AZOMITE® International

A Natural Source of Minerals and Trace Elements

AZOMITE® vs. Zeolites

AZOMITE® & Zeolites

AZOMITE® is sometimes mistakenly compared to another type of rock deposit known as a zeolite. As we shall see, the usage, physical structure and chemical composition of **AZOMITE®** is quite distinct from all zeolites.

There are roughly 40 natural zeolites in existence today as well as over 100 manmade ones. Natural zeolites are most commonly used in pet litter to retain waste; in animal feed as a toxin binder (even though most toxin binding only works well *in vitro* and rarely very well in the gut of the animal); in agricultural applications for soils that have poor water retention qualities; and in wastewater treatment. In contrast, manmade zeolites are more frequently used for water treatment as ion-exchange resins or in petroleum cracking to resolve impurities.

In marked contrast, **AZOMITE®**'s physical structure, usage profile, and number of biologically available trace minerals are vastly different from any zeolite. For example, zeolites have a crystalline structure that provides very good water retention, while **AZOMITE®**'s colloidal structure contributes very little to water retention and appears to more closely resemble a teardrop in which the trace minerals line the perimeter. Second, **AZOMITE®** is used in animal feed and for soil remineralization where it provides an abundance of trace minerals that are lacking in many feed ingredients and also missing from agricultural lands. Many scientific studies using **AZOMITE®** in soil and in animal feed suggest that its trace minerals are biologically available; use of zeolites, on the other hand, only provides chemical absorption, adsorption or water retention.

There are so many natural zeolites in existence that it is virtually impossible to provide a reliable single comparative analysis between *all* zeolites vs. **AZOMITE®**, but below is a comparison of some of the trace minerals in **AZOMITE®** vs. one example of a natural zeolite currently on the market. Note that **AZOMITE®** is higher in trace elements in every essential mineral except Copper (Cu) and includes many others that zeolites usually do not possess:

Trace Element	*AZOMITE®*	Amount in Common Zeolite
Boron (B)	29 ppm	0
Chromium (Cr)	6.1 ppm	0
Cobalt (Co)	22.3 ppm	0
Iodine (I)	2.2 ppm	0
Molybdenum (Mo)	12.6 ppm	0
Nickel (Ni)	2.6 ppm	0
Praseodymium (Pr)	27 ppm	0
Selenium (Se)	0.7 ppm	0
Silver (Ag)	0.005 ppm	0
Sulphur (S)	240 ppm	0
Tin (Sn)	2.9 ppm	0
Vanadium (V)	7.8 ppm	0
Potassium	5.23%	4.19%
Calcium	3.67%	2.23%
Sodium	2.07%	0.59%
Silica	65.85%	67.40%
Aluminia	11.43%	10.60%
Magnesium	0.78%	0.45%
Titania	0.20%	0.27%
Phosphorous	0.15%	0.10%
Manganese	0.02%	0.01%
Copper (Cu)	12 ppm	25 ppm
Zinc (Zn)	64.3 ppm	35 ppm
Rubidium (Rb)	325 ppm	120 ppm
Iron (Fe)	1.37%	1.30%
Zirconium (Zr)	62.7 ppm	480 ppm
Yttrium (Y)	23 ppm	55 ppm

Niobium (Nb)	40 ppm	40 ppm
Strontium (Sr)	380 ppm	560 ppm
Neodymium (Nd)	5.1 ppm	45 ppm
Lanthanum (La)	220 ppm	55 ppm
Barium (Ba)	0.09%	1200 ppm
Cerium (Ce)	230 ppm	130 ppm
Lead (Pb)	6.2 ppm	29 ppm

For more information on zeolites, see the website maintained by the United States Geological Survey (USGS) here.

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