



TEAM
RHINO
leading the charge...

Science of
Juice
PLUS[®]+

Quality Assurance Statement

Juice PLUS+® is made using the highest quality fruits, vegetables and other carefully sourced ingredients available. The Juice PLUS+® raw materials are tested to ensure they meet NSA's strict quality standards for safety, quality and consistency. Blended ingredients are carefully tested during every step of the production process to ensure the quality and purity of the final product. The facilities used to manufacture Juice PLUS+® are state of the art and adhere to the highest quality GMP standards within our industry, including TGA, (Australian Therapeutic Goods Administration), NSF International and Swiss Medic.

The fruits and vegetables are sourced from respected and reliable producers. Some organic produce is used, although the amount varies due to seasonal availability. The fruits and vegetables are chilled, cleaned and washed, then juiced. The chilled juices are dried using NSA's proprietary process which is both low temperature and short duration, to preserve phytonutrients. Finally, the Juice PLUS+® Capsules, Chewables, Soft Chewables and Complete are regularly tested for compliance with NSA's own strict standard for safety, quality and consistency. This comprehensive testing ensures that Juice PLUS+® meets or exceeds the US Food and Drugs Administration and the European Union standards for safety and quality.



Mel Loades

Director of Product Development, Europe





NSA's position on

GM

In line with the NSA Corporate philosophy, we only use the best ingredients available to make Juice PLUS+® products. We do not use GM ingredients in these products.

Gluten

We can confirm that Juice PLUS+® Fruit, Vegetable and Vineyard supplements have been tested for the presence of gluten using approved methodology, and can be classified according to the Codex Standard as gluten free i.e. containing less than 20ppm of gluten.

Gelatine Capsule

All the capsules used in European Juice PLUS+® products are manufactured using gelatine from countries where a programme of testing is in place. The capsules are made in accordance with the European Food Safety regulations and the US Food and Drugs Administration's strict standards. The gelatine used in our product is of pharmaceutical quality.

Pesticides and Heavy Metals

In line with NSA corporate philosophy, we only use the best ingredients available to make Juice PLUS+® products. Our ingredients are carefully selected and production is strictly observed and monitored at all stages to ensure total compliance with final product specifications. High levels of supervision are in place at all stages of production to ensure that Juice PLUS+® products meet our strict quality standards for pesticides and heavy metals.

Juice PLUS+® and Sports

The manufacturing plant where Juice PLUS+® Fruit, Vegetable and Vineyard blend capsules and tablets are produced for NSA has been accredited as a site suitable for the manufacture of products for Sports people by HFL, an independent expert laboratory. This provides assurance there are no banned substances such as those listed in the WADA (World Anti-Doping Agency) Prohibited List International Standard or the IOC Doping List on their premises and they do not manufacture products containing any such substance. Cross contamination during the production process of Juice PLUS+® capsules and Juice PLUS+® Tablets with banned substances is therefore not possible.

The Juice PLUS+® Fruit, Vegetable and Vineyard capsules have been tested at various times over the past 2 years by two accredited European laboratories. In all cases they tested negative for the presence of prohibited substances within the accepted limits for testing (10ng/g).

The Dutch Doping Authority declares Juice PLUS+® safe for consumption by top athletes

In November 2010, the Dutch Doping Authority gave the NZVT certification to the Juice PLUS+® products. The Juice PLUS+® Fruit, Vegetable and Vineyard capsules were tested and approved according to the NZVT (Nederlands Zekerheidssysteem Voedingssupplementen Topsport) standards, the Dutch security system for analysing nutritional supplements for professional athletes, which guarantees the athletes that the products are free from doping agents. For more information go to: www.juiceplussports.eu

NSF Product Certifications

In the United States the Juice PLUS+® Fruit, Vegetable and Vineyard Blend capsules have earned the product quality "seal of approval" from NSF International, "the Public Health and Safety Company." Moreover, various batches of capsules of the different blends were tested to exclude the presence of banned substances and received the NSF certificate for sports. NSF is a not-for-profit organisation dedicated to product and ingredient safety. For more information go to: www.juiceplussports.eu





NATURAL ALTERNATIVES INTERNATIONAL EUROPE SA World Leader In Nutritional Science

NAI, Natural Alternatives International, manufacture Juice PLUS+® on behalf of NSA International.

NAI's headquarters are in San Marcos, California, with a manufacturing plant in Lugano, Switzerland.

NAI assists NSA in blending, encapsulating and packaging Juice PLUS+®; in product design and formulation across the Juice PLUS+® product line; and in quality control using its full range research and laboratory services.

The regular Quality Control procedures are an important part of these standards, and are carried out during all different production stages, both through independent and in-house analysis, using state-of-the-art laboratory equipment.

All products produced by NAI are meticulously screened for weight, ingredient, homogeneity, colour standardisation and content levels; tablets are examined for hardness, thickness and integrity.

All these procedures ensure a high and consistent quality level.

It is possible to visit the NAIE plant in Lugano. Ask your Home Office, salesupport@nsamilan.com, for any information and agenda of the guided tours.

*Encapsulation and packaging of Juice PLUS+®
at the manufacturing plant NAIE, Lugano*





Guaranteed security

NAI is certified for the following standards defined at international level:

- **“Good Manufacturing Practice” (GMP)**, which is used internationally to ensure that products manufactured under these guidelines fulfil required standards of quality with “Standard Operating Procedures” (SOP).

- **“Therapeutic Goods Administration of Australia” (TGA)**. Allowing production for export purposes in Countries that subscribed the Pharmaceutical Inspection Convention, among which also most of the European Countries.

TGA is the Therapeutic Goods Administration, part of the Department of Health and Ageing within the Australian Government which regulates therapeutic goods including food supplements (for Juice PLUS+® this is the capsules and soft chews). Products must be registered with the TGA and adhere to their requirements in order to be legally sold in Australia.

- **“Swiss Medic Certificate” (SMC)** for meeting pharmaceutical specifications.

- Furthermore, NAI complies with the rules of the US pharmacopeia (USP), standard according to the US pharmacopeia regulation.

- In the United States the Juice PLUS+® capsules have obtained, after meticulous checks by a panel of certification experts, the **“NSF”** quality seal of approval.

NSF International is the “Public Health and Safety Company”, not-for-profit organisation dedicated to ensure the security of products and ingredients.

- While in Europe, we initiated an independent review of the quality of our European Fruit, Vegetable and Berry capsules with a company in Germany. SGS INSTITUT FRESENIUS, is a reputable and independent company, providing assurance of quality and safety. The **“Fresenius Quality Seal”** has been in existence for over 30 years in Germany and surrounding countries and is well respected by consumers. After a thorough assessment of documentation, comprehensive product testing and detailed inspection of our manufacturing facilities, this seal has been awarded to our European Juice PLUS+® capsules providing further evidence of quality for all European Juice PLUS+® capsules. For more information on the Fresenius Quality Seal, visit www.qualitaetssiegel.net.



Scientific studies

We analyse Juice PLUS+® to be sure that it is packed with good, wholefood nutrition. This is done as a routine part of our manufacturing process. The analyses show that we retain much of the important nutrition of fruit and vegetables when we make Juice PLUS+®.

We then carry out further research on Juice PLUS+® to check for two other factors:

- (i) that the vitamins and phytonutrients in Juice PLUS+® are absorbed and used by the body;
- (ii) the effects of Juice PLUS+® on our bodies.

Hospitals and universities that investigated Juice PLUS+®.

1. Medical University of Graz, Austria (3) - 2013
2. University of Milan, Italy (3) - 2013
3. Nemours Childrens Clinic, USA - 2012
4. University of South Carolina, USA - 2012
5. University of Witten-Herdecke, Germany - 2012
6. University of Birmingham, UK - 2011
7. MD Anderson Cancer Center of University of Texas, USA - 2012
8. University of Milan, Italy (2) - 2011
9. University of North Carolina, USA - 2011
10. Yale Univ-Griffin Hospital, USA - 2011
11. Charité University Medical Center, Berlin, Germany - 2011
12. University of South Carolina, USA - 2010
13. University of Graz, Austria (2) - 2009
14. Georgetown University (UCLA), Washington, USA - 2009
15. Tokyo Women's Medical University, Japan - 2007
16. Vanderbilt University School of Medicine, USA - 2007
17. University of Graz, Austria (1) - 2007
18. University of Mississippi, USA - 2006
19. University of Milan (1), Italy - 2006
20. University of Florida, USA - 2006
21. University of North Carolina Greensboro, North Carolina, USA - 2006
22. Medical University Vienna, Austria - 2004
23. Division of Human Nutrition, Health Department Asl Foggia, Italy - 2003
24. University of Maryland School of Medicine, Baltimore, USA - 2003
25. University of Sydney, Australia - 2003
26. King's College London, London, England - 1999
27. Brigham Young University, Utah, USA - 1999
28. Arizona University, Tucson, USA - 1999
29. University of Texas, USA - 1996
30. University of Toronto, Canada - 2011

All the studies mentioned above have been published in peer reviewed international scientific journals.





Results of studies including Bioavailability

Numerous studies have included various aspects of Juice PLUS+® bioavailability (absorption by the body). These include work done at the: Nemours Childrens Clinic, USA³; University of Witten-Herdecke, Germany⁵; University of Birmingham, UK⁶; MD Anderson, Texas, USA⁷; University of South Carolina, USA¹²; Georgetown/UCLA, USA¹⁴; Tokyo Women's Medical University, Japan¹⁵; Vanderbilt University, USA¹⁶; University of Florida, USA²⁰; Medical University of Vienna, Austria²²; University of Sydney, Australia²⁵; London King's College, UK²⁶; Brigham Young University, USA²⁷; University of Arizona, USA²⁸; University of Texas Health Science Center, USA²⁹; and others. These investigators studied the bioavailability of select nutrients found in Juice PLUS+® and concluded that Juice PLUS+® effectively increases various phytonutrients, including antioxidant nutrients and vitamins such as folate.

Juice PLUS+® contains vitamins C and E which contribute to the protection of cells from oxidative damage. The presence of folate in Juice PLUS+® also contributes to normal cell division

Studies with Juice PLUS+® have confirmed this effect. Several of these studies which included various aspects of nutrient bioavailability also reported improvements in various parameters related to oxidative stress, for example: an increase in antioxidant enzyme levels¹²; plasma antioxidant capacity^{15, 19, 20, 26}; reduced lipid peroxides²⁹ and oxidized LDL cholesterol⁸.

In addition, researchers at the Medical University of Graz, Austria^{1, 13, 17} and the University of North Carolina, USA^{9, 21} found that Juice PLUS+® Fruit, Vegetable and Vineyard Blends together were effective in reducing a marker for oxidative stress associated with exercise.

Reducing oxidative stress can also help maintain healthy DNA

Studies conducted have shown a reduction in DNA damage after taking Juice PLUS+® in healthy adults at the University of South Carolina⁴, in the law students at the University of Florida²⁰, and in an elderly population at Brigham Young University, USA²⁷.

Results of the studies about the effect of Juice PLUS+® on our body

Juice PLUS+® contains vitamin C and folate which contribute to a normal function of the immune system

Good nutrition is important for the normal function of the immune system and healthy DNA. Published clinical research indicated that Juice PLUS+® supports several measures of immune function - in law school students at the University of Florida, USA²⁰ and in elderly people in a study conducted at the University of Arizona, USA²⁸. A study of healthcare professionals at Charité University Medical Centre, Germany¹¹, reported Juice PLUS+® use over the cold winter months resulted in a 20% reduction in moderate/severe symptom days.

Juice PLUS+® contains vitamin C which contributes to normal collagen formation for the normal function of blood vessels. Folate present in Juice PLUS+® also contributes to normal homocysteine metabolism

Studies have been carried out into the effect of Juice PLUS+® on several markers of heart and vascular health. Homocysteine is an amino acid that is found in the blood. Maintaining healthy homocysteine levels is thought to be important for the heart and cardiovascular system. A clinical study at the University of Sydney, Australia²⁵ reported a reduction in homocysteine levels - even though the levels of the Australian participants were already within an acceptable range. Researchers in Foggia, Italy²³, at the University of Milan, Italy² and at the Tokyo Women's Medical University, Japan¹⁵ also found a reduction of homocysteine levels in adults with elevated levels of homocysteine. Researchers at the University of Maryland School of Medicine, USA²⁴ found that subjects who consumed Juice PLUS+® were better able to maintain the normal elasticity of arteries, even after a high-fat meal and researchers at the University of Milan, Italy¹⁹ saw a reduction in oxidized LDL cholesterol in heavy smokers. Investigators at Vanderbilt University School of Medicine, USA¹⁶ monitored several measures of vascular health in a low risk population who took Juice PLUS+® for two years and noted various improvements with no adverse side effects.



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