

## Using Zeolites for Natural Odor Reduction

**Andrew Pace:** Welcome back to Non Toxic Environments, everybody. This is Andy Pace. Jay, we've got a really, really interesting topic for this week and it's somebody that I've been really looking forward to having on the show. I know you and I have talked about this product once or twice, probably more than that over the years. And as we were talking about just off the mics earlier it's a product that just works. I don't know how else to explain it and then we'll have in trouble, come on and he'll tell us all about it, but between you and I Jay it's just a product that works!

**Jay Watts:** Well, you know, it's, we were talking off mic, you said a lot of the new things, new fangled products that are on the market, they have a lot of bells and whistles wrapped around them. And it's a very enticing story that these products have. It's wonderful to know that there's something out there that as you said, just works well, it just works well, and it doesn't need a lot of bells and whistles because it stands for itself. That's all it needs is just its history and its efficacy. And you and I are both very big on those ideas.

**Andy:** Oh, for sure. Well, all right then let's bring the man in himself. Trevor Mullins with Deodoroc, Trevor, I have known you and your family for many, many years. As I said earlier, I'm really looking forward to having you on the show for, so thank you very much for coming on.

**Trevor Mullins:** Yeah. Great. Thanks for having me, Andy.

**Andy:** Of course. So you will do much better than I will- if you can give everybody a history of Deodoroc and really, you know, specifically how on earth did, did something like this come about?

**Trevor:** Yeah, well, it's got a long, long story. My father, as you recall was a very colorful character. So there's no end of entertaining stories that could be related to the development of the product, but maybe what I should do first, Andy and I think it will I'll just describe the product initially, just to give the listeners an idea of what we're talking about. Deodoroc is a eco-friendly odor absorber, and what it does is it attracts and absorbs any type of odor from any item or any area and where it's different than like activated charcoal or baking sodas it observes a full spectrum of odors because of pH levels some odors aren't attracted as well by baking soda as they are by charcoal and things like that. So it's good that way. But what it does is when it's put into an environment where there is an odor, it will react with the oxygen that's in the area and set up what they call a negative charge to it by going through an ion Axion exchange system effectively, what it does is it turns into a negatively charged, negative end of a magnet and coincidence of that, any odor how it reaches your nose or anybody's nose is that, the molecule of the odor piggybacks onto a molecule of oxygen and it finds its way through air currents to your nose and you get the sensation of a smell. What's nice about it piggybacking on oxygen is that it takes on a positive charge. We all remember the grade school, negative attracts positive. So that's what happens. And what's a particular importance to that is that Deodoroc doesn't just absorb the orders that are in the air, it'll attract them. But when it's closer to an item that's been saturated with odors, it will actually go into that product. Like wood is a really good example.

Everybody's had the experience of a cat urine on a floor. You wipe it up, clean it up two days later, it starts to stink again because of the odors as is percolating out of the wood. What this does, it will actually draw it out of the wood or out of the tennis shoes, out of the upholstery in your car or any item in any area. And it'll pull it in there. So that it's something that other products just don't do at all. They only clean the surface or worse than that they overpower your sense of smell with names that sound pretty, but they're pretty toxic, or they just numb your sense of smell. So you can't smell it anymore. So it's different from those other products in that way. And they're reusable as well. The actual Deodoroc product it adsorbs, \ that's with a D rather than a B and absorbed is when you have a sponge in it absorbs water, adsorbs is it takes it right into the internal cavity of the the cells that make up the Deodoroc. So adsorbs is what it does. When it's taken, when it's saturated, it does have a saturation point, just like a sponge when it has taken up all of the odor that possibly can, you put it out in the fresh air and it'll discharge it, it'll go through exactly the same ion Axion exchange system and start releasing the odors to the oxygen and other molecules that are floating around in the area and leave it out there for several weeks, sometimes even longer. And it's totally recharged and ready to reuse.

**Andy:** Wow. Again, amazing product. And let me tell you the very first time we used this and I became, a huge fan was a friend of mine bought a pool table and they bought it used from a place where there was heavy smoking being done. And the felt on the pool table just had this horrible, horrible smoke aroma coming from it. We took a couple of pounds of the Deodoroc carpet granules, and we spread them all across the felt and covered it up with sheets of newspaper, probably kept it there over a weekend, vacuumed off all the granules. And that was 20 years ago, that smell has never come back. I mean, it's truly an amazing product. And I was sold from that point on, I was sold. And it's remarkable that this is a natural material and you

mentioned it most manufacturers of deodorizers or fragrances are essentially just masking the odor or numbing the senses. This actually takes those odors away and dissipates them.

**Trevor:** Yeah. Removes them completely.

**Jay:** You know, I have a question that just came to me when you were talking about carpeting, Andy, Trevor, how does, how does the product work when you have a synthetic chemical and Andy, you know what I'm talking about? We have people who buy new carpeting and the off gassing from the carpeting is a disturbance for them. Can the product can work for those kinds of challenges as well?

**Trevor:** Absolutely. It will. But just to manage expectations, you have to understand with carpets and paints and the odors that come off of there, it's like turning on a fire hose it's coming out very, very fast and over time it will reduce in volume that it's gassing off. So will the product work? Absolutely. It will. It will absorb all those gases, will it adsorb all of them? Probably not because there's just too much, an open window would work far better for something like that. And normally a week or two, and it's gone, but after, two or three weeks, it's gone, it's dissipated to a level that Deodoroc up will definitely work. And one block, the 8 ounce block, is typically good for one room. And it won't, that's another thing too, Jay and Andy about the product is that it doesn't have the glitter that a lot of the other deodorizer and air freshener products have. It doesn't, it's not an instant fix for a problem. You can't put it into a smelling room and come back in five minutes and have it smell pretty. It just doesn't work like that at all. It takes time. It works slowly, but it is effective. So if you have an odor in a room, depending on how severe it is, how long it's been there, how long it's saturating into the items and areas that are in the room it could take up to a week before you start noticing a smell

[reduction]. I mean, if you had a way to measure it, you would probably see the impacts of it, within hours, but your nose isn't that accurate nobody's nose is really that accurate, but after a week, you'll start to notice the level of odor dissipating, certainly after two weeks, it will be very obvious. And probably within a month, I wouldn't say that it would be 100% gone, but it would probably be 100% undetectable by an average nose.

**Jay:** Hey, so the Andy story about the pool table was pretty, pretty interesting. Do you have some stories about how the products work and give us some of your like highlights?

**Trevor:** A good story is it actually happened to my brother. His wife had taken their car out to do some shopping during the summertime. And they were going camping. So they were taking their camper van and going and left the car behind, but they also left a package of raw chicken on the back window of their car. And of course they were gone for a week and they came back. It was horrible. Months later, it still stuck. Every time it got warm, the car stunk, we ended up taking the carpet deodorizer, putting it all around the back shelf of the window, all over the seats on the floor. We opened up the trunk and put the blocks in there and put pucks, wherever we could fit in every little corner we overdid it. But the smell was gone in about a week completely and never, ever came back. And this was after it had been hounding them for the better part of a year. My dad, as I mentioned, he was a colorful character. He was one of his stories that he used to refer to all the time. It'll suck the smell of a dead rat through a wall. It's kind of a not a nice way to say it, but it does do that. It will gather odors and take them through a wall and absorb them into the product.

**Andy:** Trevor, your dad Gordon was I remember being on the phone with him it seems like for hours at a time, cause he would talk about the product. He would. I mean, he lived in breathed

this material and I remember he was telling me that, back early on you were actually packaging and selling this for farm feed additives and to be used in meat processing plants and so forth. Nowadays there's probably laws against using natural materials because the governments feel like chemicals will do a better job, but I mean, this product is very, very safe. So you don't have to worry about, you know, if your dog or cat starts licking at the block, it's not going to hurt them. Back in the day, what was the product first invented for? Was it just for an odor reducer? It wasn't for the farming industry.

**Trevor:** Yeah, well, like I said about my dad being a colorful character where he really got to start was in gold mining and I'm not sure if you're familiar or the audience is familiar with gold mining, but typically what we have is small, independent prospectors going out staking small claims. What they try to do is they try to compile a set of contiguous claims so that they get a large enough area of gold bearing that it makes it commercially feasible to go in with equipment. And so my dad would do that and he'd get a lot of his properties by not claim jumping, but he would find claims that hadn't been renewed within the timelines and he'd go and put his name on it. And anyways, he did this and he was able to put a lot of property together, but he wasn't able to bring it to full fruition because of the amount of capital that's needed for that. So he had up trading back and forth for different types of properties and he got into minerals and zeolite was one of them and it was quite by accident. And that was actually the name of the founding company was Industrial Minerals of North America. And as things turned out, you had to focus on making some return off this he needed the money, everybody needs money. So he ended up trading all of his properties and got clear claim to a number of zeolite properties. And zeolites are the main component of our Deodoroc product. And it comes from volcanoes is where they cut, the way to describe it's a lab that comes into contact with water and it foams up and solidifies. A little bit more to it than that, but that's

essentially what it is. And my dad started looking at different ways of using the product. At the time there wasn't a lot of research being done or had that had been done. They've known about zeolites for many, many years. They used to use phosphates in laundry detergent. So they stopped using those and replaced them with zeolites. And those have since of course, been replaced with manufactured equivalents to zeolite. And it's just a way to stop everything from sudsing up, to keep everything from clumping together, when you're washing things with the soaps and anyways that's what he did. He found a number of uses, and included in that were not order issue related ones, but for animal feed as I mentioned and they're still doing this today. It is still used today in the farming industry, they'll feed it to animals mainly the pigs and cattle but with the way that the zeolites adsorb meant things they'll absorb nutrients and then release them slowly. So as the animals are eating them, especially like cattle, the remnants with multiple stomachs, they'll eat up to about 3 to 5% and that range in their feed, and it serves two purposes. One is a food additive, and the second it stops the feed from clumping up, and that makes it easier for the animal to eat and pass it through his digestive system. But as it's passing it through the digestive system, it allows us a reduced number amount of nutrients to go through tact in each stomach, rather than just all getting flushed through. You get more efficiency out of the feed that you have the animal, and then more so with pigs with pork, it's always an odor issue with pigs and this does help it doesn't get rid of it completely, but it lowers it down to a level that it can be controlled by other means, you know, mechanical means for removing odors. So there's the two uses, and it's still happening today. But it's used in very large, large volumes. And it's, it'll probably continue being used forever because it's a great product in itself. The other way that they use it and it was used quite a bit if you remember the Exxon Valdez oil spill because of the way that it attracts things that it was used, not so much in the initial cleanup of that spill, but it was after the main spill had been cleaned up and there was all the residual bits. They did a lot of preliminary research on how to make the zeolite work

for that. And then essentially what it was, is they're putting it directly into the end of the water and the areas that's being soiled by the oils. And and then vacuuming it up. And it's a rather delicate process to do. But what it did was it got rid of all of the residual oil that was there, but it didn't disturb the natural environment that was still intact. So it's used for that as well. It's also used in agriculture. I'm not sure Andy or Jay, if you're golfers, but quite often...

**Jay:** We try to be, we try to try to be, yeah, yeah.

**Trevor:** The golf courses on the greens, what they do is they use zeolites on the greens and as a soil enhancement for it from a physical perspective, it keeps the soil aerated in it. And it's important that air gets to the roots of the grass, it helps it be healthy, but they also mix it in with fertilizers and without a zeolite and put it onto the greens. And it releases rather than burns the the grass as it releases a very slowly. So they've got a cost efficiency in how they apply on the volumes that they apply on the frequency. They apply the zeolites to the golf courses. It's used a number of other areas as well, but those are the most common ones there. And that's another good point about Deodoroc when we say that it's an ecofriendly product, it indeed is friendly. I'm not sure Andy, what you did after the pool table. But the proper thing to have done with that product after your done is to put it in your compost or into your garden. And it helps the garden in every way that I, as I described for the golf course, it works great for that. It works great in the host plants for moisture retention as well. Again, it adsorbs a slowly and releases it slowly. So that was how my dad got his start on that and with the mining industry, again, a very, very expensive thing to get involved with, and you have to have a lot of capital for the equipment and the extraction and the processing. And, so parallel to that, he was looking at consumer products and he came up with this idea of using it for absorbing orders for household consumer purposes. And that's where Deodoroc was born. And he started that

probably about 1985. And, it became fully commercial in the early nineties. And it was carried for many years in the do it yourself, big box stores across Canada, and a little bit into the US.

**Jay:** You know, I'm just thinking about, I have excuses now for my erratic putting, I can blame my erratic putting on zeolite. And I can just imagine the looks on my buddy's face as they're like with zeolite what are you talking about?

**Trevor:** I guess it's probably a lack of zeolite because maybe your golf course doesn't use it.

**Jay:** Possibly, possibly. I wanted to throw another one at you here, and this is one that Andy and I'd get all the time. Someone's moving into a home that had smokers and it's polluted with nicotine smoke smell. And I guess what I'd like you to talk about is if I said, okay, I've got a, I've got a thousand square foot home, and it's all smoke polluted, how much Deodoroc do I really need to think about having to deal with that problem? I mean, I know it's going to take time for it to work, and that's fine. I understand that. And I think you're right on, you're talking about meeting expectations. If clients understand the expectation, then there's no issue. But if I had a thousand square foot smoked out house, what would you do if I said, Hey, come on in Trevor, come over to the house and take care of this for me. How would you go about that?

**Trevor:** First, first off, Jay, it's best to understand what we're dealing with with cigarette smoke or any smoke for that matter. When it goes through the air and it lands on something, it lands on more or less as an oil. As time goes by, could be hours, weeks, whatever, yet it's like many oils, like an oil you'd use on furniture. Not an oil for your car, but it hardens in the air. So it gets like a shellac or a varnish finish on it. And because it becomes solid, it doesn't give off an odor, but it's still there. So every time there's physical movement changes in humidity, temperature

changes, it fractures that shellac coating, and that's what releases the odor. So that's what we're dealing with. So with the Deodoroc in the room, it all depends on how much physical movement there is in the room, in the area, what the temperature fluctuations are, what the humidity fluctuations are. And I stress fluctuations because if everything's stable, it will stabilize at that point, but then there won't be any smell, right? Yeah. So a thousand square foot house, the way that we look at them, for a very soiled area, let's use a room just for the sake of a 10 by 10 room, soil to the degree that you've just described with cigarette smoke. It would probably be best to have two blocks in the room. And it doesn't have to be in contact with anything specific, just that being in the room, if it's got air flow by it so much the better like an event from a forced air furnace would have be helpful, anywhere underneath the bed, out of the way, or even in the middle of the room or sitting on a tray on a table, anything like that, as long as it's in the room, it will take depending on what's going on in the room anywhere up to two to three weeks before you start noticing a difference. And then again, you know, as things roll out, it will reduce the smell more and more over time to the point that you can't smell it anymore, but eventually it will get rid of it. All cigarette smoke is nasty because of the way that it varnishes up. And unless there's a lot of physical movement and changes going on in that area, it's going to keep on coming back every time there is a change.

**Jay:** I didn't know that. Thank you for educating me on that because I never understood that. Andy, did you understand it that way?

**Andy:** Well, that makes me think of how we discuss taking different system approach to remediating things. Now think about how we have said in the past that if you were to wipe a surface with a damp cloth that just has water on it, water re-emulsifies, a surface. And so when I'm thinking, as Trevor's talking about having a couple of blocks in that room, if you also

had a damp rag that you were wiping the surface and you had fans blowing air around, this would speed up the process a little bit because here's how I used to talk about a Deodoroc. Again, I've been dealing with the product since the nineties, and somebody asked me, what would it take away formaldehyde in carpet? Well, think of formaldehyde as a bowl of water. If you had a block sitting a few feet away from this bowl of formaldehyde liquid, take an awful long time for all that formaldehyde to get into the block, it would probably saturate so fast. You'd have to replace them. Cigarette smoke is the same thing. There's 2000 different chemicals that make up cigarette smoke. But if you had a way to agitate the surface to crack that shell, as Trevor was saying, and then air movements, so that the blocks the room had the ability to absorb what is become airborne, it would probably take care of that situation a little quicker.

**Trevor:** It would certainly accelerated Andy. Yeah. And he just on a point that you made, I want to build on that a little bit, that wiping it with a wet cloth... When you do have an odor absolutely the best thing to do, number one thing to do is to clean up. If you know what the source is, getting soap and water and clean it up with soap and water, open the windows, air it out. That will give you a ground zero place to start doing your odor control treatment with Deodoroc product. And that's the important thing to do. And as important to remember that everything has a smell, it doesn't matter what it is. It's just whether it's in an appropriate time and place or not. Like everybody loves the smell of having a nice seafood dinner when you're eating it, but it's not so pretty to smell the next day. So it's like that. And, you know wood, you know, cedars have odors and they're pleasant, very pleasant sometimes, but sometimes they're not. That's another thing too a lot of antique dealers use perky pucks, and they use them to absorb Cedar oil. They just put a few drops and they put them in their cupboards of their antiques. It helps control some of the smells that are part of antique furniture, but in, in parts

of nice sweet Cedar smell into the into the furniture. Now they love it that way. They don't have to worry about damaging the product with putting the Cedar oil directly onto it. And it's great that way, too.

**Andy:** That's a great idea. And so a couple of ways that we've used the product in the past and the Perky Pucks are a little one ounce puck that fits into a shoe. I used to be a pro racquetball player, and I can tell you that the gym bag was not a very pleasant piece of material. So I would have Perky Pucks in my gym bag all the time to absorb those odors. I would use a puck in a vase full of flowers actually put it right in the bottom of the water. And I was told, I think your father told me years ago that it'll absorb the bad things in water that can cause flowers to wilt faster.

**Trevor:** Yeah, it does do that. It's iron and manganese that it takes out. A lot of the people, old time users of our product, they'll put them in their toilet tanks and we don't promote this cause we haven't done a lot of research on that. But if you've thought a lot of manganese and iron or iron in your water, you'll get a brown ring on your toilet. And it's just a bit of a nuisance. You put the blocker pucks into the tank and absorbs that and a normal ring. That's a nice way to use it, but like I said, it's not something we promote, but going to your point about the flowers, yes, it does help with the longevity of flowers.

**Andy:** And to that point, then you also have, what's called a Fridge Friend, which is essentially a block that's been formulated just a little bit differently to be able to be used in refrigerator. So in a sense, it's like a putting baking soda in the refrigerator, but far more effective.

**Trevor:** Yeah. Yeah. It is far more where in fact, I mentioned earlier that it absorbs the full spectrum of odors and out of a refrigerator there's any of odors come out of a refrigerator, as we all know, especially, in the lunch room where you work, that's where you get the interesting mix of odors. You get sort of nosed deaf to you own your own refrigerator, but when you go and smell everybody, else's food, it's always quite a shock. Yeah. And it does, it absorbs that very well. And with the amount that the fridges are open and closed and that, it would typically last three to six months before it needs recharging.

**Andy:** So the question we get quite often when it comes to Deodoroc and because it's not something... there's no moving parts to it. There's no flashing lights to say when it's full or when you have to change it out, you really just have to be on schedule. If you have one in the room just to do its job, have one outside in the sun and then switch them out, and get into a habit of just switching them out on a schedule basis, people ask me, how do you know that it's working? And by response has been well, take that block or that puck out of that area, that it's absorbing the odor and take it into a room or a space that has a neutral smell and then smell the block. It will smell exactly like that aroma you're trying to get rid of in the other room.

**Trevor:** Yeah. We call that the sniff test. So if you can smell an unpleasant odor on the deodorant block, it's fully saturated. And likewise for when it's recharging, if you can't smell anything on it after it's been outside for a duration of time, that means it's fully recharged and ready to reuse.

**Jay:** That was the question I was going to ask how long the recharge process takes.

**Trevor:** It depends on how severe severely it has been saturated with odors. We use anywhere from a three to four weeks to up to up to three months for recharge and that's for recharging. For using it depends on the environment. For example, I keep one of my freezer all the time. And I've never changed it. It's been in there for years. Take it out and you can smell it. And if you leave it out, it starts the freezer starts to smell again. So it depends on the environment, but the sniff test is the best way to do it. You can set up guidelines for how long it takes. And it's difficult to do that because every situation's just a little bit different.

**Andy:** I'm probably going to answer my own question, but I don't think there's any research out there to show the efficacy of things like this for the materials or for the ways you're using it. And so this is why people, sometimes they look at natural materials and say, well, who knows if it actually works, but I'll tell you, I mean, my experience is how well it works. The thousands of customers that we've helped over the years, they know it works. Compare this to what we find a lot in the big box stores. These materials that are designed to be sprayed onto a surface to kill the odor. That's a completely different process, isn't it?

**Trevor:** It is. And it's not one of my favorites, you're introducing another ingredient into a living area that is exposing the people that you love and care about to there is toxicity and pretty well anything that's got a smell to it. It does have a degree of toxicity, whether it's hitting the threshold of reporting for their MDS or not, it's still there.

**Andy:** Okay. And then compared to a charcoal, we do see some other companies selling like bamboo charcoal in a bag. I don't know if that's supposed to be this similar material or is it a different version of the same thing or what do we do?

**Trevor:** Yeah, well, like I mentioned, with baking soda and activated charcoal, they've been around and they do have a good place, they do work for what they claim that it will work. Does it work as well as zeolite Deodoroc? No, it doesn't because they are limited in what they can absorb. Of course, you know, baking soda is an expensive, it's not reusable, but you can dispose of it down the sink. You can do anything with it. Um, but when it's not being fully effective, absorbing the odors you're really not spending your money wisely, likewise for the activated charcoal and whether the sources bamboo or any type of a renewable resource like that, it really doesn't matter. Charcoal is charcoal. It doesn't matter where it came from it. They do work. They can be very, very messy at times. It's very popular now that they put them inside of a burlap bag and then a finer mesh bag inside of that. But the dust does come through eventually, or it gets damaged and you'll get little black streaks. Not that that's usually a big deal, but they don't have the absorbing power they can, or the volumes that the deodorant can have odors nor can they absorb the full spectrum of order. So that all the types of orders, regardless of whether PH levels are.

**Andy:** One thing I have heard from clients is that the bulk of activated charcoal is made from coconut shell. And we do have a lot of customers who have sensitivities to coconut. And so they can't be around any carbon or charcoal product made from coconut.

**Trevor:** That's a good point. I'd never considered that one.

**Andy:** Well, Jay, you can see why I've liked this company for so long. And I mean, again, it's a simple to understand product that just works. We have it on our GDC website in various sizes, the Pucks, blocks, and then the granules for carpet. It's been the same product for the last 25 plus years that I've been selling it. We're just so happy that it's still available for our customers

and Trevor I can't thank you enough for coming on the show to talk about the product and the history. And we look forward to being able to promote these products to our customers for many, many years to come.

**Trevor:** And I'm sure they'll enjoy them.

**Jay:** It's been an eye opener for me. Thank you, Trevor. I'm always grateful for the education that I get from our people that we interview. So thank you. Appreciate you being on the show today.

**Trevor:** Yeah, sure. It, thanks very much for giving me a chance to talk about the product that my father and myself that we're so passionate about.

**Andy:** Of course, of course. And folks, if you have any additional questions about the Deodoroc product or zeolites, anything we've talked about today, feel free to reach out to me [andy@degreeofgreen.com](mailto:andy@degreeofgreen.com). You can always go to the website and leave us a SpeakPipe question, which is a way to leave a voicemail right on our website. And we appreciate you listening this week. We'll be back again next week with another episode of Non Toxic Environments for all of us here on the show, have a great weekend, and we will talk to you next week.