The Petri Dish: How We Get the Ingredients for Our Meals by Marcel Leone

Hello, customer! Welcome to The Petri Dish! In case this is your first time here, we're a diner committed to supplying our customers with the highest quality meals, made with exclusively local ingredients, many of which are from our own labs. One of the main components of our meals is the lab grown or cultured meats made right next door in our lab building. Cultured foods for cultured customers, as we like to say.

Here at the Petri Dish, we believe that a good restaurant is very open and transparent about where we get and how we make all of the food we serve. This is why we're going to explain to you the specifics of how we bring you our award winning meals.

You may ask why we've chosen to source all of our meat options from cell-grown meats instead of meats farmed the traditional way. First, without even going into the conditions most animals bred for meat lived in before they were slaughtered, the mere fact that tens of billions of animals were slaughtered every year for meat production itself was unacceptable. Many studies also showed that the meat industry was one of the biggest industries directly contributing to climate change. In the year 2021, the food industry as a whole accounted for a little over a third of the entire world's greenhouse gas emissions. Of these emissions, 57 percent were caused by the meat industry specifically, particularly from the cattle. This means that meat production accounted for very close to one fifth of the greenhouse gas emissions in the entire world (Milman). Since then, as cell-grown meats became more commonplace and expanded across the world's markets, the traditional meat industry diminished to the point it is today. It's still large, and chances are it will never go away completely, but nowadays, you're likely to find more options in the area of cell-grown meats than in that of traditional meats.

In addition to the animal welfare and environmental improvements, cell-grown meat can be much healthier. Because cultured meats are grown in a very controlled environment, everything going in is carefully monitored and regulated, meaning it removes much of the risk of diseases that exist in traditional meat production (Rogers).

These are some of the reasons we choose to carry and use only cultured meats at our restaurants.

As far as the origin of cultured meat goes, the very first lab-grown meat came in the form of a burger in the year 2013. The overall review of this burger was that it was very close to, but not quite the same as, meat ("World's First"). Of course, we've refined the process since then so that our products now taste practically indistinguishable from traditional meat. It has also been made much more affordable since the original burger. That burger cost around $330,000 ("World's First") to make; however, currently, thanks to improved production methods and resource costs, a similar burger would be much closer to the cost of a burger made with traditional meat.

While this was the first public appearance of cultivated meat, it wasn't approved for sale for another seven years. At the end of the year 2020, Singapore became the first government to approve the product for their markets ("Lab-Grown"). In subsequent years, however, as the process was refined and the demand increased, it was approved for many more countries, eventually leading to today, where cultured meats outnumber traditional meats in the markets.

This may lead you to ask the question: "Well, if cultured meats are so readily available, what is there to make the meals at The Petri Dish stand out?" The answer is in our process.

Overseeing all of the lab work is a complex automation and artificial intelligence system that we call the Cultured Meat Monitoring and Production System or C-MMOP for short. The C-MMOP autonomously manages our lab facilities by keeping the growing cells in the proper conditions for most efficient growth. Few of our competitors have systems this complex monitoring their production.

At the start of the production process, we extract cells from a living animal. It's important to note that none of the animals we use are slaughtered to get the cells required. This is when the C-MMOP comes in. Through a series of tests, the C-MMOP selects the specific stem cells it deems best for the product we intend to make. It then determines the environment the cells would naturally grow in. This environment is then simulated, and these cells are grown on and around a structure called scaffolding. The scaffolding is created with advanced bioprinting and is used to simulate the different cuts found in traditional meat. This is the primary area where we differ from other cultured meat producers. Many of our competitors use substances in the scaffolding, such as gelatin, which do require the slaughter of animals ("Lab-Grown"). Sure, it isn't as many animals as traditional meat production would require, but here in the official Petri Dish labs, there is no part of our process that requires or performs any killing of animals. Our meat truly is slaughter free.

On top of everything already mentioned, it also takes less space to get higher production when dealing with cultivated meats. When you have a traditional farm, you need a lot of land on which the animals can graze. When you have a lab to supply meat, however, not only do you not need any land allocated to grazing, but you can also expand vertically if you want more systems put into place. This can lower the impact humans have on the land because we have less need to clear and maintain large fields for animals. On top of all of this, it's also faster to grow meats in a lab than it is to get an equivalent amount via the traditional method.

As we mentioned before, we are fully in favor of helping the environment here at The Petri Dish. That's why all of our food is produced locally, either here in our own labs or at the companies with which we collaborate. One such company is the hydroponic grocery store called Dihydrogen Monoxide Hydroponics. It's a bit of a mouthful, but if you've had any of their produce, you know it's a good mouthful! They specialize in growing hydroponic produce. If you've had any of our meals, you've almost certainly had some of their produce. If there are vegetables in it, there's a very good chance it's from their hydroponic systems.

In case you didn't know, the difference between hydroponic produce and traditionally grown produce is that hydroponic produce is grown without soil. Instead, it's grown in a solution of water and a selection of nutrients. There are two main types of growing systems when it comes to hydroponic plants, aggregate and liquid. An aggregate growing system uses a medium, such as rockwool or sand, to support the root structure, whereas the root structure in a liquid hydroponic system is typically suspended in a liquid with no support (Shrestha and Dunn). Dihydrogen Monoxide Hydroponics uses a sand culture based hydroponic system.

Thank you so much for reading this pamphlet explaining how and where we get our main components to our meals. Hopefully, if you're already one of our customers, this helps explain some of the work that goes into our restaurant and the food we make. If you haven't heard of us or tried our food yet, hopefully this will inspire you to check us out. Whatever the case, we appreciate you taking the time to learn a little about us, and we hope to see you in The Petri Dish soon. Have a great day!

Works Cited

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