

This information is provided as a medical and scientific educational resource for the use of physicians and other licensed health-care practitioners ("Practitioners"). This information is intended for Practitioners to use as a basis for determining whether to recommend these products to their patients. All recommendations regarding protocols, dosing, prescribing, and/or usage instructions should be tailored to the individual needs of the patient considering their medical history and concomitant therapies. This information is not intended for use by consumers.

Thermo-EFx™ is a newly formulated product targeted to promote healthy body composition, satiety, and increased basal metabolic rate (BMR).^{*} This clinically studied blend of citrus and guarana extracts alongside peptides from *Saccharomyces cerevisiae* helps support reductions in fat mass and waist/hip circumference.^{*} It is designed to support healthy weight management by helping to increase the body's energy expenditure and satiety without causing the side effects associated with other weight reduction formulas.^{*}

Formula Highlights

- Clinically researched safe and effective ingredients to support a natural approach to weight management^{*}
- Contains a peptide extract from *Saccharomyces cerevisiae* to promote satiety^{*}
- A blend of citrus and plant extracts standardized to 42% flavanones (naringin and hesperidin) and 3.5% to 4% caffeine for promoting normal fat metabolism^{*}

Ingredient Highlights

Citrus and Guarana Extracts (Sinetrol® XPur-C)

Citrus fruits contain many bioactive constituents that support healthy metabolism and optimal cellular functioning.¹ Sinetrol® XPur-C contains extracts from grapefruit, three varieties of orange, and guarana that contain flavonoids such as anthocyanins, phenolic acids, and the flavanones naringin and hesperidin.¹

Biochemically, Sinetrol® XPur and its concentrated version, Sinetrol® XPur-C, supports body fat metabolism through its ability to promote antioxidative status, a normal inflammatory response, and healthy lipid metabolism.¹ A clinical study with Sinetrol® XPur-C was shown to help activate cyclic AMP-dependent uncoupling protein-2 and help inhibit cAMP-phosphodiesterase (PDE), which results in increased lipolysis (release of free fatty acids from adipocytes), thermogenesis, and basal metabolic rate.⁶ One double-blind placebo-controlled study supplemented 77 subjects with 450 mg Sinetrol® XPur, twice daily, for 16 weeks. The results showed a statistically significant increase in resting energy expenditure (REE) of 181 kcal/day in the intervention group, with no significant change in the control group (University of Murcia, Spain; submitted for publication).

In laboratory studies, citrus flavonoids have been shown to suppress atherogenesis, inhibit fatty acid and triglyceride synthesis, and increase fatty acid oxidation, demonstrating their potential antiadipogenic and antiatherogenic properties.^{7,8} In animal and experimental models of obesity and hyperlipidemia, plasma lipid and cholesterol levels were observed to improve significantly in the presence of naringin, a flavanone found in citrus fruits.⁷ Moreover, animal and cell culture studies with naringin showed significant hypoglycemic effects and improved markers of insulin resistance through various mechanisms, improving insulin sensitivity.⁷

A 12-week randomized, double-blind, parallel, placebo-controlled clinical trial explored the potential efficacy of Sinetrol® XPur in 100 overweight or obese participants.¹ The treatment arm consisted of two Sinetrol® XPur tablets at 450 mg per tablet once daily. All participants were instructed to consume 500 kcal/day less than usual and perform exercise the equivalent of 300 kcal or more. Significant reductions in body fat mass, body weight, body fat percentage, and BMI were reported at the study terminus when compared with placebo. Body fat was significantly reduced by 2.9 lbs in the treatment group versus 0.9 lbs in the placebo, and represented 93% of the total weight loss, while the percent body fat dropped by 4.8% versus 1%, respectively. No differences in safety profiles were observed between the treatment group and placebo.¹

A double-blind placebo-controlled study with 95 individuals (men and women) involved 450 mg twice daily supplementation with Sinetrol® XPur for 12 weeks.⁵ Participants were instructed to exercise 30 minutes per week and consume calories limited to 2,000 kcal daily for women and 2,500 kcal daily for men. Upon study completion, when compared to placebo, the treatment arm experienced significantly greater decreases in abdominal fat by 9.7% vs. 3.2%, as well as in waist and hip circumference. C-reactive protein decreased significantly by 22.9% with no significant change in

Benefits*

- Supports healthy weight management¹⁻¹³
- Promotes healthy body composition^{1,3-6,11}
- Supports a reduction in body fat mass and waist/hip circumference^{4,5,11}
- Promotes normal appetite to help reduce caloric intake^{3,11}
- May help increase resting energy expenditure

Supplement Facts

Serving Size 2 capsules
Servings Per Container 30

Amount Per Serving	% Daily Value
Citrus and Guarana Extracts (Sinetrol® XPur-C) Pomelo (<i>Citrus grandis</i>), Grapefruit (<i>Citrus paradisi</i>), Orange (<i>Citrus sinensis</i>) and Guarana (<i>Paullinia cupana</i>) [standardized to 42% flavanones and 3.3% caffeine]	630 mg *
Yeast Hydrolysate (DNF-10®) (from <i>Saccharomyces cerevisiae</i>)	500 mg *

*Daily Value not established.

Other Ingredients: Cellulose (capsule), microcrystalline cellulose, dicalcium phosphate, vegetable stearate, silicon dioxide.

the placebo. Significant increases in superoxide dismutase (+17.4% vs +2.2%) and glutathione (+4.6 % vs -2.4 %) were observed, with no adverse events.⁵

A 12-week randomized, double-blind, placebo-controlled study involving supplementation with twice daily 450 mg Sinetrol® XPur in 12 overweight men reported several improvements in metabolic profiles and parameters related to body composition. These included reductions in abdominal fat (by -9.7 % vs -4.8 % in the placebo), in waist and hip circumferences, and in waist/hip ratio.⁴ Plasma ApoA1 levels increased significantly by 5.4 %, while decreasing by 3.3 % in placebo. ApoA1 is the primary protein component of HDL.⁴

In conclusion, Sinetrol® XPur-C may help support healthy body composition and normal fat metabolism in combination with a healthy diet, ideally with moderate-to-low carbohydrate intake.*

Yeast Hydrolysate (DNF-10®) peptides

DNF-10® contains non-pathogenic yeast hydrolysate (YH) peptides derived from *Saccharomyces cerevisiae*. YH peptides have a molecular weight <10KD and contain Cyclo(L-histidyl-L-proline), a naturally occurring cyclic peptide resulting from the formal condensation of both the amino and acid groups of L-histidine with the acid and amino groups of L-proline, which may be responsible for their potential to support healthy metabolism and satiety. An animal study involving the administration of YH reported decreases in serum triglycerides and low-density lipoprotein levels, alongside the inhibition of hepatic glucose-6-phosphate dehydrogenase (G6PD) activity.⁹ Another animal study reported significantly lowered serum ghrelin levels in the presence of YH administration.² Lowered ghrelin levels are associated with appetite attenuation. An animal study revealed that YH may help promote satiety through the reduction of neuropeptide Y expression in the hypothalamus.¹⁰

An eight-week randomized controlled trial involving 30 obese women investigated the effects of 500 mg daily supplementation with DNF-10®.³ The participants were instructed to continue their regular diet and exercise regimen patterns the same as before. At the study terminus, the treatment group experienced significant reductions in body fat and percent body fat of -4.6 lbs and -2.3%, respectively, compared to baseline, with no change in the control group.³ In addition, parameters related to appetite were improved in the treatment group when compared to control. A reduction in the caloric intake in the intervention group was observed and reached -600 kcal/day by the end of the eight-week study.³ Conversely, the control group experienced a slight increase in caloric intake that fluctuated up to +200 kcal throughout the study. The control group desired food and thought about food more frequently than the treatment group. Significant reductions in sweet preference were also reported in the treatment group; alternatively, the placebo group experienced a slight increase in sweet preference during the same time period.³

A similar RCT involving obese men and women (ages 20 to 50 years) were randomized to receive 0.5g DNF-10® twice per day, 30 minutes before breakfast and dinner for 10 weeks, or placebo, and were instructed to continue their regular diet and exercise regimen patterns the same as before. Significant differences in abdominal fat thickness, abdominal fat area, and abdominal circumference between the treatment and placebo groups were observed at the study terminus.¹¹ The DNF-10® supplemented group lost 5.7 pounds after 10 weeks with no significant change in lean mass. This fat loss may be attributed, at least in part, to reduced appetite responsible for a decline in caloric intake up to -392.3 kcal/day.¹¹ Two additional clinical studies assessed the effects of supplementing women with 1 g of DNF-10® per day and demonstrated similar significant reductions in body weight and fat mass.^{12,13}

In conclusion, supplementation with DNF-10® may help support a normal appetite and healthy body composition, especially when combined with a healthy diet and exercise.* The two ingredients in this product, Sinetrol® XPur-C and DNF-10®, have complementary mechanisms of action. For example, based on study results, they may support a significant daily caloric deficit, such as 180 kcal due to a REE increased by Sinetrol® XPur-C, and 400 to 600 fewer ingested kcal due to diminished hunger by DNF-10®.* This may result in a total deficit of 580 to 780 kcal/day or 4,060 to 5,460 Kcal/week, which is equivalent to 1.1 to 1.5 lbs of fat/week.*

Recommended Use: Take 2 capsules per day 30 minutes before a meal or as directed by your health-care practitioner (divided dosing recommended).

This product contains <25 mg caffeine per serving.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---thermo-efx-tech-sheet-references>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

Sinetrol® is the property of Fytexia.

DNF-10® is marketed by Fytexia.

***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.**

To contact Designs for Health, please call us at (860) 623-6314 or visit us on the web at www.designsforhealth.com.