pomella® POMEGRANATE EXTRACT

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Pomella® pomegranate extract is standardised to bioavailable punicalagins and natural polyphenols. Clinically researched for multiple health applications including antioxidant, cardiovascular, cognitive, oral, and cartilage support, the latest studies show benefits on gut health and skin beauty & skin microbiome.

PRODUCT PROFILE SHEET

The health benefits of pomegranates have long been associated with their high antioxidant content; however, studies demonstrate that pomegranate ellagitannins, while highly bioactive in vitro, are not absorbed intact into the bloodstream. Patented Pomella® pomegranate extract is standardised to offer bioactive punicalagins, and their gut-derived metabolites, urolithins.

About Punicalagins

The health benefits of pomegranate have long been associated with the high content of antioxidant polyphenols, in particular ellagitannins such as punicalagins and their gut-derived metabolites, urolithins. According to research, consumption of ellagitannins can lead to the presence of urolithins for up to 7 days.[1] The symbiotic relationship between phenolic compounds and gut microbiota have gained much attention due to their relevance to bioavailability and human health.

The antioxidant function from Pomella®'s powerful polyphenols work with the body to support health benefits often impacted by oxidative stress, contributing to overall wellness, including gut microbiome, skin health, cardiovascular, cognitive and antioxidant support.

Product Advantages

- ✔ **Innovative scientific approach**
  The latest studies shows benefits on skin health, influence on the gut-skin axis, and skin microbiome.
- ✔ **Researched for multiple applications**
  Such as skin health and skin microbiome, cardiovascular health, glycemic support, oral health, cognitive function, gut-brain connection, gut health, sports nutrition, joint health, and more.
- ✔ **Standardised to punicalagins**
  Delivering measurable and efficacious metabolites.
- ✔ **Unique whole pomegranate spectrum**
  Natural, bioavailable polyphenols.
- ✔ **Patented**
- ✔ **Safe**
  Supported by safety data, published long-term toxicology data and GRAS affirmed.
- ✔ **Sustainable and Traceable**
- ✔ **Clean Label**
  No excipients used.
- ✔ **Kosher & Halal Certified**

Research

Pomella® benefits on Skin and Skin microbiome

A recent publication (2022) with Pomella® evaluated Pomella®'s skin health and beauty from within benefits and the synergistic influence on skin microbiomes. Researchers examined the ability of Pomella® in healthy men and women aged 25-55 years (250mg/day) for its potential to promote healthy skin and gut microflora, impact to wrinkle severity, and facial biophysical properties.[2]

In this 4-week, randomised, double-blind, placebo-controlled human study, supplementation with 250mg Pomella® pomegranate fruit extract once a day showed significant reductions in wrinkle severity and a decreasing trend in the forehead sebum excretion rate. The facial skin microbiome was augmented for the ***Bacillus genus*** and ***Staphylococcus epidermidis*** after Pomella® supplementation.

Furthermore, higher levels of ***Eggerthellaceae*** in the gut microbiome were correlated with a decrease in both transepidermal water loss (TEWL) and wrinkle severity in the Pomella® group, suggesting that the extract improved skin barrier function in addition to improving the appearance of wrinkles. ***Eggerthellaceae*** presence showed compounded benefits, benefits that were observed with Pomella® in general and then compounded with ***Eggerthellaceae***. There was a statistically significant decrease in the facial wrinkle severity by 6.2% in the Pomella® group ($p < 0.01$) compared to placebo.[2]

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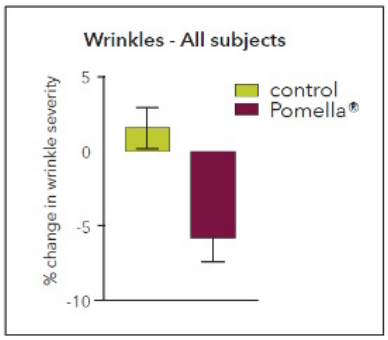

Figure 1

Overall, the study demonstrated improvements in several biophysical properties, wrinkles, and shifts in the skin microbiome with oral Pomella® supplementation in healthy subjects. In addition to this, Pomella® was shown to be effective at protecting human skin fibroblasts from cell death following UVA and UVB exposure, while increasing the intracellular antioxidant capacity, and reducing generation of intracellular reactive oxygen species (ROS) after UV exposure.[3]

Pomella® and Gut Health

Another recent publication (2023) aimed to assess Pomella®'s impact on the gut microbiome, circulating short-chain fatty acids, and urolithins, gut-microbial derived ellagitannin metabolites, using whole genome sequencing for microbial analysis. The study evaluated the effects of 250mg/day of Pomella® Pomegranate Extract on healthy adults aged 25-55 (n=18, predominantly women).[4] The results demonstrated a significantly increased relative abundance of ***Coprococcus eutectus, Roseburia faecis, Roseburia inullnivorans, Ruminococcus bicirculans, Ruminococcus calidus,*** and ***Faecalibacterium prausnitzii***. Expanding on these findings, researchers highlighted significant changes in short-chain fatty acids (SCFAs) pre and post Pomella® extract supplementation.

They observed a 162% rise in propionate levels ($p = 0.02$) and a 38% increase in acetate levels ($p = 0.12$) following Pomella® supplementation.[4] Short chain fatty acids can act as bioactive by-product of probiotics and prebiotics, in signalling from the gut to other areas of the body. In particular, butyrate, propionate, and acetate are key amino acids known to support the gut-body axes. The results revealed that gut functional analyses are consistent with circulating short-chain fatty acids (SCFAs), reinforcing the idea that Pomella® supplementation may improve SCFA levels by influencing the gut microbiome. These results imply also that consuming Pomella® pomegranate extract may support a healthier gut and improves gut-body communication.[4]

Pomella® and Absorption of Gut-derived urolithins

A new pharmacokinetics study (2023)[5] was conducted by the University of Mississippi in order to investigate the metabolism of Pomella® extract, focusing on the major polyphenol, punicalagin, and the gut derived metabolites urolithin A and B. Subjects were given 250mg or 1000mg of Pomella®. Plasma samples were collected over a 48hr period. The study showed that punicalagin rapidly metabolised to ellagic acid which was then rapidly absorbed and conjugated after oral administration. The conjugated ellagic acid exposure was approximately 5-8x higher than unconjugated EA for both dose groups, while urolithin A appeared in the bloodstream at a delayed rate, starting approximately 8 hours after dosing. Results support the gut microbiota-mediated metabolism of ellagitannins, specifically punicalagins to ellagic acids and then to urolithins.[5] Given the recent interest in specific gut microbiota and the role in metabolising ellagitannins to UA and their association to positive health, this study supports the polyphenol capability in Pomella®.

Furthermore on absorption, in an open label human study,[6] Pomella® was studied for its absorption, metabolism, and antioxidant effects. Results indicated that Pomella® is bioavailable, with an observed Cmax of 33ng/mL at Tmax of 1hr. It was also indicated that the bioavailability of ellagic acid (EA) derivatives of ellagitannins from pomegranate juice (PJ) and extracts was comparable at the administered doses. The plasma metabolites urolithin A, urolithin B, hydroxyl-urolithin A, urolithin A-glucuronide, and dimethyl ellagic acid-glucuronide were identified by HPLC-MS. AUC (area under the curve), MRT (mean residence time), and terminal half-life were estimated as 118.01ng hr/mL, 5.5hr, and 0.942hr, respectively. Also a 32% increase in the antioxidant capacity of plasma 0.5hr after the consumption of Pomella® Extract was observed.[6]

Pomella® and Cardiovascular and Glycemic Health

Two clinical studies (2016) showed significant improvements in cardiovascular and metabolic health, respectively, with administration of 300mg Pomella® (150mg twice daily in tablets) for 30-days as an adjunct therapy.[7,8] In the first study, researchers studied the effects of Pomella® extract in 100 patients (20-60 years of age) with myocardial infarction in conjunction with regular prescribed medications.

The study determined the effects of 150mg Pomella® twice daily for 30 days on biomedical parameters like high-density lipoprotein (HDL), total cholesterol, triglycerides, low density lipoprotein (LDL), non-HDL cholesterol, serum homocysteine, high-sensitivity C-reactive protein (hs-CRP), and oxidized LDL (OX-LDL) as an add-on with regular medication showing improved antioxidant status of the blood biomarkers associated with cardiac health.

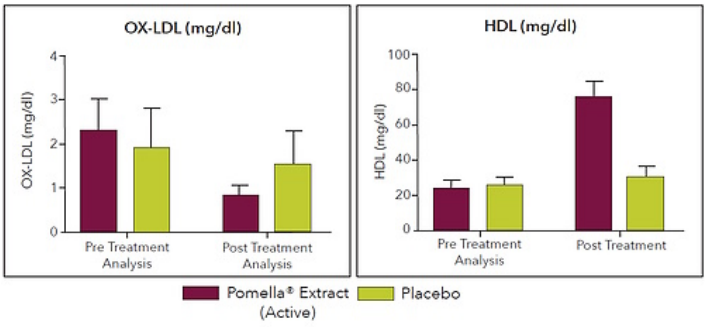

Figure 2 & Figure 3

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In this study, the results of the post treatment analysis showed a significant improvement in mean levels of total cholesterol, triglyceride, HDL, LDL, non-HDL cholesterol, serum homosystein, hs-CRP and OX-LDL after add-on treatment with Pomella® compared to placebo.[7]

The same group of researchers studied the antioxidant effect of Pomella® extract as adjunct therapy at 300mg per day for 30 days in comparison to placebo in 40 patients with diabetes mellitus type 2 and myocardial infarction. At the end of the study, results showed that the blood glucose levels and hemoglobin A1c (HbA1C) levels were significantly reduced compared to baseline.[8]

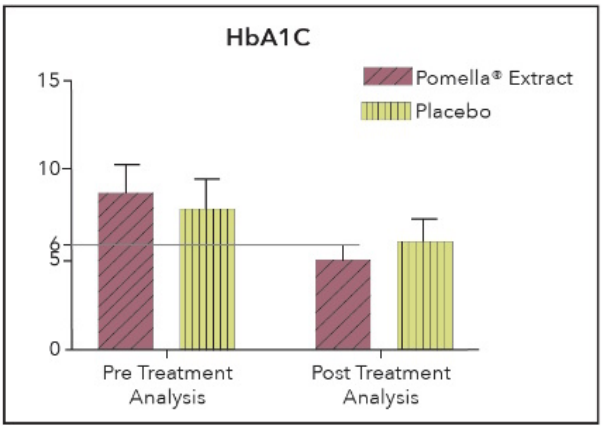

Figure 4

Pomella® and Antioxidant Support

A study published in the Journal of Agricultural and Food Chemistry showed Pomella® ranked highest in antioxidant activity across a number of assays including ORAC, TEAC, FRAP and DPPH, compared to 26 other antioxidant products. Pomegranate supplements (Pomella®) with the highest content of punicalagins showed high antioxidant activity, whereas those high in ellagic acid showed the lowest.[9]

Pomella® and Oxidative Stress

Researchers at the University of Rhode Island, Kingston demonstrated that Pomella® phenolics inhibit the formation of a biologically relevant oxidative stress marker called Advanced Glycation End products, or AGEs. AGEs are formed when a sugar molecule attaches to DNA or other proteins, and prevents their proper function.

Accumulation of AGE plays a key role in aging and some age-related chronic human diseases. The study demonstrated that Pomella® may offer support for the prevention and treatment of AGE-related diseases such as type-II diabetes and Alzheimer's disease.[10]

Pomella® and Oral health

A 4-week randomised, single-blinded controlled clinical study showed that mouthwash containing Pomella® administered three times a day affected saliva readings for antioxidant, anti-inflammatory, antibacterial, and bacterial enzyme inhibition compared to a placebo effects. Furthermore, Pomella® reduced total protein count, which is associated with plaque forming bacteria.[11]

Additionally, a new, randomised, controlled study has been conducted (2025) to explore this topic further. This study compared a 30% Pomella® mouthrinse against the gold-standard 0.12% chlorhexidine (CHX) mouthwash over a period of 21 days, with 60 adult participants[12]. Both mouthrinses significantly reduced plaque, gingival inflammation and salivary bacterial counts from the baseline, but Pomella® showed a superior short-term antiplaque effect, with greater plaque reduction at 5 and 21 days compared to CHX.

While gingival health improvements and long-term bacterial count reductions were similar between both groups, Pomella® demonstrated an immediate antibacterial effect, within 30 minutes of rinsing. These findings suggest that Pomella® mouthrinse is an effective, cost-friendly and natural alternative to CHX, offering strong antiplaque and antimicrobial benefits without the common side effects associated with synthetic agents.

Pomella® for Cognitive health

As part of a strategy to help guide the selection and evaluation of medicinal plant candidates for their neuroprotective potential, researchers at the University of Rhode Island developed a Neuroprotective Potential Algorithm (NPA) by evaluating twenty-three standardised and chemically characterized Ayurvedic medicinal plant extracts in a panel of bioassays targeting oxidative stress, carbonyl stress, protein glycation, amyloid beta (Aß) fibrillation, acetylcholinesterase (AChE) inhibition, and neuro-inflammation. Pomella® was one of the extracts with the highest accumulative NPA score.[13]

Pomella® for Healthy Joints

In addition to all the benefits mentioned above, Pomella®'s pomegranate antioxidant capabilities may promote a balanced inflammatory response and support cartilage regeneration and lubrication via hyaluronic acid, adding support to healthy joints.

Pomella® and Gut-Brain Axis

In an in-vitro study, urolithins, gut microbial metabolites of punicalagins/ellagitannins, fulfilled in silico criteria required for BBB (blood–brain barrier) permeability, and prevented ß-amyloid fibrillation in vivo. Moreover, urolithins not only prevented ß-amyloid fibrillation in vitro, they also helped Caenorhabditis elegans from amyloid ß1–42 induced neurotoxicity and paralysis, supporting Pomella®'s neuroprotective effects as urolithins may be easily absorbed by the brain and contribute to pomegranate's anti-AD effects.[14]

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Sustainability

At Verdure Sciences®, sustainability is a core value integrated in every step of their supply chain.

Verdugration®: Their flagship initiative, driving eco-conscious, traceable, and certifiable plant-based practices globally.
Verdure Cares®: A key part of their mission, Verdure Sciences® is commitment to responsible relationships with employees, communities and business partners.

Verdure's Sustainable Pomegranate Program Highlights:

- 30,000 plantlets distributed to 44 farmers; expanded to 80 acres in Feb 2025.
- Targeting optimal harvest yields through continued agronomic support by 2027.
- Introduction of a new pomegranate fruit processing machine has resulted in a 50% reduction in water waste.

Product Safety

Pomella® has undergone extensive safety.[15] At doses exponentially greater than the recommended dosage range, no significant treatment-related changes in any clinical, physical, biochemical, or haematological parameters were observed.[14] Further to this, Pomella® food supplements have been on the market worldwide with no reported safety issues, and pomegranate juices and extracts have been used in foods and supplements for most of the 20th century.

Product Range

Ingredient	Active Content	Grade	Mesh Size
Pomella	Min 30% Punicalagins Min 50% Polyphenols	Powder	NLT 90% thru 80 mesh

Product Pack Size

Pomella® Pomegranate Extract is sold in bags of 10kg.

Product Applications

Pomella® can be used in capsules, softgels and tablets.

Product Dosage

The suggested daily dosage for Pomella® 30% Punicallagins (Standard Grade) is 250mg - 600mg per day depending on the health application. This is based on effective clinical dosages observed in the Pomella® studies.

For skin health the suggested daily dose is 250mg/day.

About

With headquarters in Noblesville, IN, USA, Verdure Sciences® is a supplier of plant-based, botanical ingredients with an emphasis on intrinsic synergies and clinically backed, tangible health applications. Pomella® is a registered trademark of Verdure Sciences Inc.

References

1. *Ozdal T et al.* The reciprocal interactions between Polyphenols and Gut Microbiota and Effects on Bioaccessibility. *Nutrients vol. 8,2 78. 6 Feb. 2016, doi:10.3390/nu8020078*
2. *Chakkalakal M et al.* Prospective randomised double-blind placebo-controlled study of oral pomegranate extract [Pomella®] on skin wrinkles, biophysical features, and the gut-skin axis. *J Clin Med. 14 Nov 2022. 11(22): 6724. doi: 10.3390/jcm11226724*
3. *Pacheco-Palencia LA et al.* Protective effects of standardised pomegranate (Punica granatum L) polyphenolic extract in ultraviolet-irradiated human skin fibroblasts. *J Agric Food Chem.2008 Jul 18. EPub 2008 Aug 22. DOI: 10. 1021/jf80053076*
4. *Sivamani RK et al.* Prospective, randomized, double-blind, placebo-controlled study of a standardized oral pomegranate extract on the gut microbiome and short-chain fatty acids. Foods. *2023 Dec 19. 13(1): 15pgs. doi: 10.3390/foods13010015*
5. *Wang et al-2023-Journal of Pharmaceutical and Biomedical Analysis:* Development of a liquid chromatography-tandem mass spectrometry (LC–MS/MS) method for characterizing pomegranate extract pharmacokinetics in humans. *DOI: 10.1016/j.jchromb.2020.122278.*
6. *Mertens-Talcott SU et al.* Absorption, metabolism, and antioxidant effects of pomegranate (Punica granatum L) polyphenols after ingestion of a standardised extract in healthy human volunteers. *J Agric Food Chem. 2006. 54(23): 8956-8961.*
7. *Goyal R et al.* An antioxidative effect of Punica granatum (pomegranate) on biomedial parameters in patients with myocardial infarction: A double blind placebo controlled trial. *Eur J Biomed Pharma Sci. 2016 Apr 30. Vol 3 (Issue 5): 662-667*
8. *Goyal R et al.* Antioxidative effect of Punica granatum (pomegranate) on biomedial parameters in patients diabetes mellitus (type 2) and myocardial infarction: A double blind placebo controlled trial. *Int J Adv Res. 2016 May. Vol 4 (Issue 5): 857-864. DOI: 10.21474/IJAR015.*
9. *Henning SM et al.* Variability in the antioxidant activity of dietary supplements from pomegranate (Pomella), milk thistle, green tea, grape seed, goji, and acai: Effects of in vitro digestion. *J Agric Food Chem. 2014 Apr 18. 62: 4313-4321. DOI: 10. 1021/jf500106r3.*
10. *Liu W et al.* Pomegranate phenolics inhibit formation of advanced glycation end products by scavenging reactive carbonyl species. *Food and Function. 2014. 5: 2996-30042.*
11. *DiSilvestro RA et al.* Pomegranate extract mouth rinsing effects on saliva measures relevant to gingivitis risk. *Phytother Res. 2009. 23: 1123-1127. EPub 2009 Jan 23. DOI: 10.1002/ptr.27597.*
12. *Sasi et al.* Efficacy of Pomegranate Mouthrinse Compared to Chlorhexidine on Plaque Accumulation, Gingival Inflammation, and Salivary Bacterial Count: A Randomized Controlled Trial. *Cureus - Part of Springer Nature - doi:10.7759/cureus.93612*
13. *Liu W et al.* Development of a neuroprotective potential algorithm for medicinal plants. *University of Rhode Island. Neurochem Int. 29 Sep 2016. 100: 164-1778.*
14. *Yuan T et al.* Pomegranate's neuroprotective effects are mediated by urolithins, its ellagitannin-gut microbial derived metabolites. *ACS Chem Neurosci. 2015 Nov 11. DOI: 10.1021/acschemneuro.5b002609.*
15. *Patel C et al.* Safety assessment of pomegranate fruit extract: Acute and subchronic toxicity studies. *Food Chem Toxicol. 2008 Apr 24. 46: 2728-2735. DOI: 10. 1016/j.fct.2008.04.035*