

A woman with long blonde hair, wearing a light-colored wide-brimmed hat, a grey tank top, and dark denim shorts, is sitting on a rocky outcrop. She is looking out over a vast, hazy landscape of rolling hills and mountains at sunset. The sky is a warm, golden-orange color, and the sun is low on the horizon, creating a soft glow. The overall mood is serene and adventurous.

Ready. Set. Glutathione.

Ingredient Overview

Antioxidant Support | Detoxification | Immune Support | Skin Health

The logo for Setria, featuring a stylized white arch above the brand name.
Setria[®]
Glutathione

Setria® Science Snapshot

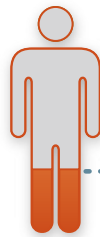
Why is glutathione important?



Protects cells from oxidative stress.

Supports the immune system.

Where does it come from?



The body produces its own glutathione, but levels can be depleted by poor diet, pollution, toxins, stress, and aging.

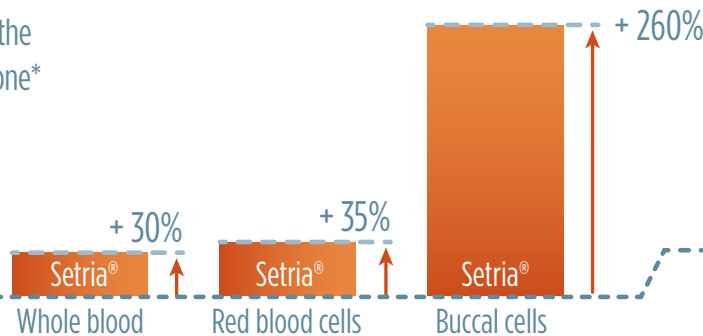
A recent published study shows:

1 Setria® can help increase the body's stores of glutathione*

6 Months

Setria® 1000 mg/day

Baseline



Taking 1,000 mg/day of Setria® showed a 30% increase in whole blood, 35% increase in red blood cells and 260% increase in buccal cells glutathione levels from baseline.

2 Setria® can increase NK cell activity two fold and support the immune system

3 Months

■ Baseline

■ Setria® 1000 mg/day



At three months the study revealed a 2 fold increase in NK cell activity at 1,000 mg of Setria® (NK cells support immune health).

3 Setria® supplementation needs to be ongoing to maintain elevated levels



One month after supplementation ended glutathione levels began to return to pre-study levels.

Setria® Glutathione does not adversely affect the body's normal production of glutathione.

Richie JP Jr, Nichenametta S, Neidig W, Calcagnotto A, Haley JS, Schell TD, Muscat JE. Randomized controlled trial of oral glutathione supplementation on body stores of glutathione. European Journal of Nutrition. May 2014; 1436-6207. doi: 10.1007/s00394-014-0706-z

CONCLUSION: Setria® Glutathione supplementation effectively increases the body's stores of glutathione and supports the immune system*

*These statements have not been evaluated by the European Food Safety Authority or the European Commission. This information is only for business-to-business use. The product is not intended to diagnose, treat, cure, or prevent any disease.

Setria's Scientific Advantages

Setria® is a branded form of glutathione—an antioxidant present in almost all cells of the body. Glutathione is a critical player in numerous bodily processes, including:

- Detoxification*
- Antioxidant protection*
- Immune system support*

The body's natural glutathione reserves are lowest in the morning and are taxed by stressful conditions, exposure to ingested and environmental toxins, poor lifestyle choices and natural aging. Setria is a stable, clinically tested, branded form of glutathione that can help replenish the body's reserves.*

How is Setria manufactured?

Setria is manufactured using a fermentation process that preserves the bioactivity of this critical tripeptide while eliminating any risk of Transmissible Spongiform Encephalopathy (TSE) contamination.



Setria can boost the body's glutathione levels to protect against oxidative stress and premature aging.*

Setria Glutathione is pure, vegetarian and allergen-free. It is manufactured according to GMP standards.

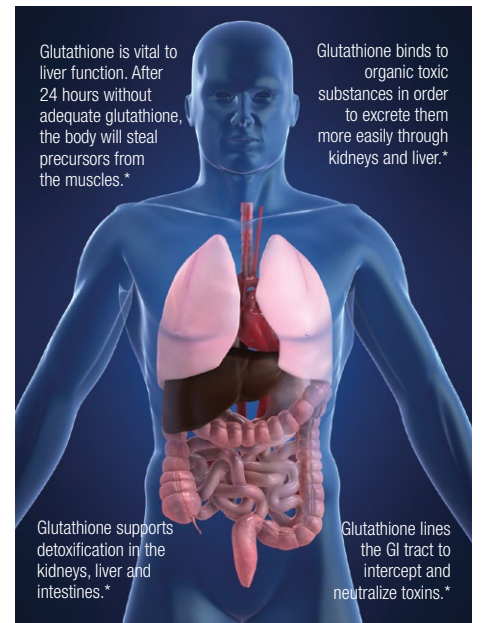
Why Setria?

A recent long-term, randomized, double-blinded, placebo-controlled human clinical trial, published in the *European Journal of Nutrition* confirms that Setria Glutathione is effective at increasing blood levels and enhancing immune cell function in humans.*¹⁰

- Results of the study showed glutathione levels in the blood increased after one, three and six months vs. baseline at both doses.¹⁰
- At six months, mean glutathione levels increased 30-35 percent in erythrocytes, plasma, and lymphocytes, and 260 percent in buccal cells in the high dose group ($P < 0.05$).¹⁰
- Glutathione levels increased 17 and 29 percent in blood and erythrocytes, respectively, in the low dose group ($P < 0.05$).¹⁰
- Natural killer cytotoxicity increased two fold in the high-dose group versus placebo at 3 months.¹⁰

How Setria fights free radicals*

Eating, exercising, even breathing results in the build-up of free radicals. These imbalanced molecules attack the body at a cellular level, robbing other molecules of electrons and setting off a chain reaction. Setria glutathione is a powerful antioxidant that both binds to and stabilizes free radicals as well as helping to regenerate other antioxidants (such as vitamin C and E), returning them to active duty.*



How Setria helps eliminate toxins*

Glutathione supports the function of the liver, kidneys, GI tract and intestines—the body's major detoxification pathways.* Glutathione helps in two primary ways:

1. It helps eliminate toxins and ingested chemicals that the body has already absorbed.*
2. It intercepts and neutralizes toxins in the GI tract before they can be absorbed.*

How Setria supports the immune system*

Setria glutathione helps fortify the immune system in two important ways:

- It plays a central role in the proper function of white blood cells, including T cell lymphocytes.*
- It supports the natural killer ability of some immune cells.*

*This information is only intended for business-to-business use. It must not be passed to the final consumer of your products. The information contained herein is based on our current knowledge and contains scientific, quality and technical information to help our trade customers understand more about our ingredients and the science behind them. The statements have not been approved by the European Food Safety Authority or the European Commission. It is your responsibility to comply with all relevant EU and national laws when issuing commercial communications about your finished products.

Setria's Marketing Advantages

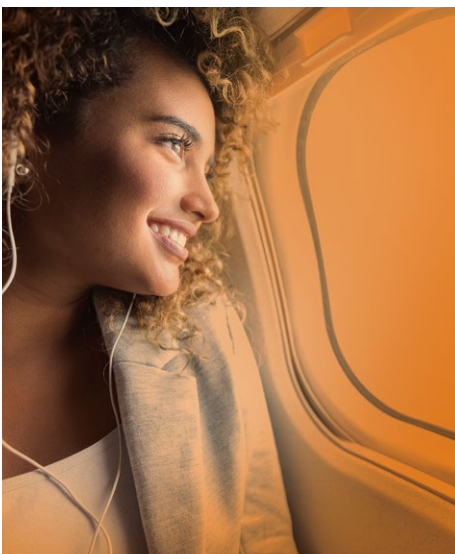
Setria® is easy to use in your products

Manufacturers, formulators and marketers will love the more practical benefits of Setria.

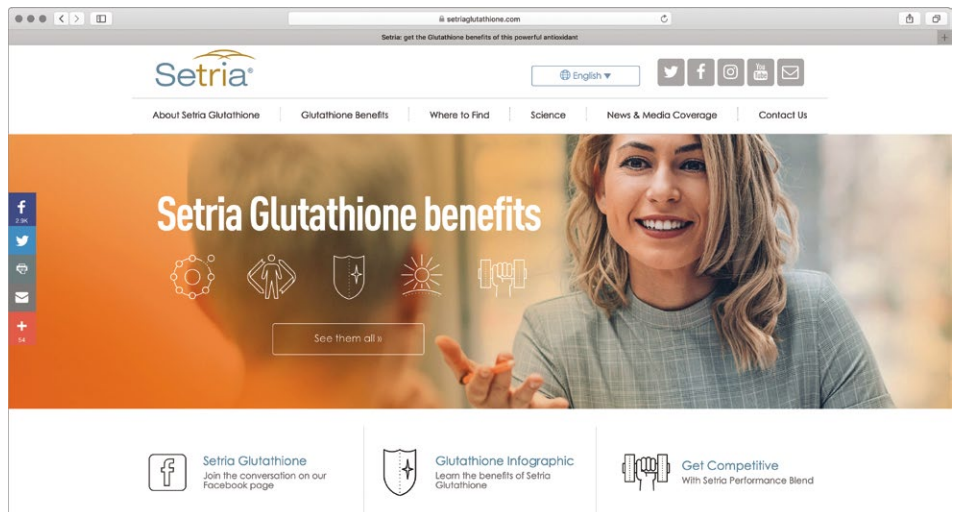
- **Pure** Setria is a pure ingredient with an assay value of 98.0%–101.0%
- **Stable** Setria is stable to temperature and humidity
- **Fermented**
- **Additive-free** Setria contains no additives, artificial flavors or preservatives
- **Allergen-free**
- **Vegetarian** Setria contains no animal origin material
- **Kosher**
- **TSE/BSE risk free**
- **GMP-compliant** Setria is manufactured in compliance with GMP guidelines
- **Meets specification** for JP and USP (DS) monographs

Setria product uses

Setria is recommended as a dietary supplement for its antioxidative action, detoxification, immune fortification and overall anti-aging properties.*



Setria supports the body's natural detoxification processes for adult consumers of all ages.



Setria advertising and PR outreach

Trade

- Sponsorships and presence at all major tradeshows
- Presentation of new research at scientific meetings
- Publication of new findings in scientific journals
- Articles and ads in trade journals

Healthcare Practitioner

- Presence at professional healthcare conferences
- Healthcare practitioner website portal
- Healthcare practitioner marketing collateral
- Articles and ads in healthcare practitioner journals

Consumer

- Consumer ads with co-branding
- Consumer brochure and fact sheets
- Consumer website
- PR and educational outreach

Setria is backed by Kyowa

Kyowa is an international health ingredient manufacturer and a world leader in the development, manufacturing and marketing of nutraceuticals, pharmaceuticals and food

products. Kyowa is committed to ongoing scientific research, quality management and consumer education for its products.

Setria claims

- Setria® Glutathione is a vital antioxidant that boosts the body's natural defense system* 4,17,18,19,22
- Help your body fight oxidative stress with Setria®** 4,17,22
- Setria® promotes healthy aging and overall health* 3,11,15,19,22
- Setria® replenishes your body's primary defense system* 17,18,19
- Setria® supports immune health* 2,3,5,6,17,18,19,20
- Setria® can help to boost your body's immune system* 2,3,5,6,17,18,19,20
- Setria® contains glutathione, a natural detoxifier that helps to eliminate harmful toxins in the body* 2,12,14,15,16,17,18,19,21,23,24
- Setria® supports liver health by eliminating harmful toxins* 13,15,23
- Daily consumption of Setria® increases the body's glutathione levels* 1,8,9,14,19
- Daily consumption of Setria® can help to maintain optimal glutathione levels and overall good health* 1,8,9,11,14,17,19
- Setria® supports respiratory health*

Setria's Specifications

References

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Over 100,000 published studies have shown that glutathione plays a central role in detoxifying the body and managing overall health.*

Setria® Description

Characteristic odor, white crystalline powder, acid taste

NCI Designation

L-Glutathione

CAS No.

70-18-8

Physical & Chemical Properties

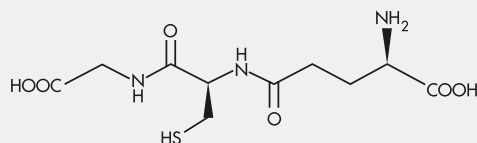
Empirical formula

C10H17N3O6S

Molecular weight

307.33g/mol

Chemical structure



Specifications

Appearance

White crystalline powder

Identification

Pass test

State of solution (T%)

Not less than 98.0%

Ammonium (NH4)

Not more than 0.020%

Sulfate (SO4)

Not more than 0.030%

Iron (Fe)

Not more than 10 ppm

Heavy metals (as Pb)

Not more than 10 ppm

Arsenic (AS2O3)

Not more than 1 ppm

Loss on drying

Not more than 0.5%

Residue on ignition

Not more than 0.1%

Assay (dry basis)

98.0% - 101.0%

Total impurities

Not more than 2.0%

Manufacturing Process

Setria is manufactured using a fermentation process. The process eliminates any risk of Transmissible Spongiform Encephalopathy (TSE) contamination.

Stability

■ Stable to temperature or humidity

■ Unstable in water

Safety Studies

■ Acute oral toxicity

LD50 > 12.5 g/kg (mice)

■ AMES test

Negative

Recommended Use Levels

■ Oral Use

250-1000 mg/day

Storage

■ Store at 15°C to 30°C in tight, light resistant containers.

Packing

■ Standard packing

25 kg



Supply consumers with the “master antioxidant” in the form of pure, clinically tested Setria Glutathione.

For more information on including Setria in your next product, go to www.setriaglutathione.com.



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