

MIT

Chocolate Tasting

April 5, 2008

1:30pm - 3:30pm

Eastgate Lounge

Sponsors

GSC HCA Off-campus committee
Spouses & Partners @ MIT
Postdoctoral scholars @ MIT
Eastgate Community Association

Organizers

Jeffrey Chambers
Jennifer Recklet
Debra Martin
Jialan Wang

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The Origins of Chocolate

What is chocolate?

Chocolate is one of the world's oldest processed foods, first invented by Mesoamerican peoples and made from the tropical *Theobroma cacao* tree native to Central and South America. Fresh beans of the cacao plant taste very different from the rich, sweet flavor of chocolate as we know it, and it is only after fermentation, roasting, and the addition of other ingredients that chocolate reaches its final form.

The EU and the US governments both have guidelines on what can be labelled “chocolate” on grocery shelves, and each set of guidelines also distinguishes between different grades and varieties of chocolate. In general, EU regulations require a higher percentage of cacao than in the US, so US manufacturers are able to make products with higher quantities of cheaper ingredients such as vegetable fat, sugar, and vanilla flavoring.

US regulation minimums (from the Ghirardelli chocolate website):

	White	Milk	Bittersweet / Semi-sweet	Unsweetened
Cocoa content	0%	10%	35-99%	100%
Cacao fat	20%			
Milk solids	14%			
Milk fat	3.5%	3.4%		

Terminology

Ballotin - a gift box for chocolates

Bloom - a condition in which chocolate appears dull with a whitish cast caused by the migration of sugar or cocoa butter to the chocolate surface. This condition does not significantly affect chocolate flavor, but does affect the texture.

Bonbons - filled chocolates (France)

Cacao - the plant from which chocolate products are made

Cocoa - chocolate products made from cacao

Cocoa butter - fat derived from cocoa beans which make up about 50% of a bean's weight

Cocoa content (%) - the percentage of cocoa in a product, including ground beans and cocoa butter

Couverture - large blocks of chocolate purchased in bulk by chocolatiers

Fair trade - a certification indicating that the product was made with consideration to sustainable development and equity in international trade

Ganache - a mixture of cream and chocolate with a consistency similar to fudge or thick frosting

Gianduja - a sweet chocolate containing finely-ground hazelnuts or almonds (Italy)

Organic - chocolate made from ingredients grown without pesticides, genetically modified organisms, or additives

Nibs (cacao nibs) - roasted cocoa beans which have been crushed with the shells removed, an increasingly common ingredient in bars, bonbons, and desserts

Praline - filled chocolates (Belgium)

Praliné - a mixture of chocolate, caramel, and ground almonds or hazelnuts (France)

Single estate - indication that cacao beans were produced in a specific region of a country

Tempering - the controlled process of heating and cooling chocolate which produces a stable crystal structure with a sharp snap and smooth sheen

Truffle - a confection usually made with chocolate ganache coated by cocoa powder or nuts

Varietal - chocolate originating from a specific country

On the plantation

Theobroma cacao is a tropical tree which is cultivated in areas within 20 degrees of the equator. The three main varieties of cacao are the Criollo, Forastero, and Trinitario. While the Criollo is prized for its complex and delicate flavor, Criollo plants are more fragile and have a much lower yield than Forastero, so the vast majority of the world's cacao crop consists of the inferior but robust Forastero. The Trinitario is a hybrid which blends the properties of the Criollo and Forastero. Because of the Forastero's hardiness and high yield, the entire stock of the world's pure Criollo trees was all but destroyed in the early 20th century. According to Chloe Doutr-Roussel, one of the world's foremost chocolate experts, 85% of the world's chocolate comes from Forastero trees, 14% from Trinitario, and less than 1% from Criollo / Trinitario hybrids. In the 1990s, a few plantations rescued the Criollo from extinction by replanting seed from gene banks, and today a few varieties of pure Criollo chocolate can be found on the market.

The cacao tree grows to a height of 20-30 ft and produces small flowers which lack nectar and perfume which are pollinated by the small midge Ceratopogonidae. Cacao flowers which are pollinated grow into pods, which take five to six months to mature on the tree. Cacao pods attain a length of 6-10 inches and contain 20-40 seeds (or beans) and a mucilaginous pulp.

Chocolate-producing countries

Source: The Chocolate Connoisseur

Ivory Coast and Ghana - 70% of world production, variable quality

Indonesia - 0.5% of world production, low to moderate quality

Java - very high quality

Brazil - 4% of world production, high quality

Mexico - 0.5% of world production, mainly low quality

Venezuela - 0.5% of world production, high quality

Ecuador - 3% of world production, intermediate quality
Madagascar - 0.5% of world production, high quality
Jamaica - less than 0.5% of world production, poor quality
Trinidad -

Chocolate processing

Fermentation - This step happens on the plantation and ideally takes five to seven days. Fermentation begins to develop complex aromas and flavors in the cocoa beans and also helps preserve the beans for shipment. Inadequate fermentation produces less flavorful and aromatic beans.

Drying - After fermentation, the beans are dried on the plantation to prevent spoilage during shipment. After drying, most beans are sprayed with pesticides and / or preservatives.

Roasting and shelling - After dried beans are shipped to the manufacturer, beans are roasted according to precise temperature, time, and moisture specifications

Blending - Cocoa liquor, cocoa butter, sugar, emulsifiers, and other ingredients are mixed in various quantities to produce different types of chocolate.

Conching - The products of roasting are kneaded and smoothed for up to several days to improve flavor and texture.

Tempering - After conching, heated chocolate must be carefully cooled to allow stable fat crystals to form, resulting in a pleasant and uniform texture. While cocoa butter forms six different types of crystals, the best chocolate is made up of mostly so-called “type five” crystals. Because the crystal structure is highly sensitive to temperature and humidity, care must be taken to store chocolate in cool, dry conditions between 59 and 63 °F and below 50% humidity to preserve the best texture and flavor.

Chocolate science

In process of making chocolate, raw cacao undergoes many chemical changes.

Fermentation - Microbiological action during fermentation converts some of the cacao pulp’s sugar into acetic acid during fermentation, lowering its PH to about 5. In addition, protein breakdown and oxidative browning occur, leading to the characteristic brown color of the fermented product. In addition, complex chemical reactions during fermentation produce precursors to the aroma molecules of the finished product, so proper fermentation is key to producing high-quality chocolate.

Roasting - Roasting develops chocolate flavor and aroma and reduces moisture content. During roasting, reducing sugars and free amino acids react to produce some of the volatile compounds which produce chocolate flavor.

Alkalization - Cacao nibs, liquor, and powder are often treated with solutions of potassium or sodium carbonate to improve the color and flavor of the product. This process also destroys some of the antioxidant phenolics which contribute to chocolate’s healthful properties.

Tempering - Chocolate tempering consists of three steps - heating to melt the fat crystals, careful cooling and recrystallization, and careful heating again to re-melt unstable crystals so that only stable crystals remain. Unstable cocoa butter crystals melt at lower temperatures between 59 and 82 °F, while stable, “form V” crystals melt between 89 and 93 °F. Thus, stable crystals predominate in the narrow range between 88-90°F, which is why tempering chocolate can be so tricky.

Finished chocolate contains a variety of trace substances, including many which affect our neurochemistry:

Anandamide - an endogenous cannabinoid

Caffeine - a stimulant. One ounce of bittersweet chocolate contains about 5-10 mg of caffeine

Phenolic compounds - Antioxidant phenolic compounds including gallic acid, epicatechin comprise 8% of the weight of cocoa powder and have been shown to have positive health effects in recent studies.

Phenethylamine - an endogenous amphetamine often associated with chocolate’s aphrodisiac effect

Theobromine - an alkaloid which is credited with the large part of chocolate’s stimulating effect. This chemical is responsible for chocolate’s toxicity to animals such as dogs, cats, and birds.

Tryptophan - an essential amino acid present in many foods and a precursor to serotonin

Chocolate tasting tips

You should begin with a clean palate - try not to eat spicy or strongly-flavored foods before you taste. Cold foods and drinks and alcohol can also dull the palate. For this reason, you should allow chocolate to reach room temperature before eating. When you taste, make sure you try a piece that is large enough to allow you to taste the many flavor notes of fine chocolate as they evolve over the time it is in your mouth. In between tasting two different types of chocolate, cleanse the palate with sparkling water and / or a neutral food such as crackers. Tasting fine chocolate should involve all five senses.

Appearance - Fine chocolate should be smooth and even, and pure bars should have a radiant sheen. Also note color differences between different chocolates. Although color should not be used to discern chocolate quality as it is affected by a variety of factors, you may soon find yourself recognizing the distinctive color of your favorite bar.

Smell - Most of taste actually consists of aroma. Before you taste chocolate, inhale its fragrance and try to detect the distinct notes which make each chocolate unique.

Sound - Finely-tempered chocolate should give a sharp snap when you break it or bite into it and break off along a fine fault, not crumble.

Texture - Consider how the chocolate melts in the mouth and how quickly it dissolves as you chew it. Is the texture smooth, creamy, dry, or grainy? As fine chocolate melts, it actually cools the mouth as the fat crystals melt and absorb heat from the body.

Taste - There are many dimensions to the taste of chocolate, including sweetness, richness, bitterness, acidity, and even a touch of saltiness. In addition, chocolate contains over 600 volatile flavor molecules reminiscent of mushrooms, fruit, wine, nuts, flowers, and spices. Additional additives such as sugar, vanilla, and other flavorings add to the complexity of chocolate flavor.

The Chocolates

Cacao Barry



France



Cacao Barry Pistolettes/ Chocolate Discs Single Origin St. Dominique 70% Hispaniola, a blend of Forastero, and Criollo, combines an exceptionally long finish and produces a dark chocolate with a very pronounced cocoa flavor. Ideal product for fine moldings, coatings, pastry ganaches, mousses, pralines interior ganaches, biscuits, sauces, decorations, ice-creams and sorbets.



Cacao Barry Pistolettes/ Chocolate Discs Single Origin Ghana 40.5% Bold, distinctive with an aroma of hazelnuts. Ideal product for fine moldings, coatings, pastry ganaches, mousses, pralines interior ganaches, biscuits, sauces, decorations, ice-creams and sorbets.



Cacao Barry Pistolettes/ Chocolate Discs Concorde 66% A vigorous chocolate taste for this chocolate couverture with the mahogany tree flavor.

Callebaut



Belgium

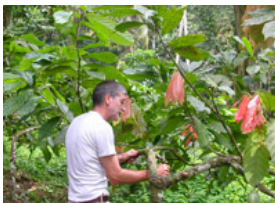


Callebaut White Chocolate Strawberry Callets
A blend of sweet white chocolate with strawberry flavor.



Turbo charge any cookie or desert with these Callebaut white chocolate chips. Made by the famed chocolate producer these chips are cut above any chips found at your local grocery. Also perfect for melting.

Claudio Corallo



Claudio Corallo has found that the cacao pods behind excellent chocolate require careful attention at every stage, from pruning of the fledgling plants to the final, carefully hand picked harvest. Much like caring for olives that produce great olive oil, or grapes that yield fine wine, tending to cacao from the ground to the finished product is essential to making a chocolate of exceptional quality. Corallo spent years growing coffee in the middle of the Congo jungle, and through that experience cultivated his exceptional talent for producing agricultural excellence in the most difficult of growing conditions.

Corallo has spent nearly a decade on the tiny African island of Principe converting the abandoned Terreiro Velho plantation that once grew superb cacao into a world-class estate producing cacao unlike any other. The harvested cacao is then transported to the neighboring island of Sao Tome where it is fermented, dried and sorted, where only the finest cacao moves on to being crafted into chocolate. Through careful study and meticulous experimentation, Corallo personally developed innovative techniques that transform his cacao into unforgettable chocolate.

A letter from Claudio Corallo

Dear chocolate and coffee lovers,

I thought you might be interested to know a little about my experiences, which are what make my chocolate and coffee what they are today. I've worked for more than 32 years to get here, so it isn't easy to put all of that into just a few words. Perhaps the best way to describe my work, with both the cocoa and the coffee, is an approach not unlike the care that a producer of fine wine gives to his vines and his oak barrels. Through all my experiences with coffee and cocoa I always strive to be completely integrated, seeking only to enhance, and not harm the local environment of the people with whom I work.

My name is Cláudio Corallo. I graduated from the Instituto Agronómico per l'Oltremare in Florence, Italy. In 1974 I went to Zaïre (the former Belgian Congo, now the Democratic Republic of Congo) on a sócio-agricultural aid project. I left after one year, but I stayed on in Zaire. For the next two years I bought, transformed and exported coffee, but I found that the trading world was not for me. Nevertheless, I became fascinated by the enormous differences in taste and smell of the coffee, even when they came from the same variety. I then decided to devote myself to producing coffee.

In 1979 I managed to buy two old plantations that were practically abandoned in the center of Zaire. These early years confirmed what I'd always believed, which is that teamwork was the way to the very best results. I built a team, and as we worked on an old variety of robusta coffee (canephora) our enthusiasm grew and grew. The coffee became so sweet that many experts couldn't believe it was from that species.

We were completely isolated on the plantations in the rainforest, at the geographic center of the gigantic country that is the Congo. We were often visited by elephants, leopards and wild buffaloes. At first we built a small landing strip, but because of the many air crashes in the country and soaring fuel costs, I soon began to travel by river. Every round trip between the plantation and Kinshasa was 3,200 kms. (2,000 miles) in a motorized pirogue. Part of the trip was down the rivers that Joseph Conrad described in his *Heart of Darkness*, but there was also a long stretch from the main rivers of ever smaller serpentine streams, completely covered by the equatorial rainforest canopy.

In 1983 from a trip to the small African island country of São Tome e Príncipe, my wife brought back some amazing samples of cocoa and coffee. We fell in love with them to such an extent that we decided that we must go to the archipelago at the first opportunity. When civil wars took hold of Zaire, in 1993 I decided to move my family (wife Bettina and children Ricciarda and Niccolo who were born while we were in Zaire) to São Tome e Príncipe (where our third child, Amedeo, was later born), going back and forth until 1997 when I joined them for good. During all this time I was searching for the same plants that my wife had first brought to Zaire.

I finally found them on the island of Príncipe, where history tells us that in 1819 the Portuguese first introduced cocoa plants to Africa, bringing them from the Bahia region of Brazil. These original plants, from an old abandoned plantation which had been swallowed up by the rain forest, survived thanks to the monkeys whose innate taste for the best cocoa led them to spread these seeds throughout the rainforest, where the plants reproduced spontaneously. I then took on this abandoned plantation, Terreiro Velho.

Just as I had done in Zaire I began the arduous work of recovering and selected the best plants, now helped by more than 20 years of experience on the ground. At first we lived in a small log cabin on the beach, next to a tiny fresh water stream. It was extremely humid, but we were happy surrounded by the cocoa plants that we had searched so long to find, though when it rained the tropical downpours on the zinc roof rendered all conversation impossible. Over the years with great care we perfected controlled fermentation and drying methods that exalted the qualities of this extraordinary cocoa.

All this time I had been searching for original coffee plants too and finally found them in a rock pile where previous passes by a tractor yanking out old plants had somehow missed them. There was a small stand of an ancient variety or arábica coffee that interested me. Thus, in 1998 I started working on another abandoned plantation called Nova Moca, on the other island that makes up the country, São Tome. To halt erosion on the sloping land we built terraces with small rock walls. The coffee trees produced almost nothing at first, victims of the whims of the seasons. But this was an arábica with more body than any I had ever found in all my life, a dream. We drank it constantly as we worked on it, mixing it with tests of the cocoa beans we were also working on across the water in Principe. My son

Niccolo, who was then 14, doesn't drink coffee, but he would always pop in to eat some beans, accompanied by a few pieces of chocolate, make a few comments, and disappear again.

I fondly remember us at the end of the work day, as the sun set, gathering in the small chocolate "factory" we had set up on our plantation in Príncipe. We would taste the results from the day's tests of different production methods, choosing our favorites. Sometimes we would melt the chocolate and drink it, almost entering into a frenzy. There we were, tasting and trying long into the night.

My very best wishes,
Cláudio Corallo



Claudio Corallo 80% Dark Chocolate Tablets with Crystallized Sugar

The higher chocolate concentration in this bar presents an intense chocolate flavor and smooth texture that is fused with the grainy sweetness of crystallized sugar.



Claudio Corallo 75% Pure Dark Chocolate Tablets

This medium bodied chocolate is firm in texture. The "snap" is clean and crisp, yielding a wonderful chocolate fragrance. The flavor is slow to build, with floral and nutty flavors and a hint of cherry in the clean, balanced finish.

De Vita



Madagascar Single Origin Chocolate: Extra Dark Chocolate with 70% Cocoa Solids for a bit-sweet yet almost spicy flavor. You will taste one of the most smooth and full Cocoa flavors of Africa.

Equador Single Origin Chocolate: Extra Dark Chocolate 75% Cocoa Solids for a round and pure flavor. You will taste one of the most deep and persistent high quality Cocoa of South America.

Dominican Republic Single Origin Chocolate: Extra Dark Chocolate with 80% Cocoa Solids for a very pure flavor. You will taste one of the most complex and strong high quality Cocoa of the Caribbean.

Dolfin



Belgium

Dolfin Chocolate Company was founded in 1989 to create a different kind of Belgian Chocolate. Dolfin Belgian Chocolate draws on the original sources of chocolate, skillfully combining the intense flavors with the subtle flavors of select natural ingredients to create a very special taste.

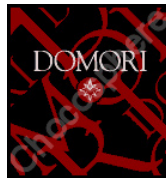


Dolfin Chocolat au Lait au The Vert Sencha du Japon
The mellow flavor of green tea blended with rich milk chocolate.



Dark w/Earl Grey
Another European favorite, Dolfin's 52% cocoa dark chocolates with Earl Grey Tea.

Domori



Italy

The origins of Domori go back to 1993. That is when Domori began a search of the world's cocoa growing regions to find the best varieties of cocoa for making chocolate. From those humble beginnings has grown a dedication by Domori to restoring the diversity of cocoa in a way that is respectful of man and the environment. Domori has a unique approach to their chocolate, selecting and roasting cocoa carefully and in small batches, processing it as little as possible, and performing some operations by hand that others do by machine. The result is that Domori makes Italian chocolate with the unique, genuine taste and aroma of the cocoa from which it comes.



Domori Sur del Lago 70%
- Venezuela

It includes more trinitario-type cacaos with a high content of criollo genotype. It has mild notes of almond and coffee, excellent finesse, smoothness and finish.

Domori Arriba 70%

- Ecuador

It is a Nacional-type cacao .

It has notes of hazelnut, banana and citrus. It is very fresh and mild.

Domori Rio Caribe 70%

- Venezuela

Notes of nuts, ripe fruit, raisins, tobacco and chlorophyll.

It has a nice acidity, a great smoothness and a long finish.

Domori Apurimac 70%

- Perú

It is a recent hybrid (trinitario-type cacao).

It has notes of flowers, caramel and cream. It is very mild with a nice sourness.



Domori Cru 100% Rio Caribe Bar

- Venezuela

Notes of nuts, ripe fruit, raisins, tobacco and chlorophyll.

It has a nice acidity, a great smoothness and a long finish.

E. Guittard



USA

Etienne Guittard journeyed from France to San Francisco in the mid 1800's, searching for gold that he never found. Mr. Guittard also brought delicious chocolate from his uncle's factory in France, making him a very popular fellow. This inspired Etienne to establish the Guittard Chocolate Company in San Francisco, in 1868.

The Guittard family has continued in the tradition of Etienne and his uncle for four generations, making chocolate of the highest quality in the San Francisco Bay area for over a century.



Guittard Chucuri Bittersweet 10g Tasting Bars

E. Guittard Chucuri 65% Cacao Bittersweet chocolate. Long, slow, deep

chocolate flavors are accented by pleasant hints of peppery spice. It makes an especially nice pairing with Colombian coffees and peppery Pinot Noir wines.



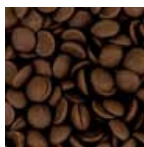
Guittard Ambanja Bittersweet 10g Tasting Bars

Rarified beans are carefully handled and crafted into E. Guittard Ambanja 65% Cacao Bittersweet chocolate. Delicious, it mingles tart and fruity essences with deep, rich chocolate flavor.

Felchlin



In 1908, Max Josef Felchlin founded a small company to import honey. From these simple beginnings, a small chocolate factory developed. From 1962 to 1992 Max Felchlin, son of the founder, was director of the company. By 2003, the small factory produced an extensive variety of semi-finished products. Constant further development permitted the move into the export trade. Today, Felchlin products are exported in more than 40 countries.



Felchlin Chocolate Discs Arriba 72%

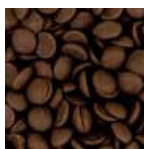
The cocoa taste is enhanced by the intensive coffee and liquorice fragrance conveying Arriba to an unforgettable sensuous experience. The traditional gentle processing method (72 hours conching) unfolds the intensive dried prune bouquet leading to a long-lasting finish of a light flowery black-currant note. Product of

Switzerland.



Felchlin Chocolate Discs Criolait 38%

The full-bodied milk/cream taste is sustained with a subtle note of honey and caramel. Consequently to the traditional and gentle processing, the pure and noble cocoa Criollo can be distinguished primarily and finishes on the palate with a delicate roasting and vanilla taste. Product of Switzerland.



Felchlin Chocolate Discs Madagascar 64%

Well-balanced, fruity cocoa entwined with a sense of roasted hazelnut aroma and with a fresh note of wild berries. The traditional gentle processing method (72 hours conching) unfolds a subtle fruit acid note enhanced with a hint of clove and cedar leading to a long-lasting harmonious finish. Product of Switzerland.

Felchlin Cru Savage Couverture Rondos

The substantial and harmonious cocoa taste is well complemented with the freshness of the

lemon and the fruitiness of the grapefruit. The traditional gentle processing method (60 hours conching) unfolds the intense dried prune bouquet and vanilla in its most exquisite way. The exceptionally pleasant fruit acidity and the long-lasting ending make the Cru Sauvage to a unique culinary experience.

Lake Champlain



USA

At Lake Champlain Chocolates, our goal has always been the creation of something special. The union of the rich history of making fine chocolate, the heritage of craftsmanship, and the wonderful flavors of Vermont is accomplished every day at our factory, producing sweet indulgences with pride that goes into each bite. Perhaps that's why The New York Times reveres it as "some of the best chocolate in the country."



Lake Champlain African Blend 80% Cocoa
High Cocoa Content Dark Chocolate Bars.
Bitter? Never.

Powerful, mystical, extreme? Absolutely.

Three African countries -- Tanzania, Ghana, and Sao Thome -- grow the rarest, most aromatic cocoa beans.

Uniting them unleashes a robust, complex flavor profile.

Crafted in small batches to ensure absolute freshness.



Lake Champlain Sao Thome 70%
(fruity vanilla) - 70% cocoa content

Both fruity & robust, Sao Thome is as wondrous as its island home off the west coast of Africa. Lush tropical jungles, volcanic mountains, and remote golden beaches all contribute to an exceedingly complex, yet astonishingly pure flavor.

The resounding vanilla tones conjure memories of how wholesome chocolate can taste.



Lake Champlain Dark 54%

The traditional art of blending cocoa beans from different countries recognizes that the right combination yields a synergy -- a total effect greater than the sum of its parts.

This dark African blend is just right: creamy, sweet, fruity, and floral.

Crafted in small batches to ensure absolute freshness.

54% Cocoa Content Dark Chocolate Bars.

Pure Belgian chocolate.



Lake Champlain Hazelnut Praline

Dark chocolate surrounding gianduja -- pure, all-natural hazelnut paste whipped with dark chocolate.

This alluring center is tantalizing -- an artisanal combination of nuts and chocolate you won't soon forget.

Crafted in small batches to ensure absolute freshness.

54% Cocoa Content Dark Chocolate Bars.

Pure Belgian chocolate.



Lake Champlain Almonds

Roasted almonds surrounded by perfectly balanced dark chocolate. This dark African chocolate blend is just right: creamy, sweet, fruity, and floral.

Crafted in small batches to ensure absolute freshness.

54% Cocoa Content Dark Chocolate Bars with Almonds.

Pure Belgian chocolate.



Lake Champlain Triple Nut

Triple Nut harvests salty & sweet flavors from three continents -- almonds & pistachios from North America, cashews from South America, and deep, rich milk chocolate from Africa.

This enticing combination yields a salty-nutty-chocolaty flavor all its own.

Crafted in small batches to ensure absolute freshness.

38% Cocoa Content Milk Chocolate Bars.

Pure Belgian chocolate.



Lake Champlain Milk 34%

The traditional art of blending cocoa beans from different countries recognizes that the right combination yields a synergy -- a total effect greater than the sum of its parts.

This milk African blend is just right: sweet, creamy, aromatic, and wholesome.

Crafted in small batches to ensure absolute freshness.

34% Cocoa Content Milk Chocolate Bars.

Pure Belgian chocolate.



Tanzania

(creamy & complex) - 75% cocoa content

Intense and creamy, yet very fruity and floral, Tanzanian's complex flavor profile reflects the climate of its East African origin.

Valrhona



France

The origins of Valrhona Chocolate go back to 1922 in the Rhone Valley of France. Since then, their mission has been the creation of exceptional chocolate, utilizing the natural aromas of the various cocoa growing regions and in keeping with the traditions of the French chocolate making craft.



Valrhona Feves 64% Tainori

It gradually lets us discover the flavors of yellow fruit followed by notes of citrus and ending with a prolonged nutty note lingering on a background of cocoa and freshly baked bread. Product of Dominican Republic.



Valrhona Feves 66% Alpaco

Grand Cru de Terroir from Ecuador. Experience a chocolate combining strength and finesse: delicate floral flavors (jasmine, orange blossom)... lovingly wrapped in pronounced chocolate notes which make it both calm and powerful. Product of Ecuador.

Chocolate Directory

(Mostly) Boston Area

Lake Champlain

<http://www.lakechamplainchocolates.com/>

750 Pine Street

Burlington, Vermont

Monday - Saturday 9AM - 6PM

Sunday 12PM - 5PM

Lake Champlain makes some of the best chocolates in America, and you can visit their factory for a free tour and samples in Burlington, VT. At their factory store, you can watch them make their signature chocolates through a large glass window and buy fresh truffles and factory “seconds”. In the Boston area, their chocolates are available at Cardullo’s, Formaggio Kitchen,

South End Formaggio, and Whole Foods. Lake Champlain has generously donated its signature Chocolate of Vermont line to the MIT Chocolate Tasting.

Taza chocolate lounge at the Mariposa Bakery

<http://www.tazachocolate.com/>

424 Massachusetts Ave

Cambridge, MA 02139

Thursdays 7:30p-11:30p

The Taza Chocolate mission is to bring chocolate eaters closer to the cocoa farmer by making minimally processed chocolate that passes directly from the farm, to us, to you. Since we source beans directly from farming communities and co-operatives, we can ensure that a fair price is paid for high quality cocoa beans. From there, we bring the beans to our chocolate studio in Somerville, Massachusetts and grind them into our delicious chocolate.

Beacon Hill Chocolates

<http://www.beaconhillchocolates.com/>

92B Pinckney Street

Beacon Hill Chocolates is a new chocolate shop opened in 2006 that sells high-end bars and confections from top chocolatiers and chocolate-makers from around the world. It is a great place to go for gifts, because not only do they sell chocolates, but they also sell exclusive handmade keepsake boxes. Beacon Hill Chocolates is the exclusive distributor of Mary Chocolates, handmade artisan chocolates of Belgium, as chocolates from Michel Cluizel and several American chocolatiers.

Trader Joe's

(617) 262-6505

899 Boylston Street

Boston, MA 02115

Daily 9am - 10pm

748 Memorial Dr

Cambridge, MA 02139

(617) 491-8582

Although Trader Joe's has a limited selection, they have the best prices anywhere for the bars they carry. Their store-brand chocolates are imported from Europe and are a great deal for most of your cooking needs, and they have lines of organic and single-origin chocolates for the more discerning taster. The Cambridge location has a much wider selection than the Boston Back Bay location.

Selection:

Valrhona

Scharffen Berger

Ghiradelli

Villars
Single origin (Ocumare?)
Trader Joe's Organic fair trade milk, dark
Trader Joe's Pound Plus brand milk, dark, and bittersweet
Trader Joe's brand 10lb milk bar
Trader Joe's brand milk, semisweet, white chips
Toberone
Around the holidays - lots of nicely packaged confections
Many kinds of chocolate-covered fruits and nuts

LA burdick

<http://www.laburdick.com/>
52 Brattle St
Cambridge, MA 02138
(617) 491-4340

L.A. Burdick is Boston's premiere chocolate cafe and boutique. Here you can sample tasting flights of chocolate, hot chocolate and other beverages, their signature chocolate mice and other confections, and to top it all off, you can get Valrhona and El Rey bulk chocolate bars at the best prices in town!

Cardullo's

<http://www.cardullos.com/>
(617) 491-8888
(800) 491-8288
6 Brattle Street
Cambridge, MA 02138
Monday - Friday 9am - 8pm
Saturday 9am - 9pm
Sunday 11am to 7pm

Cardullo's wins the prize of the least likely location in the Boston area for a chocoholics anonymous meeting. Although the aisles of this Harvard Square shop are narrow, they are packed with almost every type of chocolate bar available in stores. Many of them are pricey, and you must beware of chocolate which is past its prime, but there is no better location to look if you have to have that one special bar.

Selection:
Just try to think of a bar they don't carry

Teuscher chocolates of switzerland

<http://www.teuscher.com/>
230 newbury
This fancy Newbury St. shop carries its own line of boutique truffles including their delicious signature champagne truffles. In addition, they carry their own line of chocolate bars and sea-

sonal treats.

Formaggio Kitchen & South End Formaggio

<http://www.formaggio-kitchen.com/>

(617) 354-4750

(888) 212-3224

244 Huron Ave

Cambridge, MA 02138

Monday - Friday 9am - 7pm

Weekends 9am - 3pm

<http://www.southendformaggio.com/>

(617) 350 - 6996

268 Shawmut Avenue

Boston, MA 02118

Monday - Friday 9am - 8pm

Saturday 9am - 7pm

Sunday 11am - 5pm

Formaggio Kitchen has a very large selection of high-quality chocolates and confections in gift boxes and in their display case. Although you can find better prices at less fancy markets, there is no better place to go to get high-quality hard-to-find chocolates for a special gift or a connoisseur's treat. You can check out some of their selection online. South End Formaggio has a smaller selection.

Dairy Fresh Candies

<http://dairyfreshcandy.stores.yahoo.net/>

57 Salem Street

Boston, MA 02113

Phone: 800-336-5536

Monday - Friday 9:00 AM - 7:00 PM

Saturday 9:00 AM - 7:00 PM

Sunday 11:00 AM - 6:00 PM

Dairy Fresh Candies is a little shop in the North End which is fully stocked with a wide variety of sweets. Half of the store is taken up by self-packaged bags of bulk candies, imported sweets, nuts, and dried fruits. In addition, they sell many Italian specialties, olive oils, and confectionary products. They sell premium cocoa powders and Valrhona, Callebaut, Peter's, and Merckens chocolates and many ingredients for chocolate fillings.

Savenor's market

(617) 723 - 6328

160 Charles St

Boston, MA 02114

Monday - Friday 9am - 8:30pm

Saturday 9am - 8pm

Sunday 9am - 7pm

They have a small selection of very high-end chocolates at very-high prices. You may have have to shop here if you want a Michel Cluizel tasting selection or Mademoiselle de Margaux Sarments, but otherwise the selection and prices at Cardullo's are better.

Chocochochouse

<http://www.chocochochouse.com/>

83 Pembroke

Boston, MA 02118

Tues-Sat 11-7:00

Sun 11-6:00

Temper chocolates

<http://www.temperchocolates.com/>

Inside the Hotel Commonwealth

500 Commonwealth Ave

9am-6pm, Monday-Friday

7am-6pm, Saturday and Sunday.

Richart chocolates

<http://www.richart-chocolates.com/>

100 Huntington Ave (Copley Square Mall)

Boston, MA 02116

(617) 262-4144

Belgian truffle house

714 Broadway

Somerville, MA, 02144

Lindt

704 Boylston St

Boston, 02116

(617) 236-0571

Chocolate Dipper

The Chocolate Dipper specializes in chocolate dipped fresh fruit, including apricots, kiwi slices, blueberries, grapes, raspberries, bananas, and strawberries. They also offer dipped cookies, pretzels, truffles, caramels, nuts, and brownies. Rounding out the selection are various boxed chocolates, gift baskets, New England-themed goodies, and sugar-free treats.

Downtown Crossing, 278 Washington St., Boston

(617) 227-0309

The Mall at Chestnut Hill, 199 Boylston St., Chestnut Hill

(617) 969-7252

thechocolatedipper.com

Serenade Chocolatier

2 South Station, Boston

(617) 261-9941

5 Harvard Square, Brookline

(617) 739-0795

Voted Best of Boston in 2002, Serenade's selection of chocolates are handmade in the Viennese style. The shop offers dipped fruits such as apricots, pineapple, plums, orange peel, cherry cordial, and ginger, as well as truffles made with a bittersweet ganache center and flavored with champagne, Grand Marnier, Kahlua, rum, or amaretto. Visit their flagship store in Brookline Village to see chocolates prepared before your eyes, or stop by South Station for a quick fix before the ride home.

Godiva Chocolatier Inc.

1 S Market Building, Boston

(617) 227-1970

23 Copley Place, Boston

(617) 437-8490

Godiva is one of most recognizable high-end chocolate brands in the world. Their chocolates are high-quality with attractive presentation, although they are not as distinctive or fresh as ones from boutique shops. They are also available in some sugar free varieties.

Whole Foods

Whole Foods carries a large array of higher-end chocolate bars, although they are cheaper at Trader Joe's, Shaw's, or Stop & Shop if they are available elsewhere. Steer clear of their glass truffle display - although the Charles Norman and Knipschildt chocolates look tempting, they are not fresh and are definitely not worth the \$45/lb price tag. If you're looking for fresh truffles, go to L.A. Burdick, or buy boxed varieties by the same chocolatiers.

Selection:

Green & Black milk, white, dark, and flavored

365 Every Day brand milk, dark, white

Chocolove - a good selection

Noi Sirius Icelandic chocolate - the only place I've seen it

Bulk chocolate (varies):

Valrhona

Callebaut

Scharffen Berger

El Rey

Online

Surfas Online

<https://www.surfasonline.com/index.cfm>

Bulk chocolates for serious cooks and chocolatiers, including Callebaut, Valrhona, and Scharffen Berger.

Chocolatesource

<http://www.chocolatesource.com/home/index.asp>

One of the premier online retailers based closeby in Wellesley, MA. They sell most of their chocolates in multi-bar packs and bulk quantities, and their prices are among the best.

Chocosphere

http://www.chocosphere.com/cgi-bin/webstore/web_store.cgi

Perhaps the most comprehensive online chocolate retailer with among the best prices available for hard-to-find bars.

WorldWideChocolate

<http://www.worldwidechocolate.com/>

A wide variety of specialty chocolate bars

References

Book descriptions are a combination of reviews by Amazon.com, the books' own descriptions, and comments from Jialan Wang.

Websites

All about chocolatiers with maps

<http://chocomap.com/chocolate-101.php>

Boston chocolate guide

<http://www.princeton.edu/~lfl/choc.html>

List of chocolate stores around boston and around the world

<http://edp.org/chocdir.htm>

Investigative article on overpriced Dallas chocolatier

<http://www.dallasfood.org/modules.php?name=News&file=article&sid=83>

Ecofoodnerd - recipes and more from your organizer

<http://ecofoodnerd.blogspot.com>

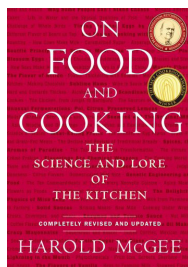
Boston markets reviews - market locations and reviews from your organizer
<http://web.mit.edu/jialanw/www/markets.htm>

Nonfiction



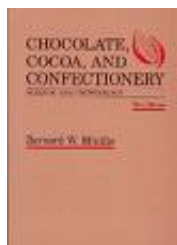
The Chocolate Connoisseur Chloé Doutre-Roussel

Written by one of the most well-regarded chocolate connoisseurs in the world, *The Chocolate Connoisseur* is an authoritative introduction to the world of serious chocolate tasting. With a passionate and pointed voice, Doutre-Roussel describes all of the qualities that make up fine chocolate and gives plenty of recommendations to get you started in truly appreciating this amazing substance.



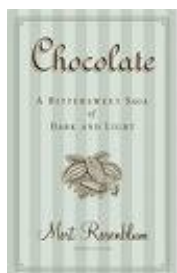
On Food and Cooking: the Science and Lore of the Kitchen Harold McGee

A classic tome of gastronomic science and lore, *On Food and Cooking* delivers an erudite discussion of table ingredients and their interactions with our bodies. Following the historical, literary, scientific and practical treatment of food-stuffs from dairy to meat to vegetables, McGee explains the nature of digestion and hunger before tackling basic ingredient components, cooking methods and utensils. He explains what happens when food spoils, why eggs are so nutritious and how alcohol makes us drunk. As fascinating as it is comprehensive, this is as practical, interesting and necessary for the cook as for the scholar. Be sure to check out the 20-page section on the history and science of chocolate!



Chocolate, Cocoa and Confectionery Science and Technology Bernard Minifie

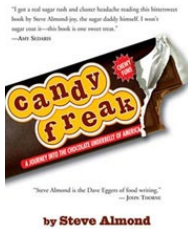
If *On Food and Cooking* is a friendly introduction to the science of food that can appeal to any curious home cook, then this is a book that only a hard-core food science geek can love, with prolix descriptions of chocolate chemistry and processing. If you care to take the plunge, it's available at MIT's library.



Chocolate: A Bittersweet Saga of Dark and Light Mort Rosenblum

In this scintillating narrative, acclaimed foodie Mort Rosenblum delves into the

complex world of chocolate. From the mole poblano (chile-laced chicken with chocolate) of ancient Mexico to the contemporary French chocolatiers who produce the palets d'or (bite-sized, gold-flecked bricks of dark chocolate) to the vast empires of Hershey, Godiva, and Valrhona, Rosenblum follows the chocolate trail the world over. He visits cacao plantations; meets with growers, buyers, makers, and tasters; and investigates the dark side of the chocolate trade as well as the enduring appeal of its product. Engaging, entertaining, and revealing, *Chocolate: A Bittersweet Saga of Dark and Light* is an intriguing foray into this “food of the gods.”



Candyfreak Steve Almond

Picture a magical, sugar-fueled road trip with Willy Wonka behind the wheel and David Sedaris riding shotgun, complete with chocolate-stained roadmaps and the colorful confetti of spent candy wrappers flying in your cocoa powder dust. If you can imagine such a manic journey--better yet, if you can imagine being a hungry hitchhiker who's swept through America's forgotten candy meccas: Philadelphia (Peanut Chews), Sioux City (Twin Bing), Nashville (Goo Goo Cluster), Boise (Idaho Spud) and beyond--then *Candyfreak: A Journey through the Chocolate Underbelly of America*, Steve Almond's impossible-to-put down portrait of regional candy makers and the author's own obsession with all-things sweet, would be your Fodor's guide to this gonzo tour.

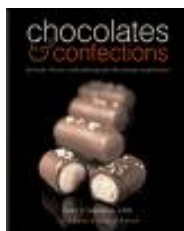
Cookbooks



Bittersweet: Recipes and Tales from a Life in Chocolate Alice Medrich

From Amazon.com: In *Bittersweet*, Alice Medrich continues her mouthwatering crusade to educate chocoholics everywhere about her passion. With 30 years experience, first at her famous Berkeley bakery, Cocolat, and then as an award-winning cookbook author, there is little Medrich doesn't know about chocolate. And what sets this book apart from all others is her willingness to share what's she's learned.

If you're looking for a chocolate cookbook that is more than just eye candy with carefully-thought-out recipes, this is it. It's truly a book written from the heart backed by a lifetime's worth of experience with the subject matter.



Chocolates and Confections: Formula, Theory, and Technique for the Artisan Confectioner Peter Greweling, The Culinary Institute of America

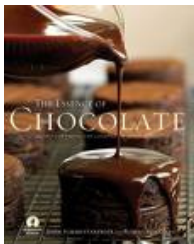
Chocolate and candy making today is undergoing a renaissance in public awareness and status. This comprehensive book combines artisan confectionery

techniques with accessible explanations of the theory and science as well as formulas for use in production. Fundamental information for the confectioner includes ingredient function and use, chocolate processing, and artisan production techniques. This book is for the serious student of chocolatmaking and confectionary, containing 140 formulas and variations for beautiful confect-ions, including dairy-based centers, crystalline and noncrystalline sugar confectionery, jellies, and nut center and aerated confections.



Chocolate Obsession: Confections and Treats to Create and Savor Michael Recchiuti, Fran Gage

In *Chocolate Obsession* Recchiuti, owner of one of the country's best chocolate shops in San Francisco, divulges his professional secrets and techniques, allowing home cooks to reproduce his exquisite confections in their own kitchens. Unlike many books by famous chefs, this one is clearly written with love and great care, and Recchiuti's meticulous attention to detail is manifest on every page. Opening with a complete discussion of chocolate from bean to bar, the book goes on to offer detailed instructions for dipped chocolates, truffles, and molded chocolates, including Recchiuti's signature ganache flavors: Earl Grey tea, burnt caramel, tarragon with grapefruit. Also featured are recipes for such sinfully delicious treats as Chocolate Shortbread Cookies with Truffle Cream Filling, Double Dark Chocolate Soufflés, and Rocky Recchiuti Brownies. Even with the recipes few could duplicate his exquisite creations at home, but his recipes offer great inspiration for those who are looking to learn from a master.



Essence of Chocolate: Recipes for Baking and Cooking with Fine Chocolate Robert Steinberg and John Scharffenberger

Established in 1996, Scharffen Berger has become America's preeminent maker of cooking chocolate and. Arranged by chocolate intensity, the recipes come from the company's files and from chefs including Flo Braker, Jim Dodge, Thomas Keller, and Stephanie Hersh. Although the formulas vary in difficulty, most are within the range of all cooks interested in making something terrific. With narrative sections in which Steinberg and Scharffenberger trace (at perhaps excessive length) their career trajectories, interesting asides such as "Bread and Chocolate," lots of chocolate lore, and a good primer on how chocolate is manufactured, the book makes a happy addition to the chocolate lovers' kitchen library.



Making Artisan Chocolates Andrew Garrison Shotts

Forget milk chocolate molded into childish candy bars. Today's chocolate candies use chocolates with high cocoa content and less sugar than previously

available and are molded into highly decorated pieces of art. Drew Shotts, former pastry chef for Guittard Chocolate and owner of Garrison Confections, has been at the forefront of this renaissance because of his daring use of unique flavor combinations not typically associated with chocolates, such as chili peppers, maple syrup, and spiced chai tea. *Making Artisan Chocolates* shows readers how to recreate Drew's unexpected flavors at home through the use of herbs, flowers, chilies, spices, vegetables, fruits, dairies and liquors.

Recipes

Recipes from Jialan.

Cappuccino cacao nib brownies



For the base:

9 ounces bittersweet chocolate
1 cup plus 2 tablespoons butter
5 eggs
1 1/3 cups superfine sugar
3 tablespoons pastry flour

1. Heat the chocolate and butter in a double boiler, whisking continuously until melted.
2. Cool the chocolate mixture to body temperature and whisk in the eggs.
3. Whisk in the flour, sugar, and other ingredients until blended thoroughly, but do not overmix.
4. Let the mixture stand for 30 minutes before baking, and then preheat the oven and bake at 325 degrees. Bake for 1 hour in a parchment-lined (this is important!) 9 inch square cake pan or for 40 minutes in paper-lined muffin cups.

Milk chocolate cappuccino ganache

2 oz milk chocolate
2 oz Callebaut milk chocolate cappuccino callets
1/2 cup heavy cream (preferably organic)

1 tbs espresso powder
1 tbs butter:

Heat the cream in a heavy-bottomed pan until just boiling. Pour over chocolate and stir until completely melted. Stir in butter and other ingredients, and cool to room temperature. Ganache can be stored in the refrigerator or freezer for several months.

Caramelized Cacao Nibs

1 1/2 cups cacao nibs
1/2 cup sugar
1 tsp butter

Line a baking sheet with a nonstick mat or parchment paper and set it aside. Make sure your kitchen is well-ventilated, as this procedure may create a little smoke. Heat the cacao nibs and sugar in a heavy-bottomed saucepan until most of the sugar is melted (about 15 minutes). The cacao nibs will start to smoke, and a few chunks of sugar may remain. Stir in the butter and make sure it is evenly distributed throughout the mixture. Pour mixture out onto the lined baking sheet to cool. When they are cool, you can break the cacao nibs into pieces of your desired size with a rolling pin.

You only need about half a cup of these for the brownie recipes above, but you can store the rest in an airtight container for months.

Assembly: cool the brownies in the pan for about 30 minutes, and carefully remove from the pan.. Cool completely on a rack. Brownies can be stored tightly wrapped in an airtight container for up to a week. Within a day of serving, spread the ganache on the brownie base and sprinkle with caramelized cacao nibs.

White chocolate green tea ganache truffles



1 cup heavy cream (preferable organic)
1/4 cup green tea leaves
22 oz white chocolate, chopped (try to find one with as little sugar as possible)
5 tbs unsalted butter
3/4 cup coconut powder

1/4 cup green tea powder

1/4 cup powdered sugar

Place chopped chocolate in a medium bowl. Bring cream and tea leaves to a boil in a covered pan over medium heat, watching carefully to make sure it doesn't boil over. Turn off heat and steep for 15 minutes. Strain the cream through a fine mesh sieve onto the chocolate, squeezing remaining cream from the tea leaves. Stir mixture with a spatula until all chocolate is melted. Stir in butter. Cool ganache to room temperature and chill for at least 2 hours, until set.

In another bowl, mix coconut powder, green tea powder, and powdered sugar. Using spoons or even better, a tablespoon-sized ice cream scoop, scoop out ganache into the powder and roll until evenly coated. Transfer to an airtight container, and keep in the refrigerator. Bring to room temperature before serving.