



My Compliments to the Lab

Grant Achatz is serving up a delicious, high tech vision of haute cuisine. (How about a -30°F mango palate cleanser, hot off the antigriddle?)

■ by Mark McClusky

It takes about five hours to make your way through the 25-course Tour menu at Alinea. Item 11 arrives at hour three, stuck on the end of a foot-long wire. Your black-clad, impeccably polite server suddenly turns stern. "This is applewood," he says. "Please eat it without using your hands." The golf ball-sized morsel looms at mouth level; there's not a fork in sight.

You eye your dining companions nervously. Who's going to be the first to bob for applewood in the middle of a four-star restaurant? You snag

"The technology allows you to be more true with the flavor," says Achatz, here holding one of his custom serving pieces.

yours and it's ... ice cream – cold, of course, but chewy like nougat, and smoky, with some herbal bitterness, somehow both savory and sweet. And absolutely delicious.

Hey, only 14 more rounds of culinary razzle-dazzle left to go. The Tour is Alinea's extravaganza, a bacchanal remarkable not only for how the food tastes but also for how it's made and

presented. The kitchen – spotless, sparkling stainless steel – looks like a chemistry lab. Dominating an entire counter, with a smooth steel top and an industrial frame, sits the antigriddle. Built by lab supplier PolyScience, it can chill food to minus-30 degrees Fahrenheit in an instant. Another station features an infuser, more often found in head shops and Amsterdam coffeehouses, which pumps mace-scented air into cotton pillows that cushion a duck-and-foie gras dish. And in the spice rack alongside the cinnamon and paprika are carrageenan and sodium alginate – chemicals used to thicken and stabilize foods. The whole place bubbles and pops with dehydrators, vacuum sealers, immersion circulators, and induction burners.

The genius at the heart of the lab is Grant Achatz (rhymes with *rackets*). A veteran of famous kitchens, the 31-year-old chef opened Alinea on the north side of Chicago a year ago. “When we started putting this thing together I told everybody, ‘This is going to be the next best restaurant in the country,’” Achatz says, “‘and we’re going to do it the way I want to do it.’”

Achatz wants to do it differently than most of the great chefs working today. The dominant form of high-end cooking today is California cuisine, pioneered in the 1970s by the likes of Alice Waters at Chez Panisse in Berkeley and popularized by chefs like Charlie Trotter at his eponymous restaurant in Chicago. They tossed out the prevailing French-inflected meat-and-sauce approach, hunting down locally grown, often organic ingredients and doing as little as possible to them so their inherent flavors shined through. This zeal for quality permeated the top kitchens in the country; it even trailed down to taquerias.

Thirty years later, the Waters school has become the norm – so much so that it occasionally descends into parody. Menus detail the origin of every morsel on the plate (Fulton Valley Farms free-range chicken with Frog Hollow Farm peaches and organic Israeli couscous). Chefs promise heirloom tomatoes, Niman Ranch pork, organic lettuce, lemon-caper aioli, and locally baked bread – when all you ordered was a BLT.

Achatz is a California cuisine alum: He spent four years in Napa Valley working for freshness fanatic Thomas Keller at the French Laundry, possibly the best restaurant in the US. For Achatz, though, the new frontier is preparation. He has turned to lab equipment and industrial food additives, pursuing quirky juxtapositions of flavor and texture. The result: otherworldly effects that return a sense of play and joy to the table.

Even the most pedestrian foodstuffs are fair game. Alinea’s pastry chef, Alex Stupak, takes peanut butter and blends



Cinnamon stick-scented sweet-potato-and-bourbon tempura is served in a stainless steel whisk called the Squid.

it with tapioca maltodextrin, a modified food starch that thickens and stabilizes fatty compounds. Tonight Stupak walks around the kitchen with a plastic container holding the resulting tan granular powder. It looks like coffee grounds but, inside your mouth, instantly reconstitutes into chewy, speech-impairing goo. Stupak uses it as a garnish on desserts, but it’s easy to imagine it in kids’ lunch boxes, an updated version of astronaut ice cream. “I love this stuff,” Achatz says,

grabbing a pinch and popping it into his mouth as he walks past. “Someday, everyone is going to be selling this.”

Perhaps the most startling thing about the applewood ice cream on the end of a wire is that it’s nowhere near the strangest presentation at Alinea. There’s the Eye, a sort of miniature petri dish that’s superchilled to keep a mango-and-sesame-oil lozenge from melting on its trip from the kitchen. A packet made of pineapple leather and stuffed with Chinese sausage and Thai basil dangles from the Bow. The Peacock’s five long pins impale miniature chocolates that taste, ever so slightly, like Tootsie Rolls. Some of these not-dishes make you laugh out loud; others seem needlessly weird. But they’re all beautiful. “I like the idea of the food and what it’s being served on becoming a little edible sculpture,” Achatz says. “Every time something arrives at the table, it’s like a piece of art.”

Five years ago, when Achatz was the chef at Trio in Evanston, Illinois, he started to wonder why innovation in ingredients and recipes hadn’t been accompanied by changes in hardware. He started looking for a like-minded industrial designer. Of 30 people Achatz emailed, only Martin Kastner responded. Born in the Czech Republic, Kastner now has a studio in a former livery stable a few miles west of Alinea.

Kastner is an expert craftsman in materials from glass to high-strength wire. After a few weeks of email volleys, the two men decided their goal would be to create implements that were functional as well as beautiful. The Eye, for example, is designed to keep a frozen item frozen. Kastner’s sugar tongs grab the irregularly shaped cubes used at Alinea more reliably than standard designs. “If you think about it critically, our way of eating hasn’t changed for a thousand years,” he says. “Basically, it’s a very medieval concept that we’re using. We stab a piece of food, then we hack it up. All we’ve done is refine the utensils.”

These tabletop sculptures tug at something very primal. You’re *supposed* to feel a little silly when confronted by that skewer of applewood ice cream. Achatz and Kastner aren’t just

playing with food; they're playing with you. "We say we're changing the way you eat," Kastner says. "If it didn't have the humorous twist to it, it would be very difficult to swallow." No pun intended, one assumes.

These unique pieces have been a huge hit, not only with diners (a suspicious number of sugar tongs have disappeared), but also with hospitality-industry giants like Marriott and Hyatt. Kastner's company, Crucial Detail, now sells some of its creations to outsiders. But there's one rule: Once a piece goes on the market, it's never used again at Alinea.

as cuisine, when often it's just not very tasty or tasteful." Not everyone in the industry agrees – in March, Alinea was nominated for a James Beard Award as America's Best New Restaurant.

Because when you think about it, it's strange to hear chefs and foodies rail against gadgets and chemicals: There isn't much distance between an antigriddle and a sandwich press, after all. And chemicals with scary-sounding names have long been a kitchen staple. A mix of sodium bicarbonate and potassium bitartate is, in the end, just baking powder.

including a spectacularly vivid parsley sauce. "How would Thomas Keller make that parsley sauce?" Achatz asks.

This is a fraught question. The French Laundry's Keller is not only the current arbiter of what counts as good food, he's also Achatz's mentor and he catered Achatz's wedding. Still, there's no real secret to a Keller parsley sauce, Achatz explains. He'd puree parsley and oil in a blender and strain it.

"Then he'd have parsley oil," Achatz says. "It tastes like parsley and oil." Achatz instead starts with parsley juice, maybe a little water and salt. "That liquid is going to taste intensely of parsley, because that's all it is. Then I'd thicken it with Ultra-tex 3, a modified starch that imparts zero flavor but gives it the same viscosity as oil."

Keller, in other words, would have compromised the flavor of the parsley. Achatz believes that technology can actually deliver a purer dish. To make an olive oil "cracker," most chefs would bake some sort of crisp fortified with oil. Achatz uses the antigriddle to freeze the oil itself into a wafer. Alinea's black cod comes with all the classic accompaniments – brown butter, lemon, capers. They're just served in powder form. "The technology allows us to get to the essence of food," Achatz says. "It allows you to be more true with flavor, not less true."

On a busy Sunday night, the restaurant is packed, but the kitchen is quiet and controlled. At one workstation, the applewood dish is being assembled on the Antenna. One chef places a precise dab of fenugreek syrup on the tip of the ice cream, which has been thickened with xanthan gum to make it chewy and keep it stable on the skewer. Another chef reaches for the muscovado sugar flakes to sprinkle on top. Runners stand by to pick up the Antennas and climb the steps to the dining room, two at a time, to deliver the food. Another table of slightly wary customers is about to be amazed. ■ ■ ■

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He wants to drag cooking – and eating implements – out of the dark ages. And he wants you to play with your food.



Pull the pin to drop a hot potato, butter and cheese cubes, and black truffle into cold soup.

Achatz isn't the only chef melding science and haute cuisine – a mashup sometimes called molecular gastronomy. Heston Blumenthal does it at the Fat Duck outside London, and the godfather of the movement is Ferran Adria, at El Bulli near Barcelona. It's a small group that faces one big criticism: The food is just too strange.

Classically inclined chefs and critics respond to industrial chemicals and additives with the same *sacre bleu!* reserved for a cockroach in the bisque. "This is the sort of thing that's being done at General Foods and CPC and Purina," says John Mariani, food and wine correspondent for *Esquire*. "That's what these chefs are trying to pass off

Nevertheless, Achatz is leery of getting lumped in with the molecular gastronomists. He once spent a week cooking at El Bulli, and while he was enchanted by Adria's creativity and risk-taking, he found something missing. "A course at El Bulli is placed there with the intention of evoking a certain emotion," Achatz says. "The flavor component is almost secondary."

The California cuisine chefs are all about taste, and Achatz says he's no different. On a frigid Monday, a day the restaurant is closed, Achatz insists that the proof is in the pudding – or actually, in the salsify, course number three on the Tour. It's a root vegetable, braised, fried, and served with various garnishes,