

Despite being a new player in the highly competitive Australian concentrated herbal granule market, Pivot Supplies Pty Ltd, together with its decade-old Hong Kong business parfner, Nong's International Limited (Nona's), is convicted in bringing the best auality aranulated extracts to its customers.

TECHNOLOGICAL FRONT-RUNNER

Nong's has dedicated itself in modernizing Traditional Chinese Medicine (TCM). With the help of many internationally-renowned academics from both local and overseas universities, Nong's has established itself as a technological front-runner in the industry.

AUSTRALIA TGA CERTIFIED

Nong's factory in Nanning has obtained Good Manufacturing Practice (GMP) certificates from both the State Food and Drug Administration (SFDA) of China and the Therapeutic Goods Administration (TGA) of Australia, proving that it has attained world-class manufacturing standards. With the ISO-17025 (CNAS certified) in-house laboratory, the 100% self-owned plant is regarded as one of the finest TCM facilities in Asia.

INTERNATIONAL QA STANDARD

The efficacy of TCM herbs depends on different factors, including the place of origin, season, recovery, storage, preparation and processing. With so many variables, it is understandable for people to cast doubts on its quality and effectiveness. Therefore, Nong's has used the 'herb-to-bottle' approach to allay this skepticism. By taking nearly every step of the manufacturing process under its own control, it has virtually built a whole supply-chain of TCM from the place of origin to the retail counter. This is crucial in producing granulated extracts with the highest quality. Nong's has led the way in TCM quality control through standardization and modernization by adopting the world's leading technologies in the TCM arena. Some of the pioneer achievements include:

- PuraLin is the first DNA-finger-printed Lingzhi product, with 6 species of Lingzhi separately identified.
- The ONCO-Z* coriolus versicolor extract is the first TCM ingredient verified by United States Pharmacopeia (USP), proving that it is the first TCM herbal extract with quality comparable to Western medicines.

ONE OF ASIA'S FINEST TCM FACILITIES

Nong's is the wholly-owned subsidiary of PuraPharm International (HK) Ltd. It has invested HK\$200 million to set up an advanced Chinese medicine factory in Nanning, Guangxi, in China. It is one of the six plants approved by SFDA in China to produce and distribute Chinese medicine granules. What is more - it is the first and only manufacturer with foreign investment to obtain this prestigious status.

The entire production line adopts the latest Japanese technology, with 80% of the manufacturing process being fully automated, outperforming the productivity of other similar production plants by 300-400%. It meets the highest GMP standards in the world by design and exceeds national specifications in many areas.

Because of its state-of-the-art design incorporating environmentally-friendly elements, the PuraPharm Nannina factory has become a model plant visited by over 200 delegations led by distinguished guests, including the former Hong Kong Chief Executive, Mr. Donald Tsang Yam-kuen in 2006; Vice Premier of the People's Republic of China, Ms. Liu Yandona in 2008; Mr. Jia Qinalin, Chairman of the 11th National Committee of the Chinese People's Political Consultative Conference in 2009. In 2010, President of the People's Republic of China Mr. Xi Jinping praised its sophistication and modernization during his visit to the factory.



President of the People's Republic of China Mr. Xi Jinping visited Nong's Nanning factory



"Our vision is to promote the wisdom of TCM to everyone and provide more convenient and effective TCM products through modernization and continuous research, so that everyone can enjoy a longer, healthier and happier life,"

CALVIN CHAN, Managing Director, Nong's International Limited

For the tenth year running, Nong's has proved itself as one of the leading brands in the herbal granule industry. According to Chan, the brand loyalty is not established by chance.

"We have been focusing on innovation and constantly responded to our customers' changing needs. This is achieved through innovative product development and professionalism championed by our business partners all over the world."

WHY NONG'S HERBS?

Nong's herbs are developed to provide quality and convenient herbal medicine solutions to replace the use of raw herbs while abiding by the TCM principles. Therefore, great dissolvability is the key to dosage accuracy and efficacy of TCM. Nong's herbs can be dissolved in hot water clearly so that patients taking the herbal drink can experience the same taste, smell and most importantly, the effects of decocted herbs.

WHAT IS THE CONCENTRATION RATIO OF NONG'S HERBS?

Most Nong's single herbal granules are produced in the ratio of 1:5. A 1:5 ratio simply means 1 gram of granule is equivalent to 5 grams of raw herbs. After dissolving in hot water, the 1 gram granule provides exactly the same amount of ingredients as 5 grams of decocted raw herbs. Here is how the ratio 1:5 is achieved. During the concentration phrase, the herbal extract is made to become a thick liquid. When it becomes thick enough; it will undergo the next phase during which the total volume will be reduced to 20% (due to concentration), thus achieving the 1:5 ratio.

Chinese herbs normally contain many medicinal ingredients, which are to be extracted and made into granules. The concentration of each granule depends on the amount that can be extracted from each kind of herb, which is clearly stated in Chinese pharmacopeia. Some herbs have larger amount of extracts by nature, for example Mai Dong. Its total extract contents can be at least 60%. Other herbs will lose some extracts if their volumes are reduced to the 20% level. However, higher concentration does not necessarily mean better quality or stronger potency. Herbal efficacy depends on the total amount of medicinal ingredients. That is why Nong's herb, Dang Gui, having a ratio of 1:3, is much stronger than some other brand's Dang Gui with a ratio of 1:5.

WHAT ARE THE ADVANTAGES OF USING DEXTRIN AS EXCIPIENT?

Granulation and Testing

Dextrin is normally made from starch in potato, corn, rice, and wheat and 100% allergy-free. It is a group of low molecular weight carbohydrates produced by enacting the process of hydrolysis on starches. Hydrolysis involves splitting water up into its basic components and allowing these components to be attached to other molecules. It is commonly used in pharmaceuticals as thickening and binding agent. It is like a natural fiber, which can enhance the body's natural ability to excrete. One of the obvious and unparalleled advantages in using dextrin is its dissolvability. Granules made with dextrin can be dissolved in hot water completely. Once it is dissolved, no matter after how long, no deposit will ever come out. Furthermore, granules made with starch is not suitable for patients with diabetes and/or allergic to corn.

Herb Collection & Processing

Reliable supply network close to the places of origin of different herbs. Authentication takes place before any procurement to ensure quality and safety. All herbs are processed in-house using traditional methods



Nong's Good Manufacturing Practice Flow

Crynoconcentration

Instant sterilization process can heat the extracts to 120°C within 10-30 seconds, then rapidly cooling them to 50°C, sterilizing 98% of the pathogens in the extracts with minimum damage to the active ingredients. The crynoconcentration process commences at around 50°C, which maximizes preservation of the active ingredients



Spray drying tower is approximately 12 metres high With a 24 000 r/m centrifugal nozzle imported from Japan. the drying process can be carried out within seconds and the extract powder sucked into the collector in the clean rooms. minimizing any possible loss of active ingredients at high temperatures



Drying

The extract powder is then granulated and packed into sachets or bottles in the clean rooms. For herbs containing essential oils, advanced ß-cvclodextrin entrapment technology is applied to seal the volatile oil in the particles, which can only be released when dissolved in hot water.

Packaging All packets of products must go through multiple tests like microbial, heavy metal and pesticides residues . before final packaging. An external laboratory is sometimes hired to double-check the finished products in addition to the in-house laboratory through the QC & QA, which are independent from production

THE BEST PLACE OF ORIGIN

High efficacy granules must come from high grade herbs. Nong's herbs are collected from regions where the best herbs can be found. For examples, Nong's Ban Xia (半夏) and Gou Ji Zi (枸杞 子) come from Hubei Jingzhou and Ningxia Zhongning respectively. They are the typical regions for quality herbs. Nong's adheres to very stringent and scientific authentication procedures in procuring these herbs. Nong's also has in-house farms for special herbs like Ginseng (人參) and Du Zhong (杜仲). Nong's grows Du Zhong at 300-1300 meters above sea level with moist, slightly acidic soil, which is also rich in humus. The herb is collected from the dry bark of Cortex Eucommia.



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