# Imsyser 12 Strain Pre & Pro-biotic

# **Information and Benefits**





Imsyser's Fermented Liquid Microbial Probiotic Product contains 12 strains of Nature's most natural form of Pre- & Pro-biotics, and multiple classes of live bacteria, including Synbiotics and Postbiotics to ensure diverse interactive release of digestive enzymes as mimicked in the gut.

Imsyser's Probiotic, unlike freeze-dried products in the market place are fermented at body temperature and contains the full range of natural enzymes, lactic acid and live bacteria necessary to restore health from within the mouth to the end of the colon for optimum digestive balance and full body health, ensuring its position as one of the best, totally unique Probiotics in the market-place.

Being liquid and raw you cannot get a Probiotic any closer to its Natural state:

100% NATURAL GMO FREE

VEGAN FRIENDLY SOY FREE

GLUTEN FREE LACTOSE FREE

DAIRY FREE NON-FREEZE-DRIED

A DAILY PROBIOTIC SUPPLEMENT that scientific studies have proven we just cannot do without any longer!!

A DAILY PROBIOTIC SUPPLEMENT that restores vital bacteria no longer provided by modern diet!!

A DAILY PROBIOTIC SUPPLEMENT providing natural bacteria needed for good health and growth in adults and children!!



A DAILY PROBIOTIC SUPPLEMENT that regulates and aids sensitive digestive tracts and digestive orders!!

EFFICIENT - LIVE - MICROBES - PROBIOTIC

#### AN EVOLUTION IN HUMAN HEALTH

- UNIQUELY DESIGNED PRODUCT
- 100% NATURAL & PROUDLY SA PRODUCT
- SAFE FOR ALL AGES EVEN COLIC IN BABIES
- PROVIDES IMMUNE SUPPORT
- GUT BALANCING
- 500 ML ENOUGH FOR FAMILY/DAILY USE
- ONCE OPENED LASTS 2 MONTHS
- 2 YEAR SHELF-LIFE
- 12 STRAINS OF PRO- & PRE-BIOTICS MORE THAN AVERAGE. TABLET/CAPSULED PRODUCT ON THE MARKET
- LIVE COCKTAIL ALL GOOD BACTERIA IN SYMBIOSIS WITH EACH OTHER MIMICKING GUT
- DIGESTIVE ENZYME RELEASE
- NO REFRIGERATION NEEDED

It is a fact that the role and importance of bacteria in human health has been grossly underestimated and generally misunderstood by members of the public, as well as many in the medical fraternity. This brief overview will help to provide a vital understanding of bacteria in its relationship to the human body, and how the handling of bacteria alone opens the door to a new era in human health.

#### INTRODUCTION

The gastro-intestinal tract's healthy function relies on the presence of beneficial bacteria. Beneficial bacteria aid in digestion, correct pH



balance (acidity), the processing of nutrients and the prevention of the build-up of harmful bacteria.

The bacteria in your bowels outnumber the cells in your body by a factor of ten to one. This gut flora has incredible power over the immune system, meaning that the health of the body is largely tied into the health of the gut. This becomes understandable when one looks at the fact that there are over 100 trillion bacteria - about 2 kilograms worth - that line the intestinal tract.

Beneficial bacteria (as well as pathogens) are almost completely killed off with the use of antibiotics, which many GP's tend to give out like candy to patients who come with any kind of bacterial or viral illness. Repeated use of antibiotics can virtually eradicate the good bacteria in the gut, which have to build up from scratch again each time a course of antibiotics is taken, allowing bad bacteria and harmful yeasts to take a foot hold in the GI tract and multiply at a high rate.

#### BENEFICIAL BACTERIA

Beneficial bacteria help to consume available food sources in the intestine and thus deprive harmful bacteria of their normal food sources. Approximately 80% of the body's immune system capability derives from the beneficial bacteria in the GI tract. The average adult body contains approximately 2.5 kg of bacteria, both good and bad. It is estimated that the large intestine (colon) alone should contain approximately 1.5 kg of beneficial bacteria. There are approximately 400+ varieties of bacteria in the digestive tract and take many years to build up through a healthy diet. Therefore, eradicating all of one's probiotic bacteria by taking antibiotics and simply taking a probiotic supplement afterwards (containing perhaps 2 or 3 strains of probiotic bacteria) is not really going to build up that same level of diversity of good bacteria as would occur naturally with a good diet.



Beneficial bacteria assist with the following:

- Helps to inhibit potential pathogenic
- Helps to prevent diarrhea caused by rota virus or
- Helps to reduce the proliferation of
- Assists in increased defecation and help to reduce
- Help in digestion by altering the pH and improving the uptake of minerals, especially calcium.
- Help to digest lactose for the lactose-intolerant
- Involved in the production of vitamins, for example, B1, B2, B3, B5, B6 B12, A, D and K, and essential fatty
- Assist in protein
- Help to clean the digestive tract.
- Produce natural antibiotics and anti-fungal such as hydrogen

Most active probiotic bacterial cells are destroyed by the stomach before they reach the small and large intestine. Therefore, the exact number taken could in some ways be considered irrelevant or not so critical. The main purpose of taking probiotics is to provide viable cells of good bacteria which can seed or multiply in the small and large intestine. It is not, factually, to physically populate the colon with good bacteria from just the probiotic bacteria that survive and reach the colon. This would be a mammoth task given the small number that reach the colon and the several kilos of good bacteria required there. Providing a regular supply of seeding bacteria to the colon and ensuring optimal conditions (and food) for the good bacteria and adverse conditions (and a lack of food) for the bad bacteria, is the main goal to achieving and maintaining a healthy floral gut balance.

Our Technology is a 100% natural and is based on a unique and highly effective combination of beneficial inter-active microorganisms that operate in a revolutionary relationship with each other and in so doing enable living organisms (plants, animals, human bodies) to function to their fullest potential on a physical level. The basic groups of microorganisms in the Imsyser Liquid Microbial Product are lactic acid



bacteria (commonly found in yogurt, cheeses), yeast (bread, beer), and phototropic bacteria as well as soil-based organisms (SBO's).

Since the beginnings of life on Earth, bacteria have been a vital part of the life cycle of every living organism on the planet. It is bacteria that allow plants, animals and humans alike to use the nutrition from their foods. Bacteria are involved in the growth and correct functioning of cells. They help living organisms to create natural vitamins and antibiotics and are a major factor in fighting disease. To sum it all up: life cannot survive without the work of bacteria.

What is new is the means to harness the capabilities of these various types of microorganisms in one effective, self-supporting and effective group. Most probiotics available today contain only one or two species of bacteria, grown as pure cultures and then freeze-dried so that they may be kept alive. It is not a natural process, and this 'process' does not contain the full range of species that microbes usually interact with as a part of their normal life cycle. Moreover, these probiotics are grown in a sterile environment, with no competition, and so when they are introduced to the wild and variable ecosystems of the "real world", their ability to survive is severely impeded. The microbes in Imsyser's Liquid Microbial Product, however, comprise a wide range of beneficial micro-organisms, fermented together at body temperature, allowing them to grow, interact and compete naturally. This unique process helps to create a consortium of highly effective, inter-dependent microbes that have the ability to survive together in any environment into which they are placed, influencing that environment in a regenerative (rejuvenating) direction, whether it be in a human or animal body, soils, plants or water.

The reason for our efficacy and results is not, as many people believe, the number of microbes present in the product but, rather the number of microbial species. In the natural world, the various species of microbes are utterly reliant upon each other for growth and stability, as can be seen by the diversity of microbial life in soils and plants. Imsyser's



Liquid Microbial Product Microbes closely mirrors this natural range of microbes that are found in our soils and food.

Other factors to look at when considering Imsyser's Liquid Microbial Product is that these microbes are all naturally fermented at body temperature, especially relevant when one considers that the human body's most important source of beneficial bacteria is naturally fermented foods. This means the finished products are raw, containing 40 trace minerals, amino acids (up to 18), various organic acid compounds, nearly 100 types of enzymes, B complex vitamins, Vitamin A (in the form of Retonin, the form ready for absorption by the body), as well as the live microbes which make up the solution itself. Importantly, none of these beneficial compounds are added artificially to the brewing process. Rather, they are a natural by-product of the fermentation process of these highly effective bacteria. A natural by-product in this interactive phase is the resultant release of digestive enzymes, a crucial benefit to healthy digestive functioning; also, a missing link from the modern day dried-freezed species commonly in the marketplace.

Due to the increased use of chemical fertilizers and antibiotics in modern agriculture, livestock and animal health, environmental remediation and human health, neither plants, animals nor mankind, for that matter, receive the benefits of the various bacteria that should be a part of the normal life cycle. The interactive action of Imsyser's Liquid Microbial Product provides us with mutually supportive bacteria which can influence the entire bacterial population of any eco-system or the body of any living organism has never been uniformly achieved. Thus, it can be said that we have reached a new era in the evolution of natural technologies.

#### **PROBIOTICS**

The word probiotic literally means 'for life' and describes the concept that a probiotic encourages the formation of a living colony of specific



beneficial bacteria; in this case in the human digestive tract. Today, probiotic means product, in fact it means thousands upon thousands of products globally which have adopted the term.

A quick look at the range of probiotic products available on the shelves immediately reveals two segments; liquid products such as yogurt or drinks, and dry products such as capsules, tablets and sachets.

#### DRY PROBIOTIC PRODUCTS

Dry products come in many shapes and sizes, however the technology behind them is broadly similar and generally involves freeze-drying. It is possible to freeze simple organisms and cells under low temperature and pressure in such a way that all the water is removed without damaging the delicate structure of the cell or organism itself. In the case of probiotics this places the bacteria in a state of suspended animation which is well suited to long term storage. Once moisture becomes available to the bacteria, they re-hydrate and a proportion of the bacteria will go on to function and divide again as they did before 'freezing'. This means that many strains can be combined into a single product. However, there are downsides to freeze-drying, not least, the high expectations placed upon bacteria to re-hydrate and regain function quickly after swallowing into the acidic environment of the stomach.

There really is no word to describe the state that microorganisms are in after freeze drying. One could say "dormant", but this really doesn't suffice. All the moisture that is part and parcel of each microbe has been removed. The theory is that once ingested, these microbes re-absorb the moisture and return to life. Even if they do fully return to their former state with no harm done, nobody has been able to tell how long it takes. If it's more than an hour or two, the microbes will be



past the stomach, through the intestine and in the bowel before they wake up. Or even further along.

Any microbiologist will agree with the statement that freeze drying of microbes causes some form of cellular damage, which can greatly affect performance of the microbes. This is the main reason most probiotics on the market contain billions of cfu (colony forming unit) per ml. It is necessary to use tremendous numbers of "weaker" microbes to get the effects of "stronger" microbes.

#### LIQUID PROBIOTIC PRODUCTS

Liquid products generally contain live bacteria, which is intuitively a good idea; to be called a probiotic in the first place a product must contain live bacteria, but it's important that these bacteria once swallowed can reach the gut and colonize to confer a benefit. Live products must also contain a source of nutrition for the bacteria; however, this raises several new issues. Firstly, storage and shelf-life can be short for some live products especially the refrigerated types (check the labels). Secondly, palatability, since probiotic bacteria are not always tasty creatures. Also, an important consideration is competition between bacterial strains within the same live product; they can compete with one another for resources in the bottle. This problem is one reason why it is very difficult to develop a multi-strain live product.

All microbes that have a probiotic or beneficial effect on the body are "mesophilic". A mesophile is an organism that grows best in moderate temperature, neither too hot nor too cold, typically between 20 and 45 °C. Organisms that prefer extreme environments are known as extremophiles. They like our body's natural temperature and that's why they have formed a symbiotic relationship with other life forms, in this case mammals. Put them in a cold environment and they die. So, the whole concept of "freeze-drying" mesophilic bacteria is a complete contradiction.



Let's also look at the number of probiotic strains in a product - there are single strain products and multi-strain products:

#### SINGLE STRAIN DRY PROBIOTICS

There are those who believe that a single strain of bacteria may be all that is needed to confer benefit; Acidophilus species are a good example, and so there are plenty of producers of single strain freeze dried probiotic tablets, capsules and powders. The human gut contains more than 500 different species of bacteria, so to take a single strain to hit the bulls-eye may not always deliver success.

#### SINGLE STRAIN LIQUID PROBIOTICS

With a few exceptions, live probiotic products, particularly the diary-based products containing yogurt or milk are single strain probiotics containing bacteria which thrive on the sugar found in milk; lactose (hence Lactobacillus). These bacteria tend to be strains from the Bifidobacteria or Lactobacilli genera which are very common in the environment.

#### MULTIPLE STRAIN DRY PROBIOTICS

As above, freeze drying allows for multiple species and strains to be combined in a single product without fear of competition, however other problems can arise as a result, chief among these being time of re-hydration and recovery of function for the bacteria.

#### MULTIPLE STRAIN LIQUID PROBIOTICS

On paper, these products deliver the best of both worlds; providing several bites at the cherry in one go and overcoming the problems with dry products. However, the devil is in the detail and it is very difficult to



deliver a multiple strain live product, which is why they are few and far between.

Imsyser's Liquid Microbial Product contains multiple strains. As well as being in a liquid form, multiple strains offer you one of the best probiotics on the market. Imsysers' Liquid Microbial Product is a complex of microbial cultures consisting of multiple strains. Totally unique in the industry!! The manufacturers are clear that focusing on the population counts are not as important as focusing on the product being in liquid form and the diversity of the microbes. If Imsyser's Liquid Microbial Product was to have one less strain of microbes, these products would function like all other probiotics and the results would not be as significant.

The principal classes of microorganisms in Imsyser's Liquid Microbial Product are:

#### PHOTOSYNTHETIC BACTERIA

Phototropic bacteria are one of the key elements both in Imsyser's Liquid Microbial Product structure and its work ability and benefits. These micro-organisms have been on Earth since before there was oxygen, meaning that their food source was (and is) the gases that we consider harmful or toxic to us today: Hydrogen Sulfide, Carbon Dioxide, Methane and Ammonia to name a few. What this means is that the phototropic bacteria in Imsyser's Liquid Microbial Product consumes toxins and harmful gases in the human body, giving off oxygen as one of the by-products. The aerobic bacteria (bacteria which use oxygen) then consume the oxygen generated by the phototropic bacteria and they in turn excrete carbon dioxide which the photo tropes can again use as food. Even more importantly, however, phototropic microbes also excrete amino acids, antioxidants and other substances that enhance life which can then be used by the



body. A unique chain of events even for the evolved modern-day probiotic types currently not even available in the marketplace.

The photosynthetic or phototropic bacteria are a group of independent, self-supporting microbes, considered to be the most versatile bacteria in existence. In soils and plants, these bacteria synthesize useful substances from secretions of roots, organic matter and/or harmful gases (e.g. hydrogen sulfide), by using sunlight and the heat of soil as sources of energy. The metabolites developed by these microorganisms are absorbed directly into living organisms and act as a food source for increasing populations of other beneficial bacteria.

It is the inter-dependency and mutually beneficial actions of these various microbes which make it possible for them to establish themselves within the human body (or any environment) and motivate the already-existing bacteria in a beneficial and regenerative direction. Any one of these classes of microbes attempting to influence any environment without the others is, therefore, attempting to operate in a synthetic environment because they do not operate alone in the natural world. To word it differently: although Lactic Acid Bacteria, beneficial yeasts and other microbes have properties which are hugely beneficial to organism health, they will never be able to function as they should without the other bacteria (namely phototropic bacteria) that are essential to the establishment of viable survival conditions. It is the phototropic bacteria that produce the oxygen and other substances that allow the vast range of other beneficial microbes to survive and dominate the system.

Due to the increased use of chemical fertilizers and antibiotics in modern agriculture and livestock farming, man is no longer getting, from his foods, the various bacteria that form a part of the survival of the human body, a fact evidenced by the diseases and illnesses of the 20th and 21st centuries. The action of Imsyser's Liquid Microbial Product in providing man with mutually supportive bacteria which have the ability of influencing the entire bacterial population of the body has



never been uniformly achieved. Thus, it can be said that we have reached a new era in the evolution of human health.

#### LACTIC ACID BACTERIA

Lactic acid bacteria produce lactic acid from sugars and other carbohydrates, developed by photosynthetic bacteria and yeast. Therefore, some foods and drinks such as yogurt and pickles have been made with lactic acid bacteria for decades. However, lactic acid is a strong sterilizing compound, and suppresses harmful microorganisms and enhances decomposition of organic matter. Moreover, lactic acid bacteria promote the decomposition of material such as lignin and cellulose and ferment these materials, thereby removing undesirable effects of non-decomposed organic matter.

Lactic acid bacteria also produce antibacterial compounds that are known as bacteriocins. Bacteriocins act by punching holes through the membrane that surrounds the pathogenic bacteria. Thus, bacteriocins activity is usually lethal to the pathogen. Lactic acid bacteria have several well-established benefits. They can improve lactose digestion, play a role in preventing and treating diarrhea and act on the immune system, helping the body to resist and fight infection. Several lactic acid bacteria may help prevent initiation of colon cancer. It has also been demonstrated that lactic acid bacteria slow the growth of experimental cancers.

#### **NATURAL BENEFICIAL YEASTS**

Beneficial Yeasts synthesize antimicrobial and other useful substances required for cellular growth from amino acids and sugars secreted by photosynthetic bacteria, organic matter and other microorganisms. The bio-active substances such as hormones and enzymes produced by yeasts promote active cell division. These secretions are also useful



substrates for effective microbes such as lactic acid bacteria and actinomycetes.

## SOIL BASED ORGANISMS (SBO's)

Bacillus Subtilis is a soil-based organism. Bacillus subtilis is a robust strain that's not only able to withstand the gastrointestinal tract but flourish and positively affect the composition of the microbes in the gut. Studies have shown that this probiotic can produce compounds that are naturally disruptive to harmful organisms. Bacillus subtilis helps displace unfriendly organisms in the body by affecting their ability to colonize.

The bacteria species present in Imsyser's Liquid Microbial Product and the benefits of each species:

Imsyser's Liquid Microbial Product places a huge emphasis on nature, and to stay true to this principle, our products are consortia-based. Unlike pure-culture probiotics, Imsyser's Liquid Microbial Product contain not one but many different live strains. As a result, users end up with a comprehensive probiotic that survives stomach acid 16 times better than the leading brands.

Most probiotics available today contain only one or two species of bacteria, grown as pure cultures and then freeze-dried so that they may be kept alive. It is not a natural process and does not contain the full range of species that microbes usually interact with as a part of their normal life cycle. Moreover, these probiotics are grown in a sterile environment, with no competition, and so when they are introduced to the wild and variable ecosystems of the "real world", their ability to survive is severely impeded. Imsyser's Liquid Microbial Product contains probiotics that are non-freeze- dried meaning they are alive and in their natural, raw state owing to the reason why they are so effective.

#### MICROBIAL SPECIES



Imsyser's Liquid Microbial Product restores the natural beneficial bacteria that the human body needs for optimum digestive and immune function.

Imsyser's Liquid Microbial Product includes a selection of herbal extracts added to the fermentation for a daily probiotic that improves energy and overall health.

Herbal Extracts: Chamomile, Rose Hip, Olive Leaf, St John's Wort, Elderberry, Siberian Ginseng, Kelp, Natural Molasses and Astragalus.

NOTE: Imsyser Liquid Microbial Product does not claim to cure anything or make any claims beyond the scientifically proven capabilities of beneficial bacteria.

#### **QUESTION & ANSWERS**

#### WHEN SHOULD I TAKE THE PROBIOTIC?

Imsyser's Liquid Microbial Product probiotics can be taken at any time. With or without meals, morning or evening.

#### HOW DOES IMSYSER'S PROBIOTICS DIFFER TO OTHER PROBIOTICS?

The reason for their efficacy and results is not, as many people believe, the number of microbes present in the product but, rather the number of microbial species.

Although lactic acid bacteria are the most predominant bacteria in the GI-tract they cannot establish themselves without the natural symbioses they share with other types of microbes. In the natural world various classes of bacteria are utterly reliant upon each other for growth and stability, as can be seen by the diversity of microbial life in soils and plants. Unlike most probiotic products which contain freeze-dried strains of just one or two species of microbes, Imsyser's



Liquid Microbial Product Probiotics' closely mirrors the natural range of microbes that are found in our soils and food. It is the combination of these species which make Imsyser's Liquid Microbial Product unique. This is what accounts for their efficacy and successes.

# CAN I TAKE IMSYSER'S LIQUID MICROBIAL PRODUCT WITH OTHER MEDICATIONS?

Yes, you can. The gastro-intestinal tract's healthy function relies on the presence of beneficial bacteria. Beneficial bacteria aid in digestion, correct pH balance (acidity), the processing of nutrients and the prevention of the build-up of harmful bacteria. Beneficial bacteria do not interfere with medication. In fact, they are almost completely killed off with the use of antibiotics and the immune system is hugely compromised by the toxins in most medical drugs. Taking the probiotic helps to protect the body from harmful toxins.

#### CAN I TAKE PROBIOTICS IF I AM PREGNANT?

Yes, the products are 100% natural and safe to take.

# IS IMSYSER'S LIQUID MICROBIAL PRODUCT PROBIOTICS VEGAN FRIENDLY?

Our probiotics are suitable for vegetarians and vegans. No Animal derived products are used in the culturing or production of our products.

#### WHY ARE THERE WHITE FLAKES ON THE TOP?

This is the natural yeast that forms when the product is exposed to oxygen (in other words, once the seal is broken) Do not shake it, it is normal for it to be there.



#### WHY SHOULD ONE NOT SHAKE THE PRODUCT?

Because the product is a "live" microbial product.

#### CAN I REFRIGERATE THE PRODUCT?

No, it is a "live" microbial product. The microbes go dormant if refrigerated. Store at room temperature out of direct sunlight.

#### **HOW WILL I KNOW IF HAS GONE OFF?**

The product has a 6-8 week shelf life once the bottle has been opened. It will get a really "rotten" smell when it goes off.

#### **DIRECTION FOR USE:**

Children drink  $\frac{1}{2}$  prescribed dose but on average 1-2 Tablespoons; 1 / 2 daily depending on the severity of the problem or as prescribed by the health practitioner.

The product has a 6-8 week shelf life once the bottle has been opened. It will get a really "rotten" smell when it goes off.

# For those that need more information on our unique technology and manufacturing process:

Our LAB spec's on cfu's is 3.5 x 10 power 6 for the LAB, so 8 x 10 to power 6 is well within spec.

Regarding the counts, however, it is important to note that the entire basis of our technology is the number of diverse species of microbes (15 in total with the prebiotic different species and types), not the number of CFU's. This is not our claim to fame within a strict, sterile almost out-dated criteria. The interaction of all of the various species make the



product extremely robust and able to strongly influence any human digestive system into which they are introduced.

The reason that regular probiotic products require billions of CFU's is that they are individual strains grown in a lab. They are not robust; do not have their supporting microbes and do not form a consortia, and thus they need billions of CFU's just to survive at all, disregarding even the pH factor (stomach)!

The microbes are all 'GRAS' classified. ALL of the mother culture species are classified as either lactic acid bacteria or yeast, all of which have been classified by the FDA as GRAS (generally regarded as safe) and by EFSA (European Food Safety Authority). See attachment.

Our product is made up of herbs (all safe) and beneficial microbes (all classified as safe), along with the molasses, water etc. that goes into the brew. Although these beneficial microbes produce amazing benefits in human health, we make no claims beyond the fact that beneficial microbes assist in digestion, general body health etc.

We do, however, do tests on every batch to determine total microbial counts of Lactic Acid Bacteria and beneficial yeasts, and we test for pathogens, including Salmonella, E. Coli, Clostridium. We do not release a batch if it shows signs of any pathogen, but we have also not ever had a positive test results on any of those pathogens i.e. they have never been present in the test results.

We maintain strict controls on our production, sanitation etc. and follow GMP protocols.

# **Quality Assurance**

At our manufacturing location, daily quality standards are implemented, all the way through to senior management where Quality Control is a functional responsibility, a commitment to customer



focus and product quality is incorporated into our company identity. With this process, being a finely time-monitored, time-sensitive process, nothing else would suffice. The Quality Control Team ensures compliance with company and regulatory standards.

We follow the Food Grade current Good Manufacturing Practices (cGMP). GMP guidelines provide a system of processes, procedures and documentation to assure the product produced has the identity, strength, composition, quality and purity that it is represented to possess. See attachment.

The documents that accompany any product sold include:

Certificate of Analysis (COA) - Describes quality control data for a particular lot/batch of product.

Five Advantages of our unique Technology

## **Consortium concept**

Most microbial technologies today are based on "pure-culture" methods of manufacturing. This means the microorganisms are grown as individual strains in sterile media, most manufacturing procedures for 'dry probiotics'. If a finished product contains more than one strain, each strain is typically grown in pure culture and then blended at time of packaging.

Our Technology is fundamentally different because the selected strains are grown in "consortia", in a process of co-growth that combines multiple strains during production. Therefore, each strain develops while interacting with other strains. Ultimately, through the proprietary consortia culturing processes, the microorganisms become a small eco-system-- much more resilient and capable of working together synergistic, as mimicked within the human gut. This methodology is more similar to how microorganisms actually survive in the natural



environment. In nature, strains never exist in isolation or pure culture. They are always interacting with other strains.

## Shelf life and stability

The probiotic products and their live microbial components have been rigorously developed and tested for shelf-life stability. The minimum shelf-life of the Imsyser Probiotics is 1 year by law, guaranteed microbial activity, and we have had the products tested after 4 years with continued microbial activity present on testing. This feature offers significant benefits to our customers in market development, distribution, and logistics.

### Survival under extreme conditions of temperature and pH

Our Probiotics maintain their guaranteed viable cell count under a temperature range of 5 to 50 degree Celsius (41° to 122° F) and pH range of 2 to 14. This means that the products do not require refrigerated storage and handling, contrasted with most microbial dry products. Also, the products can perform in a wide range of applications where pH could be a restriction for other technologies i.e. By-passing the stomach pH of between 1-3.

# Natural and organic technology

Each strain used in our Probiotics products is naturally occurring, not genetically modified and non-pathogenic. All ingredients used for culturing the microorganisms are natural and certified organic. All herbs are obtained from local supplies with accredited certification.

The Mother culture supplier produces its own microbial seeds and the resultant Mother Cultures in their own high-quality facility. By controlling its own manufacturing and maintaining rigorous process and quality-control standards, SCD guarantees consistent, high-quality mother culture for its partners worldwide. The Mother culture is the core



of the products ensuring optimal microbial activity for our value-add products.

