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The Food Wizard is in

*Where
the secrets
of tasty success
are cooked up*

BY KACI ELDER

Photographs by:
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Steve Gundrum and the people at Mattson know exactly what you are eating.

Mattson's food technologists like Laura Tringale have more than 3,000 ingredients at their fingertips.

I'm standing in the lobby of Mattson, waiting for Steve Gundrum and feeling like the possessor of a Golden Ticket. Charlie and his Chocolate Factory don't exist in real life, so this modest office building next to the San Mateo Bridge is as close to culinary fantasy as I'll ever get.

Mattson, a leader in food technology, has brought 1,350 products to market since 1977. Its inventions are familiar brands that convey the cross-section of America's eating habits, from the high-protein energy bar to the newest crust at the neighborhood pizzeria.

Mr. Gundrum, president and CEO, rounds the corner of the lobby with a welcoming smile, and after a chat in his office the tour begins. The metamorphic gates to the factory part, and we walk into the mysterious world of food invention.

We pass by a woman in a white lab coat standing next to a fold-out table, sealing a white cardboard box with packing tape. She stands with another woman, also adorned in a lab coat, and they're smiling. Hidden inside the boxes, says Mr. Gundrum, are samples of pre-market food inventions, ready for shipment to a slice of the 6,000 Bay Area consumers who've signed on as Mattson taste-testers. Another 10,000 households nationwide have provided feedback to Mattson via the Internet.

But... won't it lose its freshness before it arrives? My bewilderment vanishes as I remember where I am. Mattson exists because we, the consumers, have asked to eat food that survives the

journey through field, factory, interstate, supermarket shelf and our automobiles until it lands on our refrigerator shelf, with a promise to stay fresh until 2008. Somehow, through all this, food scientists have managed to make our meals safe, affordable and tasty.

"Hey, Ermgard,"



tuna salad."

It's hard to tell if they are talking about a new and improved concoction for a client, or if they're planning for a company potluck.

We enter the spacious main lab, lined with sanitized metal tables which contrasts with ubiquitous white lab coats.

Gone are any thoughts of being thrown into a rowboat and led into a technicolor tunnel, a la Charlie and the Chocolate Factory.

Long rows of canisters border the room on floor-to-ceiling



Mr. Gundrum calls to a woman loading packages into the trunk of a mini-van. "I'm here Friday if you want to make some

shelves — their contents are indispensable to the modern diet, as they contain the industrial ingredients that can bind, stretch, add flavor to and preserve food on a mass scale.

The FDA lists more than 3,000 approved food additives and it seems like they are all here. Along the far wall is a cluster of 25 or 30 canisters, each filled with a sampling of 100-plus gums that rotate through Mattson's labs annually to thicken and bind food.

There are 25 different kinds of salt with varying grind sizes and shapes.

Even the ice cubes come in different shapes, depending on what they will get blended into.

Mattson's food inventors use ingredients with multisyllabic names such as "disodium guanylate" until they become as familiar as corn starch. I ask Mr. Gundrum whether he tries to win over the skeptical consumer who fears the unpronounceable ingredients. "No," he answers unhesitatingly. "Because their perception is their reality. That (perception) is what

The engineers of taste

we need to deal with.” If a segment of consumers feels better eating a frozen lasagna made with corn starch instead of xanthum gum, a common thickener, then Mattson’s people meet the challenge.

The sanitized lab and its stainless steel tables and labeled canisters would seem almost cold and nearly uninviting if it weren’t for one thing: the people. The food inventors working on their projects show an obvious delight in their job.

A man chops tomatoes at the farthest table, and the piles of cut veggies in a large bowl suggest he’s perfecting salsa. Mr. Gundrum introduces another inventor as the woman who is “building the single greatest non-meat burger the planet will ever know!” Other food scientists give a wave as we walk, and some lighten up when they see Rory, my six-month-old son, who sits on my hip and watches them work.

For every assignment, whether it’s to improve on a popular fruit juice or invent an entirely new meal, Mattson employs teams of chefs and food scien-

tists, each cross-trained in the other’s field.

Sometimes the brand company hands the team a thick dossier filled packed with demographic stats, asking for a product to satisfy the target customer.

Occasionally, though, the team gets free rein to innovate.

“The more open the white space, the better the opportunity to create,” observes Mr. Gundrum.

The team has from 90 days (in a pinch) to a year to bring the product to market. Their formulas look nothing like a Betty Crocker recipe. Each ingredient is listed by weight, cost, nutritional value and other details.

The lesson at Mattson, though, is never to dwell at the drawing board.

“After all,” Mr. Gundrum says, “customers don’t eat concepts.”

Which brings us to the tongue.

Our vital, muscular organ relies on 10,000 taste buds to gauge flavor, from the sweet tip to the sour, salty edges. But the Matson food inventor’s palate is so sharply developed that their tongues are almost unnecessary.



Mr. Gundrum likens it to a skilled musician. The accomplished flutist can read a musical score and instantly hear the music in her head. Likewise, the food scientist only needs to read a formula to taste the result.

As for developing the skills to create a recipe (known within the industry as a formula), Mr. Gundrum uses another analogy: the Web site.

The formula for macaroni salad? Mere lines of code, he believes. Simply software whose technicians tweak the code until it looks right. The epiphany struck one day as he perused the HTML source code for a Web page. “My god,” he thought, “this is just a recipe for what this page needs to look like on the computer.”

Food science has always been closer to riddle solving than playing around in the kitchen.

This is serious business, after all. The French phi-

Mattson’s food experts know what something will taste like before it hits their tongues — or yours. Shown here, from left: Marianne Paloncy, Wennie Mo and Steve Gundrum.



“How do you create a work environment where people have such a strong stake in the quality of their work? And how do you sustain our company and their ability to attract top talent? You do that through ownership.”

losopher, Francis Bacon, armed with a dead chicken and a snowy evening, attempted to create the world's first frozen chicken in 1626. Unfortunately, he stayed outside too long and died from exposure.

What motivated Mr. Gundrum to take the inventive, potentially lethal route of food science?

It was a Christmas party long ago that did him in. No one danced. No one spiked the punch. No one was a girl. (These things mattered because Mr. Gundrum was a college sophomore, and it was the '70s.) But everyone at the party on that cold Wisconsin night was in the engineering department, and when their introductions began with “Hi, I'm mechanical engineering,” young Steve Gundrum set down his punch cup and went home.

He needed to work with people, not just equations. After moping over winter break, Mr. Gundrum returned to the University of Wisconsin and enrolled in the business school.

Family friends hired him for the summer at their food brokerage firm, Thompson, Clark, Garrison — the largest broker in Wisconsin — and, along with a partner, that summer he restocked all the jam in the state. Essentially, he learned product placement via apricot jelly and low-sugar preserves. “It seems silly...but there's a science behind it,” he said.

He loved his assignment, no doubt influenced by his cuisine-centric Greek upbringing. The Greek culture “taught me respect for food, and it was probably the most visible icon of my Greek heritage growing up. Everyone loved coming to my house for dinner. The meals and the attitude around food were wonderful,” he would write later in an e-mail.

Continuing our tour, we walk down

a bare hallway with gaps in the ceiling and exposed sheetrock, then pass a man holding a hammer and balancing on a step-ladder. The shrill hum of an electric saw comes from behind. We've entered the construction zone of Mattson, which will add 5,000 square feet of lab space by December. Clearly, the 28-year-old business is doing well.

Food invention isn't curtailed by the disruption; the cacophonous backdrop seems to energize the group to keep moving. Perhaps it's because each employee's stake in the company is greater than their paycheck.

At Mattson, everyone working at least 24 hours a week is a co-owner. Though traditional hierarchies still exist — a board of five oversee the company — the 70 odd employees are all company stakeholders. Their pay is relatively modest, he said, but after every profitable quarter they receive bonuses that outshine their peers' 2-10 percent bonus.

“How do you create incentive?” asks Mr. Gundrum. “How do you create a work environment where people have such a strong stake in the quality of their work? And how do you sustain our company and their ability to attract top talent? You do that through ownership.”

We walk on, past the construction to the final stop on our tour (and the most delectable): a display of Mattson-engineered products.

In a small rectangular room, the familiar brands are proudly displayed on shelves like finalists in a beauty pageant. Their luminosity — iridescent bottle labels and vibrant cardboard packaging — contrasts with the achromatic reticence of the labs. I've walked into Candyland. Unfortunately, most of their identities must remain a mystery,

as many clients with an eye on their image prefer to keep their relationship with Mattson private.

But not BOCA, whose meatless burgers are the darlings of the frozen food section. Mattson is responsible for every BOCA product since a Florida restaurateur invented the original soy-based burger in 1993.

“If I could put one product on a pedestal and say, this is what we're striving for in terms of quality — meaning the taste and quality of ingredients — and healthiness, the BOCA would be the poster child, Mr. Gundrum says of the popular brand, whose current selection includes veggie pizza, chik'n, lasagna, chili and even BOCA bratwurst.

It's time to conclude the tour, with a parting word from Mr. Gundrum. Food engineering, especially in post-World War II affluence, has been driven by preservation and convenience. We wanted meals that were simple to cook, reheatable, stay-fresh and, eventually, microwavable. The plateau of convenience has been reached, says Mr. Gundrum, and there's no higher ground in the search for easy meals. We can eat anything, just about any time.

Now when consumers shop the aisles or dine out, they're seeking an experience of food. Eating ethnic cuisine, imported organic ingredients or a re-engineered old world recipe, or splurging on a coffee shop's inventive new mocha — it's all part of the culinary experience.

“Smoking is taboo, drinking is taboo, sex has become taboo, (all) the ways we used to pleasure ourselves as human beings,” Mr. Gundrum said. “Now it's only food that's left.”

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