COSEVA® ADVANCED TRS® IN A COLLOIDAL SUSPENSION

WHAT IS ZEOLITE?

ZEOLITES ARE CRYSTALLINE, HYDRATED ALUMINOSILICATES WITH WELL ORGANIZED ATOMIC SCALE CAGE STRUCTURES. THEY ABSORB WATER AND COLLECT NEGATIVELY CHARGED IONS, SOME REVERSIBLY, OTHERS PERMANENTLY. THIS IS MADE POSSIBLE BY THE ATOMIC STRUCTURE OF THE CAGES IN THE. ZEOLITE WHICH IS CONSTRUCTED FROM ALUMINA AND SILICA TETRAHEDRA THAT CREATE AN ELECTRON DEPLETED CAVITY THAT IS POSITIVELY CHARGED.

THE CHARGE IS BALANCED BY THE PRESENCE OF SINGLY-AND DOUBLY-CHARGED IONS , SUCH AS SODIUM (NA+), POTASSIUM (K+), CALCIUM (CA2+), AND MAGNESIUM (MG2+). LARGER IONS WITH MORE ELECTRONS BIND VERY STRONGLY IN THE CAGE, WHICH IS WHY ZEOLITE IS AN EFFECTIVE ABSORBER OF THESE IONS. SINCE ZEOLITES ARE CAGE STRUCTURE WITH LONG RANGE ORDER, THEY ARE NOT MOLECULES. THEIR COMPOSITION IS DEFINED BY THE ATOMS CONSTRUCTING IN EACH CAGE. A GENERAL FORMULA OF A ZEOLITE IS: M2/NO • AL2O3 • XSIO2 • YH2O, WHERE M IS ANY ALKALI OR ALKALINE EARTH ATOM, N IS THE CHARGE ON THAT ATOM, X IS A NUMBER FROM 2 TO 10, AND Y IS A NUMBER FROM 2 TO 7. THE CHEMICAL FORMULA FOR COSEVA ADVANCED TRS®, A COMMERCIAL ZEOLITE, IS CALLED CLINOPTILOLITE.

MECHANISM OF ACTION

FOR COSEVA® ADVANCED TRS®, CATIONS (CHARGED METAL ATOMS), BIND INSIDE THE RIGID FRAMEWORK OF THE CAGE, WITHOUT CHANGING ITS STRUCTURE OR COMPOSITION.. THEREFORE, ALUMINUM AND SILICATE DOES NOT RELEASE FROM THE STRUCTURE INTO THE BODY IN ANY WAY. A FRESH ZEOLITE IS FILLED WITH SODIUM AND MAGNESIUM EXCHANGEABLE IONS, (THEY CAN BE REPLACED (EXCHANGED) EASILY WITH OTHER CATIONS IN AQUEOUS SOLUTION). THIS PHENOMENON IS KNOWN AS ION EXCHANGE, OR MORE COMMONLY CATION EXCHANGE. THE EXCHANGE PROCESS INVOLVES REPLACING ONE SINGLY-CHARGED EXCHANGEABLE ATOM IN THE ZEOLITE BY ONE SINGLY-CHARGED ATOM IN A SOLUTION OR REPLACING TWO SINGLY- CHARGED EXCHANGEABLE ATOMS IN THE ZEOLITE BY ONE DOUBLY- CHARGED ATOM IN A SOLUTION. THE MAGNITUDE OF SUCH CATION EXCHANGE IN A GIVEN ZEOLITE IS KNOWN AS ITS CATION-EXCHANGE CAPACITY (CEC) AND IS COMMONLY MEASURED IN TERMS OF MOLES OF EXCHANGEABLE CATION PER GRAM (OR 100 GRAMS) OF ZEOLITE OR IN TERMS OF EQUIVALENTS OF EXCHANGEABLE CATIONS PER GRAM (OR 100 GRAMS) OF ZEOLITE. WHILE THE RATIO OF EXCHANGE FOR IONS IS FIXED, THE EFFECTIVENESS OF CATION EXCHANGE IS DIRECTLY RELATED TO THE PARTICLE SIZE OF THE ZEOLITE. THE SMALLER THE ZEOLITE PARTICLE IS, THE GREATER THE AVAILABLE NEGATIVELY-CHARGED

SURFACE AREA. A LARGE SURFACE AREA PROVIDES A GREATER ABILITY TO ATTRACT POSITIVELY-CHARGED IONS FOR CATION EXCHANGE.

THE ABILITY OF COSEVA® ADVANCED TRS® TO ATTRACT AND TRAP POSITIVELY- CHARGED TOXINS

THE ZEOLITE IN COSEVA® ADVANCED TRS® HAS BEEN SHOWN TO BE EFFECTIVE FOR THE CAPTURE OF HEAVY METALS. RESEARCH HAS SHOWN THAT MORE ELECTRON RICH METAL IONS BIND MORE STRONGLY THAN SMALLER LESS ELECTRON RICH IONS., AS AN EXAMPLE ARSENIC HAS A CHARGE OF +3 IN WATER AND AN ATOMIC RADIUS OF APPROXIMATELY 1.8 ANGSTROMS, WHILE POTASSIUM HAS A CHARGE OF ONLY +1 AND AN ATOMIC RADIUS OF APPROXIMATELY 2.8 ANGSTROMS. THE ARSENIC BINDS WITH VERY HIGH AFFINITY WHILE THE POTASSIUM HAS MUCH WEAKER AFFINITY. THE COSEVA ADVANCED TRS® BINDS A VARIETY OF CATIONIC TOXINS. THIS INCLUDES HEAVY METALS (LEAD, CADMIUM, MERCURY, ETC.), NITROSAMINES, AND OTHERS. CATIONIC EXCHANGE IS AN ENTIRELY PASSIVE PROCESS—WHEN THE ZEOLITE IS IN CLOSE PROXIMITY TO THESE HIGH- AFFINITY COMPOUNDS, THEY WILL BE DRAWN TO THE ZEOLITE AND EITHER TRAPPED IN THE CAGE OR ADSORBED ONTO THE SURFACE. THERE IS NO CHEMICAL REACTIONS IN THIS PROCESS. THE ZEOLITE WILL PREFERENTIALLY BIND TO FREE CATIONS. IN DOING SO IT REBALANCES THE AMOUNT OF TOXINS THAT MAY BE STUCK TO OTHER THINGS IN YOUR BODY, EVENTUALLY DEPLETING THEM ENTIRELY. . POSITIVELY CHARGED ORGANICS (NON- VOLATILE AND VOLATILE) MAY BE REMOVED BY COSEVA® ADVANCED TRS® IF THEY ARE NOT TOO LARGE.. UNCHARGED ORGANICS ARE NOT PREFERENTIALLY TRAPPED OR EXCHANGED IN OR ONTO THE SURFACE OF COSEVA® ADVANCED TRS®

WHY A COLLOIDAL FORM OF ZEOLITE

ADVANCED TRS® IS A LIQUID SUSPENSION OF NANO-SIZED ZEOLITE COSEVA®® ADVANCED TRS® IN PURE WATER. ALSO KNOWN AS A COLLOIDAL SUSPENSION, THE PARTICLES CAN REMAIN SUSPENDED IN WATER, THIS HELPS THE ZEOLITE DISPERSE THROUGHOUT THE BODY TO DO ITS JOB.

WHAT IS A COLLOID?

COLLOIDS ARE DEFINED AS A SYSTEM IN WHICH FINELY DIVIDED PARTICLES, WHICH ARE APPROXIMATELY 10 TO 10,000 ANGSTROMS IN SIZE, ARE DISPERSED WITHIN A CONTINUOUS MEDIUM IN A MANNER THAT PREVENTS THEM FROM BEING FILTERED EASILY OR SETTLED RAPIDLY. COSEVA® ‘S ADVANCED TRS® IS SIZED IN THE NANOMETER RANGE WHICH FORMS A VERY STABLE SUSPENSION AND IS A TRUE COLLOIDAL SOLUTION THAT IS COLORLESS, ODORLESS AND TASTELESS. WITH THE SMALLER PARTICLE SIZE, IT POSSIBLE FOR THE PARTICLE TO PENETRATE DEEP INTO THE BODY TO DO ITS JOB A COLLOIDAL SUSPENSION WILL HAVE A GREATER IMPACT FOR DETOXIFICATION BY BEING ABLE TO GO WHERE THE FINEST CAPILLARIES FLOW AT A TRUE CELLULAR LEVEL.

SAFETY OF COLLOIDAL MINERALS

THE SAFETY OF COLLOIDAL MINERALS IS WELL STUDIED. NATURE SUPPLIES COLLOIDAL MINERALS TO US IN OUR WATER SUPPLY AND FOODS EVERY DAY. THE SAFETY OF COLLOIDAL ZEOLITE IN THE SIZE RANGE COSEVA® IS PRODUCING HAS BEEN AS WELL STUDIED IN VITRO AND IN VIVO. THE ZEOLITE IN COSEVA® ADVANCED TRS® HAS BEEN RECOGNIZED AS SAFE, HAVING BEEN GRANTED GRAS STATUS BY THE FDA (GENERALLY RECOGNIZED AS SAFE). ADDITIONALLY, COSEVA® ADVANCED TRS® ZEOLITE HAS A DOCUMENTED AFFINITY (OR PREFERENCE)FOR POSITIVELY-CHARGED HEAVY METALS AND TOXINS AND WILL NOT REMOVE BENEFICIAL NUTRIENTS. THE PROPRIETARY PROCESSING FOR ADVANCED TRS® REMOVES ANY EXISTING ENVIRONMENTAL POLLUTANTS AND FILLS THE CAGE-LIKE STRUCTURES WITH THE EXCHANGEABLE IONS CALCIUM, MAGNESIUM, POTASSIUM AND SODIUM, WHICH IN EFFECT, ADVANCED TRS® WILL ALWAYS SWAP OUT ONE OF ITS EXCHANGEABLE IONS IN EXCHANGE FOR POSITIVELY-CHARGED HEAVY METALS AND TOXINS. THE COSEVA® ADVANCED TRS® ZEOLITE IS TOTALLY PRODUCED WITHIN THE UNITED STATES OF AMERICA. COSEVA® ADVANCED TRS® ZEOLITE IS NOT STORED IN THE BODY AND IS EXCRETED VIA THE KIDNEYS WITHIN 4-6 HOURS OF INGESTION. GIVEN THE NATURAL HYDROPHILIC NATURE OF ZEOLITES AND THE INCREASED SURFACE AREA OF ADVANCED TRS®, INCREASING WATER INTAKE IS SUGGESTED TO FACILITATE THE BODY'S ABILITY TO REMOVE TOXINS. THE MANUFACTURING AND BOTTLING FACILITIES FOR ADVANCED TRS® ALL FOLLOW GMP (GOOD MANUFACTURING PRACTICES) IN THE HANDLING OF BOTH THE RAW MATERIALS AND THE FINISHED PRODUCT.

THE EFFECTIVENESS OF COLLOIDAL ZEOLITE

THE SMALLER THE ZEOLITE PARTICLE THE GREATER THE NUMBER OF ACCESSIBLE CAGES FOR HEAVY METAL AND TOXIN REMOVAL. THUS, RESEARCH SHOWS A MARKED INCREASE IN EFFICIENCY AND AMOUNT OF HEAVY METAL REMOVAL WITH THE REDUCTION IN PARTICLE SIZE. ADVANCED TRS® UNDERGOES PROPRIETARY PROCESSING TO REDUCE THE ZEOLITE PARTICLE SIZE TO THE NANOMETER RANGE. THE SMALL PARTICLE SIZE CREATES A VAST SURFACE AREA IN EVERY SERVING, DELIVERING AN EFFECTIVE DETOXIFICATION WITH EVERY SPRAY.

SUMMARY

1. COSEVA® ADVANCED TRS® ZEOLITE IS SAFE AND EFFECTIVE, PROVEN IN NUMEROUS TRIALS INVOLVING BOTH PEOPLE AND ANIMALS, AND IS GRANTED GRAS (GENERALLY RECOGNIZED AS SAFE) STATUS WITH THE FDA (FOOD AND DRUG ADMINISTRATION). THE ZEOLITE COSEVA® ADVANCED TRS® IS PROVEN SAFE THROUGH ITS YEARS OF SAFE USAGE AS A SUPPLEMENT FOR THE GENERAL POPULATION, INCLUDING CHILDREN.

2. WITH ADVANCED TRS®, COSEVA® IS BRINGING TO MARKET THE VERY BEST THAT TECHNOLOGY AND NATURE CAN PRODUCE, WITH A ZEOLITE SIZED TO ACCESS THE BODY ON A CELLULAR LEVEL

3. SAFETY AND EFFECTIVENESS OF ADVANCED TRS® IS INSTILLED THROUGH STRINGENT PROTOCOLS.

4. WITH AN AVERAGE SIZE OF <100 NANOMETERS AND AN ESTIMATED SURFACE AREA OF 5.2 MILLION SQUARE FEET PER OUNCE ADVANCED TRS® HAS THE GREATEST SURFACE AREA FOR THE MOST EFFECTIVE METHOD OF ACTION OF ANY PRODUCT ON THE MARKET TODAY. YOU CAN USE LESS WITH MORE EFFECTIVENESS.

THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. OUR PRODUCTS ARE NOT INTENDED TO DIAGNOSE, TREAT, CURE OR PREVENT ANY DISEASE.