

## Q&A with Dr. Robert Martin, CEO of CW Analytical Laboratories Inc. bringing Quality Assurance to the Marijuana Industry and b dispensaries by Testing for Microbiological Chemical Residue and Potency



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**CEOCFO: Dr. Martin, what was the vision in 2009 when CW Analytical Laboratories Inc was founded? What is the focus today?**

**Dr. Martin:** We got started in 2009 because several of my friends began getting sick and started asking me if I had been a marijuana user most of my life. They started asking me about the quality assurance aspects of this

alternative medicine at the time. I got involved with getting a marijuana card and I started going around to the b dispensaries of the Bay Area and asking questions about quality. Most of the focus was on potency or how strong it was. There was not really much awareness to the quality assurance or the mechanisms or principals thereof. Therefore, that got my interest up to find out if there were any histories for quality assurance. I needed a partner, who met interestingly enough, through my Merrill Lynch guy and got me involved with a young PhD out of UCLA who was a pesticide expert and myself being trained in microbiology and psychology. We put our minds together and started a laboratory for those very reasons. Even today, we are very patient and client focused. Now we have recreational users in California. Those are still our focus. Anyone imbibing cannabis in the State of California deserves safe medicine, and most of it is. I can tell you optimistically that there is a lot of cannabis that comes into our laboratory that passes all quality standards. However, we have determined that there are a great number out there using cultivation techniques and use pesticides and poor handling that increase bacterial loads. What we have really found is that awareness creates cleanliness and I think we found out in the same way in the American food industry in the nineteenth and twentieth century. Awareness brought cleanliness to that industry as well as awareness will bring cleanliness to this one.

**CEOCFO: What is the range of services you offer? Who is coming to you?**

**Dr. Martin:** Right now we have the producers of California coming in to test for microbiological chemical residue and of course potency. For potency, of course we measure different cannabinoids at different levels. Microbiologically we look for a variety of different organisms. We can do a general screen for you. We can do very specific things. We are considered the premier microbiological lab in the industry, because we have all the techniques available. It is modern science and we are certainly beginning to publish in that area and we are very excited about that as well! Since many laboratories that have been federally funded have been banned from this kind of research we feel like we are pioneers, being able to at least publish in this arena for the short time that we have been in business. Along with that, chemical residue is included in the pesticide and herbicides and things like that, that might be sprayed upon the plant.

**CEOCFO: How are you able to test to a deeper level? What do you understand that perhaps other labs do not? Is it techniques? Is it what you are looking for? Is that you care more?**

**Dr. Martin:** In microbiological terms, we consider ourselves pre-eminent, because we are on the forefront of science. We are actually contributing to papers to peer reviewed journals for the continuation and improvement of science learning. Therefore, that is one reason. The other reason, I think, is that we have taken in all the available techniques to try to use them to understand cannabis as it is, not as it ought to be. That is a really important thing in microbiological terms, because any time the American hubris or scientific hubris takes us to believe things a certain way and we have to keep our minds open to understand how they really are. We are a benevolent laboratory. We try to make sure that we understand what our clients need from us and we try to give them as much as we can in our experience. You probably realize that most of our industry is coming up very immature, because it has never really had a business plan. It never had to think of overhead and taxes and many of the things that we are comfortable with talking about; they never had to do it in their business planning. That is because they only had to grow the pot and sell it illegally. Many of our clients that are producers of our chocolates and concentrates and cookies and edible products are just learning about those kinds of things. It is daunting to many of them, with the regulations that are coming out from the states. In addition to business planning, all the regulations are really causing quite a stir. Therefore, we are doing all we can to help our clients, but it is a very, very slippery slope that many of them are trying to climb right now, because they do not have the experience. As you can imagine, if you have been burying money behind your house for ten years it is really hard to think about starting to do things with banks and out in the open; going to community gatherings and things like that. It is kind of a transition time in California, I think. Many people are eager to come out into the daylight of commercial business and free enterprise. However, as I said, they really do not know how to do it. Therefore, many businesses like mine try to add educational aspects and outreach and business planning as much as we can without going too far. We are not qualified to do that, but we certainly refer to them to accountants to get legal help and things like that to help the industry mature quicker. Much or what are seeing now are rookie and immature mistakes from people that are just starting to get into this commercial entity the right way.

**“There is a lot of heart in this industry. It’s not just a bunch of stoners, painting their faces, jumping around with leaves in their hair or watching lava lamps all night! As I said, we are a group of professionals that have braved the federal current to try to get this done. I thank the federal government for leaving us alone for so long and I think they only have because they know we are saying no to an industry and that we are out there trying to make it safe, and we are. That is what we are trying to do.”- Dr. Robert Martin**

**CEOCFO: How do growers know to come to you? Is it word of mouth? With so much going on how do people know?**

**Dr. Martin:** We found out very early that advertising is really throwing money down the drain. With the people in the industry, you have to create a word of mouth before and that comes from good outreach and good customer services and follow ups. We believe at CW Analytical that we give a lot more after the number we sell you. Therefore, that value added component makes us stand apart from the competition in most aspects. We are community focused, we are patient focused and we do not give up on that. Our brand is strengthened by that foundation and we believe it. That is what people coming back to us, because we are honest about our mistakes as well as honest about the business we offer you.

**CEOCFO: CW Analytical had a recent press release about the United State Of The Art Microbiology Program for Cannabis Greening. Who is that aimed at? What happened differently now that you are offering something new, more comprehensive? Was it just the time to let people know?**

**Dr. Martin:** It is time to let people know! Many of the regulators in many of the states right now are focusing on bad pathogenic type bacteria such as salmonella, another fungus named aspergillus and they are making us look for these organisms and it is really expensive to look for them and we are finding that we rarely find them at all. After almost 16,000 samples we have never found salmonella. Therefore, we are posing the question; is this really a good quality measure if we do not find it very often; do we really need to test for it every time? Those are the kinds of things that we are putting out there and to get credibility you need to make sure you bolster your scientific value and our scientific value of course is our laboratory. We have to be proud of the instruments that are putting in there. The main thing to remember about microbiology is that every time you get a reading that first reading you get is always known as a presumption reading. You have to go and verify that with some other technique. In our laboratory, we have all the techniques available for those verifications. I do not think there is another lab in the cannabis industry that can say that. Therefore, we are very proud of what we offer and what we can do here and, as I said, we are starting to publish. Once we start publishing then I know we are really having a bearing on the real scientific world.

**CEOCFO: *What happens when you find something? Are there steps you can take to help the grower?***

**Dr. Martin:** There is a great QA story in the microbiology of cannabis. In most cases the cannabis plant, outdoor or indoor, grows relatively clean of bacteria, but some fungi will grow it. Let us just talk about bacteria for a moment. You rarely see a large bacterial load on cannabis in the growing condition. That is mainly because there are so many terpenes being released on the surface and those are antibacterial. What we found was that once it was harvested, if it was treated poorly or handled poorly or in a non-hygienic way we would find large bacterial loads. Once we were able to take that awareness back to the growers and we started talking to them about how they handle it, 99 out of 100 times they were able to clean it up. That is an amazing quality story! Here you have come in with a too numerous to count bacterial load; after two or three calls and a site visit the next load we get is completely clean. That is all from awareness! As I said earlier, awareness means everything! Pesticides are the same story. A couple of years ago, most of the laboratories in the cannabis industry started upgrading to the type mass spectrometry equipment that can really identify all of the pesticides. Prior to that we only had sketchy machines that could pick out the major ones and allow the minors ones to slip by. Two years ago we started getting machines that were NASA rated, if you like the expression. Now we can run it through and we can find everything going through, even unknowns that are not on our standard! Therefore, when we started seeing that we started reporting all of these pesticides that growers were really surprised to see on their plants. Many of them had purchased clones that had systemic pesticides already in them that showed up in the adult plant as well and our machines are so sensitive that we can find! Therefore, it really stopped the industry cold and they started the new awareness. Now we see where it was almost seventy, eighty percent pesticides two years ago; now we see less than thirty coming in. That is because of the awareness. People are learning better cultivation practices. It is really an optimistic story if you look at it that way!

**CEOCFO: *What regulatory guidance issues constraints are you under as a lab?***

**Dr. Martin:** In California, I fall under city and state regulations.

**CEOCFO: *Is it easy to comply at this point in time?***

**Dr. Martin:** For the liability part. I have to comply with municipal levels before I am able to comply at state levels. Some of the city regulations are a little challenging. Here in Oakland we have to support equity candidates to have a permit. Therefore, I have to find local people from the neighborhood to help them get into the industry by giving them money and space to work. Therefore, I rent a place for an equity applicant to do that in Oakland. I must do that to get an applicant or an application approved in Oakland. I certainly want to help anyone that has not had a change to do something in this world. I think CW Analytical is the first to want to help.

**CEOCFO: *Is cost a factor when people are turning to you for testing? Does quality win out? Do people understand or is that part of the education as well?***

**Dr. Martin:** I have been trying to remain affordable ever since we opened. The biggest fear I have is to become incrementally dangerous to my clients. By incrementally dangerous I mean, "This test costs this much, this test costs another much"; you get five or ten tests and all of a sudden you are thousands of dollars in debt. Therefore, affordability has been a big part of what we are doing here. However, we do strive to be the highest quality we can within the price we offer. My margins are tight; I have got to tell you that, to be able to do that. Therefore, I keep a tight margin and I try to be affordable to my clients and, as I said, try to offer as much post-sale as I can, in value added.

**CEOCFO: *Were you prepared for the change in California? How did you prepare and was it enough preparation?***

**Dr. Martin:** The short answer would be no. We did not get the final, final till late November last year, so I had to go purchase machines that take six weeks to get here. Therefore, I got machines after January 1<sup>st</sup>. Then you have to commission the machines and that takes a couple to three weeks. Therefore, there was no way that any of us could have been ready January 1<sup>st</sup>. However, the state was nice enough to give us a transition to full compliance by July 1<sup>st</sup>, so we will be ready by then. However, there are a lot of moving parts! We have been practicing a lot of sampling. That is one of the biggest new parts that we have to do. We are in charge and responsible for all the sampling and transport of samples. Only labs can do that. Therefore, I had to hire new people to go and do that. I have never had people to have to go sample. There is a protocol that the state requires of sampling at locations. Therefore, it is almost like we have been turned into enforcement. We have been defined as third party by state and therefore I cannot legally own any other industry or part of the industry more than nine percent. Therefore, they forced me to be third part, which I really actually like! It puts the labs right where they need to be. That is because we are a group of professionals. I have nineteen full time people now, twenty nine employees; something like that and we have eighteen universities that are represented. We have three PhDs and many with their Masters Degrees, so we are a real professional services organization!

**CEOCFO: Would you tell us about the overall quality today as there seems to be so many new ways to make products. What do you see? What is your sense of the industry?**

**Dr. Martin:** I think it is getting better! I think we are finding it incrementally better every month, you would say. However, my experience tells me that you need to be careful where you buy it! If you buy it on the street it could be loaded with stuff that you do not want to smoke. Those are the people that do not get a tester, the people using all of those bad things we were talking about earlier, all those pesticides and those nasty things that cause cancer and kill things. I am morally opposed to the use of pesticides anyway. We try to preach organic farming here. As I said earlier, if you want the best pot grow it yourself. Dispensaries that test their products are safe places to buy it. In other words, reputable places that we believe have tested their products are good, safe places to buy. Therefore, I am optimistic it is cleaning up. As I said, the awareness changes many people and that is the nice thing about this industry. There is a lot of heart in this industry. It's not just a bunch of stoners, painting their faces, jumping around with leaves in their hair or watching lava lamps all night! As I said, we are a group of professionals that have braved the federal current to try to get this done. I thank the federal government for leaving us alone for so long and I think they only have because they know we are saying no to an industry and that we are out there trying to make it safe, and we are. That is what we are trying to do. For the last six months we have had a big change in qualified people interested in coming into the industry. Prior to this, people who have gotten PhDs or advanced degrees were hesitant to risk themselves in an industry like this that is against the federal current, like I was saying. However, now we are seeing more and more people really eager to get involved with the science, because they are interested in it and they are brave enough to take the first step into the industry and that is what is really going to change it. When the people from the mainstream start getting involved and start bringing their talents into it, it is really going to start helping bring it into the mainstream America. That is my belief anyway.

