology*, 50(1), 11-16.
- ³⁰Ahmad, U., Ahmad, R.S., et al. (2018). *Lipids in Health and Disease*, 17(1), 175.
- ³¹Ritu, M., & Nandini, J. (2016). *Journal of the Science of Food and Agriculture*, 96(12), 4231-4234.
- ³²Holvoet, P., Rull, A., et al. (2015). *Food and Chemical Toxicology*, 77, 22-33.
- ³³Gregersen, S., Jeppesen, P.B., et al. (2004). *Metabolism: Clinical and Experimental*, 53(1), 73-76.
- ³⁴Toskulkao, C., Sutheweratananon, M., et al. (1995). *Journal of Nutritional Science and Vitaminology*, 41(1), 105-113.
- ³⁵Philippaert, K., Pironet, A., et al. (2017). *Nature Communications*, 8, 14733.
- ³⁶Jeppesen, P.B., Dyrskog, S.E., et al. (2006). *The Review of Diabetic Studies*, 3(4), 189-199.
- ³⁷Mohd-Radzman, N.H., Ismail, W.I., et al. (2013). *Evidence-Based Complementary and Alternative Medicine*, 2013, 938081.
- ³⁸Aghajanyan, A., Movsisyan, Z., et al. (2017). *BioMed Research International*, 2017, 9251358.
- ³⁹Farhat, G., Berset, V., et al. (2019). *Nutrients*, 11(12), 3036.
- ⁴⁰Stamataki, N.S., Scott, C., et al. (2020). *The Journal of Nutrition*, 150(5), 1126-1134.
- ⁴¹Gu, W., Rebsdorf, A., et al. (2019). *Endocrinology, Diabetes & Metabolism*, 2(4), e00093.
- ⁴²Jaramillo-Vivanco, T. & Balslev, H. (2020). *Phytotaxa*, 441(12), 143-175.
- ⁴³Weiss, J. (2018). *Molecules*, 24(1), 137.
- ⁴⁴Goc, A., & Rath, M. (2016). *Therapeutic Advances in Infectious Disease*, 3(3-4), 75-82.
- ⁴⁵Weniger, B., Robledo, S., et al. (2001). *Journal of Ethnopharmacology*, 78(2-3), 193-200.
- ⁴⁶Rocha, L.G., Almeida, J.R., et al. (2003). *Phytomedicine*, 12(6-7), 514-535.
- ⁴⁷Allende, A. (2005). NutraMedix Laboratories, LLC.
- ⁴⁸Marcinek, K. & Krejpcio, Z. (2016). *Journal für Verbraucherschutz und Lebensmittelsicherheit*, 11, 3-8.
- ⁴⁹Keplinger, K., Laus, G., et al. (1999). *Journal of Ethnopharmacology*, 64(1), 23-34.
- ⁵⁰Montserrat-de la Paz, S., Fernandez-Arche, A., et al. (2016). *Phytomedicine*, 23(2), 141-148.
- ⁵¹Núñez, C., Lozada-Requena, I., et al. (2015). *Revista Peruana de Medicina Experimental y Salud Pública*, 32(4), 643-651.
- ⁵²De Martino, L., Martinot, J.L., et al. (2006). *Journal of Ethnopharmacology*, 107(1), 91-94.
- ⁵³Sandoval-Chacón, M., Thompson, J.H., et al. (1998). *Alimentary Pharmacology & Therapeutics*, 12(12), 1279-1289.
- ⁵⁴Allen-Hall, L., Arnason, J.T., et al. (2010). *Journal of Ethnopharmacology*, 127(3), 685-693.
- ⁵⁵Lemaire, I., Assinew, V., et al. (1999). *Journal of Ethnopharmacology*, 64(2), 109-115.
- ⁵⁶Sandoval, M., Charbonnet, R.M., et al. (2000). *Free Radical Biology & Medicine*, 29(1), 71-78.
- ⁵⁷Rojas-Duran, R., González-Aspajo, G., et al. (2012). *Journal of Ethnopharmacology*, 143(3), 801-804.
- ⁵⁸Allen-Hall, L., Cano, P., et al. (2007). *Journal of Ethnopharmacology*, 109(2), 312-317.
- ⁵⁹Natural Medicines. Cat's Claw [monograph]. (2021). <http://naturalmedicines.therapeuticresearch.com>.
- ⁶⁰Natural Medicines. Stevia [monograph]. <http://naturalmedicines.therapeuticresearch.com>.
- ⁶¹Allende, A. (2006). NutraMedix Laboratories, LLC.
- ⁶²Zhou, J., & Zhou, S. (2010). *Journal of Ethnopharmacology*, 132(1), 15-27.
- ⁶³Zhou, J.Y., & Zhou, S.W. (2012). *Fitoterapia*, 83(4), 617-626.
- ⁶⁴Chen, C.X., Jin, R.M., et al. (1992). *Zhongguo yao li xue bao = Acta Pharmacologica Sinica*, 13(2), 126-130.

NutraMedix. 

SHAKE WELL BEFORE EACH USE.

Put 2 to 60 drops in 4 oz (120 mL) of water and wait one minute before drinking. Start with 2 drops (30 min before meals), increasing by 2 drops with each dose up to 60 drops, 2 times a day or as directed by physician. Do not use if pregnant or nursing. Stop use if adverse reactions develop. Keep out of reach of children.

†This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.



NUTRA-BRL
MICROBIAL SUPPORT [†]

Dietary Supplement

2 fl oz. (60 mL)

Supplement Facts
Serving Size 60 drops (3mL)
Servings Per Container 20

Amount Per Serving	
Proprietary Blend	3 mL*
Stevia leaf extract, <i>Otoba parvifolia</i> bark extract, <i>Uncaria tomentosa</i> bark extract (Pentacyclic chemotype)	

*Daily Value not established

Other ingredients: mineral water, ethanol (20-24%)

NutraMedix. 
Jupiter, Florida 33458 USA
www.nutramedix.com
561-745-2917



V346734

Lot #
Exp.