## WHAT is FAR INFRARED LIGHT?

Solar energy from the sun covers a broad energy band including infrared, visible light, ultra-violet, x-rays and gamma rays. Only a small amount of these solar rays are visible as colors. The greatest amount of the sun's energy output is in the infrared segment of the spectrum. This band of light is not visible but can be felt as heat.

The infrared segment of the electromagnetic spectrum is divided into three segments by wave frequencies and wave lengths. Wave lengths are measured in microns (mm), which are one millionth of a meter: Near Infrared: 0.76-1.5 mm; Middle: 1.5-5.6 mm; Far: 5.6-1000 mm. A narrow spectrum between 4 to 14 microns has been shown to have particularly beneficial effects on the body.

Among the total spectrum of solar rays coming from the sun, the FIR waves are the safest and the most beneficial. For example, the visible light spectrum, with very short wave lengths, is reflected away from the body. When near (NIR) waves heat organic substances the surface gets hotter than the interior, and the interior gets heated by conduction from the surface. By contrast, far-infrared penetrates deeply with a very uniform warming effect.

What are the benefits of FIR light waves? All humans send and receive FIR waves. The FIR waves between 4 to 14 microns, sometimes called Vital Rays, appear to have special regenerative effects on the body. When any tissue in the body is exposed to FIR waves, regardless of the source, there is a rapid increase in warmth which can be shown by thermography. This heat plus the activation of several other response mechanisms stimulates the healing processes.

For example, FIR waves:

- Increase blood flow by promoting dilation (expansion) of the micro-circulatory system of capillaries.
- Reduce muscle spasms as muscle fibers are heated.
- Assist in the reduction of swelling and inflammation by improving lymph flow.
- Reduce soreness through direct action on both free nerve endings in tissues and on peripheral nerves.
- At the cellular level, researchers have discovered that specific FIR waves:
    - Promote the adhesion and osmosis of water molecules across the cellular membrane.
    - Attract calcium ions to the cellular membrane.
    - Reduce acidity.