

Stabitol and StabINetics™ Technology

Cheltec's ongoing commitment to greener growing environments.

Cheltec's StabINetics processing is a breakthrough for application efficacy utilizing less chemicals. The chemical reduction helps to minimize negative environment impact without compromising product quality and performance.

Cheltec recently acquired a new and innovative technology that uniquely suspends (solubilizes) minerals and other insoluble compounds differently to augment our current process to formulate Cheltec's flagship solubilizing solution, Stabitol™. We combined our two technologies to achieve a sophisticated solution that we call StabINetics that, like Stabitol™, converts dry insoluble minerals such as calcium or zinc into a liquid mineral solution in a novel way providing significant benefits.

Process Overview:

Using water as an example, the chemical **formula of water is H₂O** and basically means that **water** contains 2 atoms of Hydrogen and 1 atom of Oxygen. Opposite charges attract one another. The slight positive charges on the **hydrogen (proton)** atoms in a **water molecule** attract the slight negative charges on the **oxygen (electron)** atoms of other **water molecules**. This tiny force of attraction is called a **hydrogen bond**. However, this **bond is** very weak. If we add a soluble form of calcium to a glass of water, stir it until its dissolved, the calcium particles will float invisibly throughout the glass of water because of a weak bond between the calcium and water. However, if a stress factor such as a low temperature impacts the water solution, the bond breaks. When the bond is broken, the calcium particles fall out of suspension throughout the water and accumulate into a visible powdery heap at the bottom of the glass. This is called precipitation or "falling out of suspension." Until recently, Stabitol was our only solubility agent to prevent this bond from breaking and remains our most versatile, solubility agent. However, when applications require a strong solubility agent with a higher pH level and a different mode of action, StabINetics is the perfect alternative.

Cheltec's StabINetics process was developed to reorder (separate or realign the molecule ions) of liquids and oils to create a spatial void between the two atoms (Hydrogen and Oxygen). Then, when compounds with either positive or negative charges are introduced into the realigned solution, such as water, the compound(s) being introduced will bond to either the hydrogen or oxygen atom. Once the mineral compound is introduced during the molecular separation process the compound particle(s) fill the spatial void during the solution's cycling process causing both the hydrogen and oxygen atoms to bond with their new partner; the mineral. The newly formed mineral solution is then subjected to a specialized ionization-booster making the the new mineral solution stable with enhanced application benefits. The result is a clean, purer liquid micronutrient, fertilizer, or carrier for plant-beneficials such as microbes, carbohydrates, and vitamins for customers desirous of more natural products for their gardens. Both Stabitol and StabINetecs are powerful solubility agents that are superior to competing EDTA chelated minerals and other liquid minerals with far reaching benefits to both consumers and our environment.