

# SunButyrate™-TG liquid

Unique butyrate-rich triglyceride oil promotes G.I. tract health and function<sup>†</sup>

## INDICATIONS

- Ages 18 and up
- Gastrointestinal health and function<sup>†</sup>

## BENEFITS

- Promotes gut cell function<sup>†</sup>
- Supports intestinal health and mucosal barrier function<sup>†</sup>
- Unique SunButyrate™, butyrate-rich triglyceride oil, prevents breakdown in the upper G.I. tract and delivers butyrate directly to the intestine<sup>†</sup>
- Promotes cytokine balance in the G.I. tract, bowel motility, and abdominal comfort<sup>†</sup>

## FEATURES

- Delivers 875 mg butyric acid per serving
- Great-tasting blueberry vanilla flavor
- Excipient free
- Part of the PureGI™ product line
- Made with high-quality vegetarian ingredients backed by verifiable science

## VERIFIABLE SCIENCE

Butyrate is one of the three most abundant short-chain fatty acids (SCFAs) produced by anaerobic bacterial fermentation of polysaccharides/fiber in the colon, where it serves as an energy source for epithelial cells.<sup>1</sup> Butyrate plays a major role in intestinal physiology, supporting both physical and biochemical protective barrier function, bowel motility, nutrient absorption, and immune activity of intestinal cells.<sup>2</sup> It also promotes the proliferation, differentiation and renewal process of the colonocytes. Research suggests that SCFAs produced by intestinal bacteria activate key players in the regulation of energy metabolism in the gut as well as regulate healthy gene expression for mucin production, supporting tight-junction assembly, healthy mucous production, and a healthy intestinal barrier.<sup>3</sup>

In a four-week study comparing a standard low-fiber Western diet to a high-fiber diet with high levels of resistant starch from potato and wheat bran concentrated in the hemicellulose fiber arabinoxylin, levels of butyrate, acetate and other SCFAs significantly increased, as did epithelial mucin 2 (MUC2) and the tight junction protein

occludin.<sup>4</sup> Research suggests increased efficacy of oral sodium butyrate and mesalazine treatment compared to oral mesalazine alone in ulcerative colitis.<sup>5</sup> SCFAs also help protect epithelial cells by modulating oxidative stress and immune mediators, including prostaglandins; cytokines such as TNF- $\alpha$ , IL-6, IL-10; and the transcription factor NFKB. Clinical trials indicate that butyrate supplementation supports intestinal function and promotes healthy cytokine balance in the G.I. tract.<sup>6</sup> In a 30-day trial involving 50 subjects, 1g butyrate promoted healthy G.I. motility, abdominal comfort, and reduced bloating in 68% of subjects.<sup>7</sup> Preliminary research suggests SCFAs could also offer support for blood vessel and blood-brain barrier integrity, as well as relaxation and satiety.<sup>8</sup> Animal studies suggest that SCFA supplementation may moderate corticosterone response and promote the secretion of peptide YY, to inhibit gastric emptying and intestinal transit time.<sup>9</sup> As butyrate is typically produced in the colon, oral butyrate salts have poor palatability and are easily degraded by stomach acid, preventing delivery to the colon. Novel triglyceride-form SunButyrate™ offers a light and pleasant tasting, unique triglyceride-form sunflower-based oil designed to protect butyrate from degradation in the stomach and upper G.I. tract. Studies in simulated G.I. models indicate 6-8% breakdown in the stomach compared to 70% for other forms. Butyrate is released from the triglyceride by lipases in the small intestine.<sup>†</sup>

## SUGGESTED USE

As a dietary supplement, take 1 teaspoon, 1-3 times daily, with meals.

## STORAGE

Store in a cool, dry place.

## WARNING

If you are pregnant or lactating, have any health condition or are taking any medication, consult your health professional before use.

# SunButyrate™-TG liquid

Unique butyrate-rich triglyceride oil promotes G.I. tract health and function<sup>†</sup>

## SOURCE

- SunButyrate is developed in a unique manufacturing process that combines tributyrin (naturally found in butter, but commercially prepared for SunButyrate from a proprietary synthetic source) and triolein (from high oleic sunflower oil)

## NOTES

56 servings per container

Net weight 280 ml

Order code BTGL

Bottle size 300 ml

## REFERENCES

1. Canani RB, et. al. *World J Gastroenterol*. 2011 Mar 28;17(12):1519-28.
2. Krokowicz L, et. al. *Int J Colorectal Dis*. 2014 Mar;29(3):387-93.
3. Cushing K, et. al. *Clin Transl Gastroenterol*. 2015 Aug 27;6:e108.
4. Hald S, et al. *PLoS One*. 2016 Jul 19;11(7):e0159223.
5. Vernia P, et al. *Dig Dis Sci*. 2000 May;45(5):976-81.
6. Hammer HM, et. al. *Clin Nutr*. 2009 Feb;28(1):88-93.
7. Scarpellini E, et al. *Digestive and Liver Disease Supplements 1* (2017): 19-22.
8. Miller SJ, et. al. *Nutrition*. 2005 Jun;21(6):740-8.
9. Longo WE, et. al. *Scand J Gastroenterol*. 1991 Apr;26(4):442-8.

## SUPPLEMENT FACTS

1 teaspoon, 1-3 times daily, with meals.

Serving size: 1 teaspoon (5ml / 0.17 fl oz)

Servings per container: 56

Each teaspoon contains:

Calories	40
Total Fat	5 g
Saturated Fat	1 g
SunButyrate™ butyrate-triglyceride	4.5 g
Providing 875 mg butyric acid	
Other ingredients: natural blueberry and vanilla flavors, mixed tocopherols, rosemary leaf extract	

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SunButyrate™-TG liquid	Quantity	Order Code
	280 ml (9.5 fl oz)	BTGL

Visit [PureEncapsulationsPro.com](http://PureEncapsulationsPro.com) for more information about our GMO policy.

<sup>†</sup>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.