

# C ē D R U S™

*A Closer Look*



## What is Detoxing and How Can a Cedrus Sauna Help Me?

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Compared to several hundred years ago, our society has a serious battle to fight...not against people and nations... against toxins! We need to be prepared to fight. There are thousands of toxic chemicals being used in manufacturing, agriculture and for industrial purposes. These toxins are introduced into our air and water supplies and eventually find their way into the ground. We consume these toxins just by breathing, drinking, and eating food that has been grown in this contaminated soil.

We are also subject to food additives such as artificial flavoring, artificial coloring, preservatives, sweeteners



the possibility that our food has pesticides, antibiotics or industrial chemical contaminants. Just a few examples of these toxins in our everyday life are lawn and insect sprays, auto exhaust, household cleaners, drugs, dry cleaning solutions, alcohol, caffeine, and cosmetics. All the toxins mentioned above penetrate the body either through the digestive track, skin or the lungs. Everyday, more people are complaining of symptoms caused by toxicity. These are symptoms like chronic fatigue, headaches, food allergies, fibromyalgia, chemical sensitivity, irritability, hormonal imbalances, being overweight, food cravings, memory loss, digestive problems, acid reflux, bloating, gas, blood sugar imbalances, high cholesterol, fluid retention, allergies, muscle and joint pain, poor concentration and a poor immune system. Most toxins that enter the body are fat soluble, which means they dissolve only in fat or oily substances and not in water. Fat soluble toxins will plant themselves deeply within your fat cells, which makes it difficult for you to get rid of them. If your body is low on antioxidants and high in toxins, some of these toxins may be converted into potentially carcinogenic substances. This problem can also cause free radicals to form, which if excessive, can damage the liver. If you're not sweating, you're completely relying on your liver and kidneys to expel these toxins. So where does that leave us? We can begin by changing our diet. Try to eat food that is organically grown. Try not to eat as many processed foods. Limit



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What you really need to do is eliminate the toxins you've stored throughout your entire lifetime! Since most of your toxins are stored in fat cells, you need to start there. The patented far infrared from your Cedrus Sauna will literally penetrate through the two top layers of skin... the epidermis and dermis, right to the subcutaneous or fatty tissue layer. When the heat penetrates this layer, it melts the fat so that you can sweat it out along with all those toxins. Not only does the Cedrus Sauna flush out excess subcutaneous oils, and decrease fat stored toxins, it reduces excess water weight gain and salts which can keep you from losing weight in the first place! You'll also lose heavy metals such as lead, mercury, cadmium, arsenic, and aluminum (although aluminum is not technically a "heavy metal"). These heavy metals and other chemicals including excess uric acid, sodium and cholesterol have been linked to several serious illnesses. Sweat from your Cedrus Sauna will contain only 80-85% water while normal sweat contains 95-97% water. That's 15-20% more toxic waste removed! A well known doctor



named Dr. Sherry Rogers wrote a book titled "Detoxify or Die." On page 199 she states, "I am convinced that the far-infrared sauna is something everyone should do to restore health. The body gets rid of stored chemicals in stool, urine or sweat. The sweat route requires no drugs and is most efficient and natural. (Man used to physically work and sweat before computers were born.) I was looking for treatments that were natural, but inexpensive and definitely not high tech! But when you realize the lifelong incapacity and expense of diseases such as chronic pain syndrome, heart disease, chemical sensitivity, chronic



*toxicity, a sauna is cheap. Let's face it: high-tech pollution requires high-tech solutions. Just add up the time and money you waste getting diagnosed, or add up the cost for a year of prescription medications and you will pay for it. But its advantages do not end there. Once you have it, it's yours forever, for the world will never run out of ways to poison us. The whole family can use it. It is not only capable of providing the*

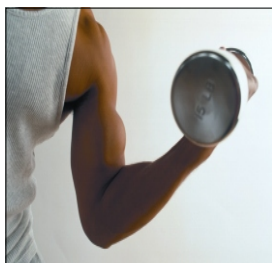


## What Health Benefits Will I Receive From Using a Cedrus Sauna?

There are numerous health benefits you will receive from using your Cedrus Sauna. Here are some of the most beneficial:

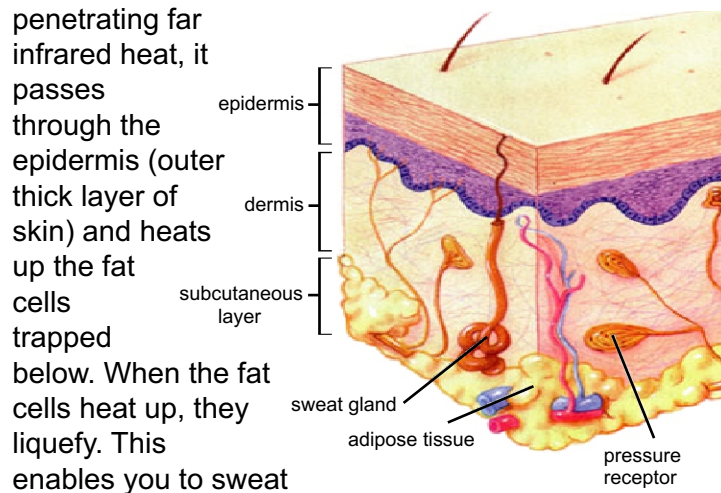
### Pain Relief and Relaxation

Many people suffer with some sort of pain – arthritis, a sore back, soft tissue damage and fibromyalgia, to name a few. Inflammation of the muscles, joints and tendons is the major cause of this discomfort. As a natural anti-inflammatory, deep, soothing, far infrared heat has been known to provide great relief. Infrared heat gets the blood circulating to the affected area and in no time you're feeling loose, relaxed and able to move again. Enjoy your Cedrus Sauna and possibly decrease or eliminate the need for pain medication. We all know that some of these medications have very harmful side effects, which include damaging the liver and/or kidneys. The best part of all is that while your pain is being relieved, you are realizing other health benefits at the same time. Even healthy people experience pain. Jobs, sports, exercise, or daily workouts can cause pain due to the build up of lactic acid in the muscles. Your Cedrus Sauna's far infrared heat eliminates lactic acid. You will feel renewed! You can sauna at home anytime! You choose the time and temperature, while enjoying music or reading and even using some aroma therapy. Imagine a quick "trip" to the Hawaiian Islands with an ocean waves CD and fresh plumeria to enhance your Cedrus Sauna experience. The choice is yours – use your sauna when you wake up in the morning, before



### Weight Loss

There are many ways to lose weight, but none as enjoyable as relaxing in your Cedrus Sauna. Add a healthy diet and exercise and you're on your way to a healthy life style! Let's face it – losing weight is about numbers...burn more calories than you take in! After your exercise routine, why not relax in your Cedrus Sauna and continue to burn calories (300-900 per session). Hard to believe, but it's true. One thirty minute sauna session can burn up to 900 calories! In your Cedrus Sauna, your body responds as if you are performing an aerobic exercise. Your heart and lungs are working at an accelerated rate and you begin to detoxify your body. One extraordinary thing about perspiring in your Cedrus Sauna is that you're not just sweating out water...you're sweating out fat as well. Because of Cedrus' deep penetrating far infrared heat, it passes through the epidermis (outer thick layer of skin) and heats up the fat cells trapped below. When the fat cells heat up, they liquefy. This enables you to sweat



wake up in the morning, before

### Cardiovascular Conditioning

With millions of people suffering from heart disease, we need to do all we can to prevent it. The heart is a muscle. It needs to be exercised. Cardiovascular conditioning is an important step in the prevention of heart disease. Increasing your heart rate and blood flow helps improve heart health. While safely dilating blood vessels, you'll be keeping your blood pressure down at the same time. Doctors recommend thirty minutes of cardiovascular exercise at least three times per week in order to maintain a healthy heart. This can be experienced in your Cedrus Sauna without the trauma to sensitive muscles and joints. For those who are unable to perform regular physical exercise, the Cedrus Sauna is the perfect answer to still receiving a great cardiovascular workout! Why not relax in your Cedrus Sauna, grab your favorite book or CD and make your sauna do all the work?

### Improves Immune System

Do you know why our bodies create a fever when we are sick? It's because heat kills the harmful virus, fungus, and bacteria that cause infection. While a fever is no fun, taking a sauna is! By creating an artificial fever, a Cedrus Sauna improves the immune system. It kills low grade virus, fungus, and bacteria that cause infection within the body. As a result, your immune system is left stronger and more capable of keeping you healthy. Building a strong immune system is not only good for fighting off a cold and the flu, but it helps with long term degenerative diseases as well.

### Improves Blood Circulation

When your blood circulates, it brings nutrients to your cells and carries waste away. This process speeds up while sitting in your Cedrus Sauna and increases your circulation. Poor circulation may cause cramping, varicose veins, and even wounds that don't heal. There are three main parts to the circulatory system:

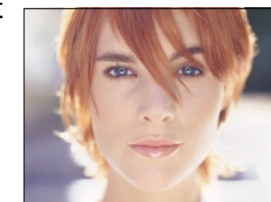
- ✓ Pulmonary circulation (lungs)

blood to your lungs where the exchange of carbon dioxide and oxygen takes place. The fresh, oxygen-rich blood enters the pulmonary veins and returns to the heart... where it again journeys throughout the body. *Coronary circulation* refers to the movement of blood through the tissues of the heart. Serious heart damage may occur if the heart tissue does not receive a normal supply of food and oxygen. The heart receives nourishment through the capillaries. *Systemic circulation* supplies nourishment to the tissue located throughout the balance of your body. The blood vessels (arteries, veins, and capillaries) are responsible for the delivery of oxygen and nutrients to the tissue. The oxygen-rich blood enters the capillaries where the oxygen and nutrients are released. During systemic circulation, blood passes through the kidneys and liver. The kidneys and liver filter much of the body's harmful waste. Using your Cedrus Sauna enhances the process of delivering nutrients and oxygen along with the removal of waste...helping you to experience better health!

### Skin Care

With all the ways available to reverse aging and to beautify your skin: chemical peels, microdermabrasion, masks, creams, lotions and exfoliation, you could spend a small fortune just to achieve the look you're hoping for. What do all these products and procedures claim? They either clean out your pores or moisturize your skin. When in your Cedrus Sauna, you're doing both. You're sweating out everything that's trapped deep within your pores including make-up and dirt that can cause blemishes.

Because Cedrus' far infrared penetrates deeply, your skin is moisturized while removing impurities through water and oil (liquid fat that's trapped



Our product is available to help you obtain optimal health. It is not intended to be a substitute for medical advice.

## What Makes Radiant or Infrared Heat a Better Heat Source?

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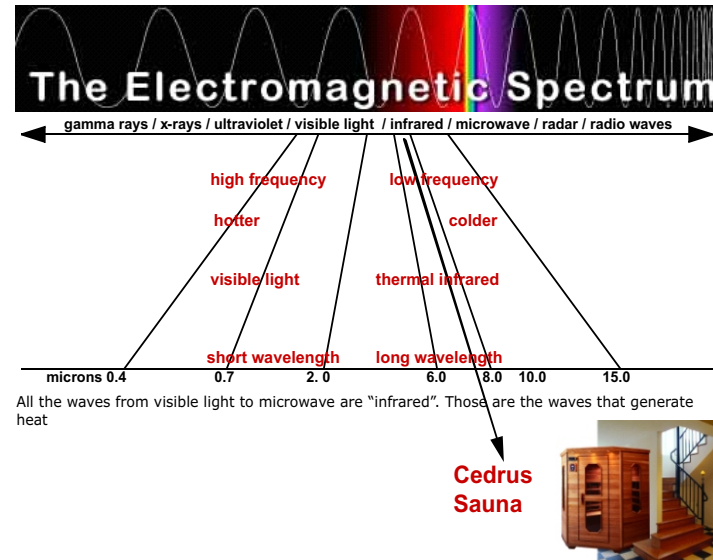
There are three types of heat: convection, conduction and radiant. Convection uses the process of heat transfer from a solid to an adjacent fluid such as air or water. Some examples of convection heat are hot air ovens, gas wall heaters and traditional lava rock saunas. Conduction is the transfer of energy through a solid to another solid medium. Examples of conduction heat would be the heat transferred from your frying pan to your food. Or the heat transfer from an iron to your shirt.

The third type of heat is radiant or infrared. Radiant heat is what is used by a Cedrus Sauna. Radiant heaters use wavelengths of energy known as emissions that travel through a medium (usually air) that remain at the same intensity until they are intercepted by a solid object. These wavelengths can then be reflected, transmitted, or absorbed. The wavelengths that are absorbed are converted into thermal energy. Human beings are infrared, therefore, we absorb infrared heat. Radiant or infrared heat has been used for many years in various applications. It's an alternative heat source used in industrial buildings. You also might have seen radiant patio heaters at your



favorite restaurant. When overhead infrared heaters are used, people feel warmth instantly but the air temperature remains cool, saving

comfortably, and realize greater benefits. In a Cedrus Sauna, your body absorbs up to 93% of the infrared energy it comes in contact with...compared to 15% for convection type heaters (used in traditional rock saunas). All infrared heaters are not created equal. One major difference is in the wavelength produced. Wavelengths are measured in microns from short to long. To help you understand wavelengths, refer to the



For many years physical therapists have used short wave infrared in the form of heat lamps to treat muscle injuries. It's beneficial because it uses radiant heat applied directly to the muscle. The problem is, with short wave infrared, the surface gets hotter than the interior. (Over time the lamp will overheat the skin.) When you use long wave, also known as *far infrared*, the heat penetrates two to three inches with a very uniform effect. That's why we use long waves in the Cedrus Sauna. With the long wave, even though it's a cooler wavelength, your Cedrus Sauna will heat your body with a deeper, healing, therapeutic heat... and never overheat the skin. All warm blooded creatures radiate infrared heat. Humans radiate a far infrared

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organic substances resonate within the far infrared frequency range and can absorb energy easily from these radiated, far infrared waves. Since it's their resonate frequency, they vibrate vigorously and become both the radiator as well as the receiver. You see, when two sources of energy operate on the same frequency together, they "resonate." Just like if you had two tuning forks across the room from one another at the same pitch. Your body emits far infrared heat. Cedrus Sauna uses the exact same wavelength. This results in a perfect match. Your body absorbs our far infrared rays to a depth of between two and three inches. A Cedrus Sauna is not only healing and therapeutic...it's the perfect tool to expel fat and toxins too! Scientists have been observing the benefits of far infrared for over 20 years. NASA has used it to keep the astronauts warm. It's also used in incubators for newborn babies.

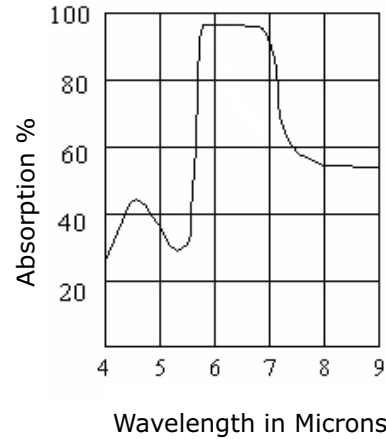
Creating the perfect long wave of infrared is not an easy task. Cedrus Sauna is the first and only manufacturer of infrared saunas that has designed, engineered and manufactured its own infrared heater. We even had it patented! Everything else is just "off the shelf" and was designed for other uses. Only saunas with the Cedrus name can offer true, full body, far infrared therapy! Achieving this goal wasn't easy. We're pleased to share some of our secrets with you. To arrive at the proper wavelength, a special heating element emits through a medium, such as ceramic or silicon sand. In order to arrive at the perfect 6.8 micron level, just the right mixture of silica, ceramic and alloy for heat dispersion must be used. The heater's surface temperature must be perfect. Getting the heat to emit at the 6.8 micron level is one thing... having the emissive power to fill the sauna with warmth, at that wavelength, is another. Until now, no one has been able to emit as much infrared heat, at the right wavelength... as a Cedrus Sauna! No other sauna has

for you and your sauna. They might emit some far infrared heat, but not at the perfect 6.8 micron level and definitely not with enough heat at that level. How do we get to that magic micron level? We understand *Wein's law of heat dispersement* which is, simply, the longer the wavelength the less energy is emitted. So, if you have a very small or thin heater, you're not able to produce enough infrared. The right wavelength requires a lower surface temperature.... You need a larger surface area to produce what is needed. Why is that? You can't turn the surface heat up! If you do that, you get shorter wavelengths that overheat your skin and the air too. When infrared energy is in the shortest wavelengths, you see it because it emits photons, or light. That's why a blue flame is hotter than a red one. Long waves are invisible and don't emit photons. The shorter the wavelength, the more energy is emitted while the longer the wavelength...the less energy is emitted. The goal is to emit the correct far infrared wavelength. Cedrus Sauna has achieved this by using the right materials plus the right combination of surface area and depth. With more surface and interior space for the long waves, maximum infrared energy is emitted. Each Cedrus heater has a surface area of 165 square inches and generates a perfect 6.8 micron level



# What Makes Cedrus' Heaters the Best?

Cedrus wants you to have the perfect micron level and maximum far infrared for your body. Since the human body is made up of at least 70% water, our goal is to emit the wavelength of infrared where water absorbs it best. There are many studies on infrared wavelengths and their absorption properties for water. This



As you can see from the graph above, water absorbs infrared best around the 6-7 micron level. Microns are how we measure wavelengths and are measured from peak to peak. What does this mean to you? Do the



All infrared wavelengths can be figured out or calculated by Wein's Law or the formula indicated:

## Wavelength of maximum intensity is dependent on T. (Temperature)

The relationship of the wavelength of maximum intensity of a black body to its absolute temperature is expressed by Wein's law.

### Wein's Law

$$\lambda_{max} = a/T$$

a = 2898 if λ is measured in microns

2898 / the temperature in Kelvin = micron level.

To get to Kelvin you must first convert Fahrenheit to Celsius and then Celsius to Kelvin. See the conversion chart below:

Conversion Formula	
Fahrenheit to Celsius	C = (F - 32) x 5/9
Celsius to Kelvin	K = C + 273

To find Cedrus' wavelength, you must first convert the heater temperature of 300°F to Celsius. We do that by using this formula: 300°F - 32 = 268, 268/9 = 29.77, 29.77 x 5 = 148.85°C, and then to Kelvin: 148.85°C + 273 = 421.85°K.

Now that we have the conversion to Kelvin we must use Wein's law to find the exact micron level. We do that by taking the surface temperature of the heater in Kelvin (421.85°K) and divide the number 2,898 by it: (2898/ 421.85° = 6.86).

Since 6 - 7 microns is the proper wavelength for water to get the maximum absorption from infrared, Cedrus has designed every heater to produce as much of this long wavelength as possible. Cedrus Sauna is the only real manufacturer of a far infrared sauna heater and we use this formula evenly over all 165 square inches of each heater surface. That's a lot of far infrared! Cedrus wants you to have the best. To do that we had to design, engineer and manufacture our own heater. Only Cedrus Sauna can give you a whole body, far infrared experience. You can't get anything better! Of course there are other infrared heaters...but none like Cedrus – they're either smaller in overall size, very thin or both. Size is important for two reasons: One reason is because using a lower temperature to achieve far infrared is fairly easy. The difficult part is to emit enough energy at that low temperature to heat the sauna. This is called emissive power...the rate at which radiated heat is emitted from a surface, per unit surface area, per unit wavelength. You have to emit a lot of energy over a large surface area, and the entire surface area has to emit energy evenly (at the same wavelength) and consistently. This is where all others fail. Cedrus' heaters are made of just the right combination of materials in order to generate maximum emissive power. They are custom made for just this purpose. The second reason size is important is that infrared heat only radiates in a straight line. You need larger heaters so that you can receive more infrared in a direct line. With small skinny tubular heaters...you get a small, skinny area of infrared. With short, small ceramic heaters...you get a short, small area of infrared. Some ceramic coil heaters are curved in a convex shape to spread out the infrared. This



In the sauna, the radiant beams go in a straight direction, and are either reflected, transmitted, or absorbed depending upon the surface that they intercede with. You can only count on the waves that directly intercede with you. All organic matter and water absorbs infrared heat and turns it into thermal energy. Animals, plants, and people are organic matter. Water is a great absorber of infrared. An example is a cloud as it passes over the sun. It absorbs so much of the rays that you don't feel warm anymore. Since your body is 70% water and you're organic... you absorb a lot of the infrared rays. Smaller infrared heaters rely on reflectors behind them to radiate the heat. Reflectors are helpful to spread the heat around but reflected infrared will never be at the same wavelength, or as effective, as the direct 6.8 micron rays from a Cedrus Sauna. We don't use reflectors because our heaters are larger and already provide more heat than any other sauna. Once a radiant heater emits a certain wavelength of infrared and it fails to be directly absorbed, it's either transmitted or reflected. It will change wavelengths either way. In many industrial applications, countless calculations are done to measure these changes (thermodynamics). In the study of thermodynamics, infrared heat is measured to find the appropriate wavelength after it is reflected or transmitted through particular surfaces. For example, in a sauna, once the wavelengths hit surfaces other than you, like the walls or reflectors, those particular waves are no longer at the same wavelength. They're just warming the air and your body but not penetrating, like the proper wavelength would. That's why it's so important that the far infrared produced gets to you directly. Once it passes you up, hits the wall and bounces back... it becomes much less useful to you. Cedrus' large



## Why Do Cedrus Saunas Have the Best Construction?

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Cedrus Saunas have the best construction because of their details, details, details. Cedrus is Latin for cedar and all of our saunas are constructed with the finest, clear, select, premium Canadian Western Red Cedar. Western Red is known for its beautiful colors in mellow ambers, reddish cinnamons and rich sienna browns. It has a uniform fine grain texture, satin luster and a true straight grain. Western Red Cedar is also known for its outstanding physical properties. It's naturally durable and both weather and decay resistant. Its resistance comes from its contained extractives. These prevent decay causing fungi and mold. Unlike almost all other sauna woods, Western Red Cedar can be used for exterior applications. It's sometimes used for siding on houses. It's termite and bug resistant and a great thermal insulator. After arriving at the factory, the wood is air dried for long term durability and natural oil retention. Next, it's hand

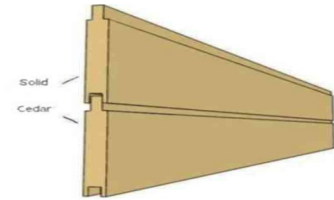


The next step is to build the frame. No cost cutting here – Cedrus uses only hard, solid wood instead of formaldehyde based plywood and the frame is assembled with metal fasteners...not glued like others.



This prevents any "off gassing" or fumes. No oil based glues, adhesives or lacquers are used in the production of a Cedrus Sauna. As a California corporation, manufacturing in the United States, Cedrus Saunas are built to the highest standards in the industry.

Cedrus Sauna adds another wonderful feature – steel conduit around every wire. The wires are actually built through the frame... no loose ends here. Even the finest houses don't provide this level of construction. We want to make sure everyone in your family is safe from any potential danger. Not only does the steel conduit protect the wires but it also provides EMF (electromagnetic field) shielding. All four sides of the sauna are made of solid wood and groove with tongue panels.



Cedrus Sauna utilizes a heavy duty ten ton press to make sure all the walls are safe, sturdy and built to last a lifetime. Each panel is high pressure sealed for at least five to six hours. After the panels are sealed, they are sent to the double-cut saws where they are



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Next, the panels proceed to the sanding machines. Everything is sanded, even parts you don't see. They are sanded...then sanded again.



The accessories, like the backrest, window trim, molding, door handles, and sauna legs are all meticulously handcrafted with detail, and hand sanded. When the sauna is fully assembled...it's all

At Cedrus Sauna, each panel is a different team's specialty. One team's specialty is the top panel, where they specialize in installing the beautiful overhead lights, built-in speakers and the easy-to-open vent. Another team specializes in the back panel where you will also enjoy a hand sanded backrest. Still another team specializes in the front panel where the CD player, digital controls, and the beautiful glass door and elegant hand-crafted door handle are installed. One of the front panel team's jobs is to make sure that the door's wood grain matches the wood grain of the front panel. Even the trim is individually matched up. This ensures the high quality, custom look of a Cedrus Sauna. With each team specializing in one section of the sauna, there is a great deal of pride going into every detail. Once all the panel teams are finished, the panels are brought together to another team where they are assembled for the first time. The saunas are hand sanded one last time and inspected for any flaws before the multiple water based clear coats are applied to the exterior of the panels. This protects and enhances the beauty of the wood. So with Cedrus, you can see there's quality in every detail. If you've purchased your sauna already, welcome to the wonderful world of Cedrus! If you haven't purchased yet, call your local dealer and start enjoying your own

## Why Are Products Made In The United States So Much Higher in Quality?

Most of us have experienced the difference in quality when we choose to purchase a product that has been made in another country. A product made in China results in lesser quality and a lower price for several reasons. The primary basis for determining the value of a product is the quality of components and the quality of the workmanship. In manufacturing, there are many ways to cut corners and cost (most of which are not allowed in the United States). When labor rates are less and regulations are low or non-existent, it is easy to produce a product with low quality and a low price. When low cost foreign products are sold by dealers and distributors to consumers in the United States, the focus is on the profit margin. When the profit margin becomes more important than the quality and safety of a product, the results may be devastating. The consequences are often very serious when foreign companies manufacture an inferior product. Everyone suffers – the U.S. company that buys the product wholesale, the retailer that sells to the consumers, and the end-user. The reality is that these types of products have already caused real damage to children, adults and pets. Products like these (some of which have been recalled) include baby bibs, baby and children's toys, food (pet and people) and tooth paste. American dealers and distributors sometimes make bad choices to sell low cost foreign products. They eventually spend most of their "higher profit margin" towards repairing product defects and responding to customer service issues. Problems often remain unresolved because the source of the problem is on the other side of the world! When making a purchase, smart consumers will ask themselves the following questions: "What is the quality value in relationship to the price tag?" "If I choose to spend less for lower quality, how much money, time and effort am I willing to invest when it

Many Chinese made infrared saunas are being imported into the U.S. In many situations these imported saunas are marketed as U.S. made products. This happens frequently on the internet, where these companies' web sites are the only place for you to purchase their sauna. You may receive a damaged product or one that doesn't even look like the sauna you bought from the website. Warranty becomes an issue if the web site company no longer imports saunas or decides to change



brands. Now, you are left with a manufacturer's warranty from somewhere in China! These lower cost, lower quality imported saunas are made using pine, spruce, fir, or hemlock. Some import companies even use lesser quality cedar. They also have smaller, lower quality heaters and most would not certify to our electrical standards (ETL, UL or CSA). Quality is remembered long after price is forgotten!

C E D R U S<sup>™</sup>  
  
 S A U N A S

**History of the Infrared Sauna Industry and Our Story**  
 Initially, there was only one infrared sauna manufacturer in the United States. This manufacturer used high quality wood and the best infrared heater that was available (rod type infrared heater). After a period of time, two more companies were started by sales people from the original company. Both of these companies chose to use a lower quality heater that was originally intended for industrial use (small ceramic convex shaped heater). They did, however, copy the original company's use of big reflectors behind the heaters. To further lower costs, they used lesser quality wood in order to undercut the pricing of the original company. In an effort to compete with price, the original company took their manufacturing and production to China. Many dealers and distributors became dissatisfied with the inferior quality of the product and not much of a difference in their wholesale prices. It wasn't long before some of these dealers and distributors went "direct" to China for their saunas. As long as they were getting the lowest quality, they wanted the lowest price! Now, there are many lower quality Chinese saunas being sold here in the United States. A huge change in the industry was about to take place. Several key executives from the very first company were extremely unhappy with the decision to manufacture in China. The key engineer did not want to relocate to China. The other executives (who were responsible for the expansion and growth at the first company) continued to have the same goals. Their desire was to represent the highest quality product. These executives started their own manufacturing company. With all of their experience and expertise, it was clear to them just how to fill the "quality" gap in the industry. After all, the designer and engineer of the original product, as well as the other top executives, knew exactly what kind of product distributors, dealers and their customers were searching for, quality. Our company, Full Spectrum International Inc., is dedicated to just that — offering American made quality and is located in sunny California. While there are many choices in infrared saunas, why not choose the highest quality made sauna, available at a fair price? Enjoy Your Cedrus Sauna!





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