



Roller Grinder

3G Roaster

# LILLA GAZETTE



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LILLA'S NEWEST RELEASE:

# SMART AUTO ROASTER

Green technology at your reach

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# LILLA'S NEWEST RELEASE – SMART AUTO ROASTER

GREEN TECHNOLOGY, PERFECT ROASTING AND HIGH COST-BENEFIT RATES.  
WHAT ELSE ARE ROASTING COMPANIES LOOKING FOR?

It is well known that as time goes by, more and more countries are adhering to the new wave of creating environmental standards as to decrease the emission of harmful gases. Environmental control has become an important issue in many countries, and is now a tendency to become more present in our daily lives as roasters and as consumers, all around the world.

This ever-increasing demand on environmental actions along with the need of offering high cost-benefit rates to its clients led Lilla to the creation of an extremely versatile solution for one's roasting business: the all-new SMART AUTO roaster.

Neighbors tired of smoke, chaff and smell, as well as environmental inspectors eager for finding flaws in your roasting process will be at ease with Lilla's new release. Such claim is only possible through a large number of features that grant the Smart Auto Roaster the title of "Green", or "Eco-friendly" roaster, combining low cost, high roasting quality standards, and ecological operation. A light at the end of the tunnel for those who are concerned about not spending a large amount in order to fit in the new environmental regulations, and at the same time keep their recipes and quality that were acquired overtime.

Smart Auto's built-in afterburner is the feature that allows Lilla to call it an ecological roaster. Doing two jobs at the same time, only one burner is used to both generate the hot air for the roasting process and clean this very same air that was contaminated during the roast, through an exclusive recirculation duct system. That means one will spend less fuel (reducing emissions and saving considerably on fuel, once there's no need of a chimney afterburner) and no smell, chaff, or smoke will be seen coming out of the chimney. Only CO<sub>2</sub> and vapor of water will be released into the atmosphere.

Lilla was not only worried about granting producers the chance to be in tune with high environmental standards. The ability to yield high quality products has been Lilla's obsession for the last 92 years. Smart Auto's

Profile Roasting System will give you the chance to control the variables that influence the roasting process.

Once the Smart Auto works under the principle of roasting by convection, it is able to uniformly roast all types of raw material, from small, broken, to big, specialty beans, granting consistence in every batch and high flexibility. Its strong airflow, when combined with a perfect rotation of the roasting chamber (thus creating a bean curtain, where the hot air passes through), gives Lilla's Smart Auto one of the highest air-to-bean ratios in the market.

Stopping the roasting process at the right time is also extremely important to keep color and flavor consistency in every batch. The Smart Auto is equipped with a water quenching system, where it uniformly sprays water at the beans, and at the same time a cold air inlet door is open, thus stopping the exothermic reaction that keeps roasting the beans even after the process is finished.

You'll also be able to choose between Smart Auto's 2 different versions, with Automatic or Semiautomatic operation. Controlled by PLC (Programmable Logic Control), the Smart Auto Roaster can be easily operated, and as you opt for the full automatic version, one won't have to worry about hiring operators to look over the machine. It does its job very well, all by itself, at a fair price.



Model	Capacity per Batch	Hourly Production	Dimensions			Approximate Net Weight
			Lenght	Width	Height	
SMART	Kg	Kg				Kg
500	125	500	3000mm	3200mm	4300mm	5000
1000	250	1000	3600mm	4100mm	5000mm	7500
2000	500	2000	4700mm	5000mm	4700mm	9000

## NEWS

### Graycliff Bahamas Purchases Opus 2 Compact

Lilla is not only present in coffee roasteries around the world. World class accommodations, 5 star dining, exceptional amenities and an atmosphere filled with romance and history gives Lilla's newest customer the well-deserved five stars it presently owns: The Graycliff Hotel – Nassau, Bahamas. Besides offering top-quality cigars, fine chocolates, high-class dining and glamorous boutiques, now Graycliff has entered the venue of high-quality, specialty coffee, counting with the best technology before available only in large-scale roasters, now with our 22 kg per batch, 110 kg per hour roaster, the Opus 2 Compact. Graycliff now offers 100% organic-certified espresso coffee grown in the high mountains of Guatemala and harvested by hand, the traditional way. Graycliff coffees are served in its restaurants and are available for sale in 8oz. and 16oz. packages. Now Graycliff's guests and customers will taste the best coffee there is, in the best hotel in the Bahamas, of course, with the help of the Opus 2 Compact.



## SOUTH AFRICAN TriBeCa INCORPORATES OPUS 4

A good beverage can be recognized by anyone, anywhere around the globe. If you add organic, state-of-the-art roasting, leading innovation and product development, one name will come to your mind in South Africa: TriBeCa Coffee.

The TriBeCa Coffee Company was founded by Mr. Martin Fitzgerald and Mr. Dale Mazon, who met in Mazon's small coffee shop in the central business district of Pretoria, in 1996. From these modest beginnings, these two friends shaped the TriBeCa success story, bravely following their pioneering spirit to establish themselves as leaders in the South African coffee industry. The company's unmistakable identity and warm, playful character has grown from the duo's natural flair as restaurateurs. Today the brand lives as a large scale, state-of-the-art coffee roastery and a countrywide network of fifty-five cafés, employing more than a thousand people.

### Important Facts and Milestones

- Installation of The Lilla Opus 4 Compact, making TriBeCa the second largest roastery in South Africa.
- TriBeCa owns the largest non-franchised coffee chain in South Africa, operating 4 cafés in Poland and 55 in South Africa and is the preferred purveyor of coffee for a national retail chain.
- Ishan Natalie, TriBeCa's national beverage manager, won the South African Barista Championship in 2009 and 2010 and competed internationally at the Barista championships in Atlanta and London.
- In a recent public rating, TriBeCa's special brand of organic Cappuccino was voted best Cappuccino in South Africa.



• Apart from being the first organic roaster in South Africa, TriBeCa is currently the market leader in innovation and product development in South Africa.

- All the green coffee beans roasted at the TriBeCa coffee factory are sourced by a qualified Q Grader/SCAA Cupping Judge.
- Over the past two years, TriBeCa and Woolworths SA have helped establish the UNION CAFE and Coffee Roastery at the foot of Mt.

Kilimanjaro in Tanzania. The social responsibility project benefits thousands of coffee sm all farmers who belong to the Kilimanjaro Native Co-operative Union.

- In January 2011 TriBeCa and Woolworths will undertake the Kilimanjaro ICE Coffee expedition. The expedition members aim to climb to the iconic, but fast disappearing ice cap of Africa's highest free-standing mountain and ceremoniously mix coffee grown on its slopes with the glacier ice. The team will consist of a climatologist, journalists, coffee farmers and entrepreneurs, retailers and a conceptual artist. By making Kilimanjaro Ice Coffee, constructive conversation about the causes and effects of the region's "melting identity" and the environmental implication thereof will hopefully be created amongst coffee drinkers around the globe.

Steering TriBeCa in an unorthodox and passionate way, Mazon and Fitzgerald have built a business that is as bold, adventurous and sophisticated as the fresh flavors that

abound in their trendy cafés.

## OPUS 3<sup>RD</sup> GENERATION NOW AT DAN KAFFE MALAYSIA

The latest and most advanced technology in coffee roasting is once again in Malaysia

Planned, designed and eventually set up in 1994 with the goal of being the first coffee extract plant in Asia, Dan Kaffe is still the one and only factory in Asian territory able to produce coffee extracts and its many derivative forms, such as Spray Dried and Freeze Dried products, following worldwide quality standards. Now the Opus 40 3<sup>rd</sup> Generation came to take Dan Kaffe's name to higher grounds.

Dan Kaffe's demand for quality in every step of the production process, being roasting the most important, led Malaysia to the coveted position of the 3<sup>rd</sup> largest exporter of coffee extracts to Japan, after Brazil and Colombia. Now possessing the most advanced equipment and technology available in coffee roasting and extracting, Dan Kaffe is able to achieve rich aroma and full flavors in its products. Always receiving feedback from its customers, Dan Kaffe is constantly working to improve its methods, processes and products,

keeping the act of supplying what its customers specify as their main scope of work.

Always seeking for safety and quality, Dan Kaffe relentlessly seeks to improve its food safety through two important programs: Good Manufacturing Practices and Hazard Analysis. The Opus 3<sup>rd</sup> Generation acquired by Dan Kaffe has been approved in such programs and is now a safe and effective tool in Dan Kaffe's search for top-quality products.



### NEWS

## EXPOCAFÉ MÉXICO 2010

Lilla has been present in Mexico since the 80's. Mexico has been coming up as a large player for quite some time in the coffee roasting world, presenting a huge potential in the coffee business in general. Knowing that, Lilla has participated in the Expocafé 2010 México, meeting long-term and potential partners and customers, and sharing its almost centennial knowledge on coffee processing with producers from all over the world and mainly Mexico, Central, North and South America.

Given the importance it has for Lilla, Mexico became the launching ground for the all-new Smart Auto Roaster. Such importance has been earned due to some of our customers there, such as Etrusca (DF), Nestlé (Toluca, Mexico), Cafiver (Orizaba - Ver), Café Basa de Córdoba (Córdoba- Ver), Catoex (Córdoba- Ver), Cafés de La Sierra (Acayucan- Ver), Café Seroga (Ciudad Valles, San Luis Potosi), Unión de La Selva (Comitán, Chiapas), Café La Tampiqueña (Tampico, Tamaulipas), Ecomtrading-Amsa (Tapachula, Chiapas), among many others.

Making hundreds of new contacts and friends, we are sure that those who visited our booth were delighted and enriched by all the knowledge and skills that were shared by our agent in Mexico, Mr. Alberto Tenorio, and by our Director of International Sales, Mr. Fernando Oliveira.



# PROFILE ROASTING AND ACIDITY

By Eng. Fernando Fernandes - Executive Director of Cia Lilla

## What can we say about green coffee acidity?

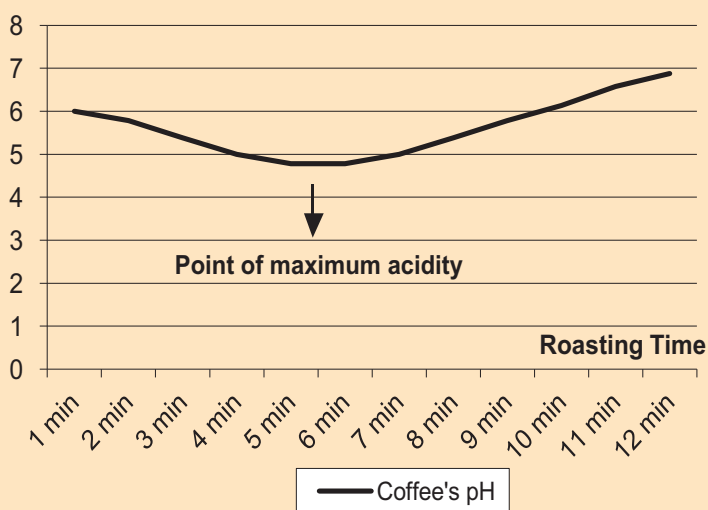
Green coffee acidity will vary depending on the coffee type, as well as the plantation's specific conditions, solar radiation ratio and rain intensity that vary from year to year over the same coffee farm. It will also depend on the coffee cherries drying process after the harvesting. The average pH found in the green coffee is 6.0, but according to the explanation above this acidity will slightly oscillate for different coffees from different origins.

The coffee's most important acid is the chlorogenic. It is considered to be a natural antioxidant: It fights the free radicals, thus preserving one's early aging. Around seven percent of the green coffee weight is composed of chlorogenic acid. Unfortunately, a significant amount of all kinds of acids is destroyed during the roasting process.

## What happens to the acidity during the roast?

There are at least three different main processes that affect coffee acidity during the roast; The predominant one is the destruction of the acids that happens along the entire roast. The second is the decomposition of the carbohydrates that forms carboxylic acids. The third process that we should mention is the formation of some volatile acids which are spilled out. All these comings and goings will cause the acidity to vary in different directions along the roast. The graphic below shows how this variation happens.

### Coffee's pH

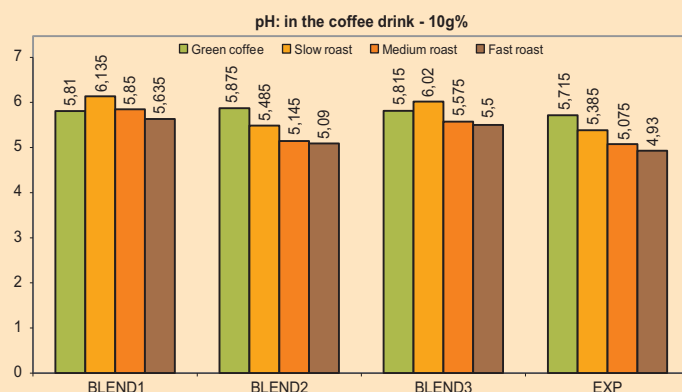


In the beginning of the process the acidity increases due to the carboxylic acids that are formed from the carbohydrates. Therefore, the pH of 6.0 (acidity of raw material) drops until the reaction caused by the acids' destruction overwhelms the acids' formation. This usually happens in a roasting phase where the coffee still has a very light color, but its cupping is already palatable. In this roasting phase the coffee reaches its lower pH, but from this point on, the acidity will decrease more and more, so the darker the roast gets, the less acid the roasted coffee is. Thus, the pH of a medium roast may be

5.1, and the pH of a medium dark roast is 5.5, and a very dark one may present a pH higher than 6.0.

## What is the influence of profile roasting in the final roasted coffee acidity?

Based on the above we could wrongly conclude that final acidity of the roasted coffee depends exclusively on the raw material and the final roasting color. However, nowadays we have experiments that show an evident control of the profile roasting (the coffee beans' temperature evolution along time) over the acidity. See the graphic below:



The presented graphic shows chemical analysis of samples from some experiments we have performed. These experiments were repeated, exactly the same manner, for four different green coffee blends. Each blend was roasted in three different ways using three different roasting profiles (bean temperature evolution along time). The yellow bar shows the slow roast, which took 16 minutes, the orange bar shows the medium roast, which took 8 minutes, and the brown bar shows the fast roast, which took 4 minutes. The green bar represents the raw material's pH

The graphic clearly shows a defined tendency where the acidity increases from the slow to the fast profile. In order to understand the importance of the results of these experiments we emphasize that each blend was roasted with different roasting final colors. This causes the absolute pH value to differ among the tested blends, but we conclude that the profiles imposed the same trend in all the experiments. Therefore, we can state that the control of the coffee temperature evolution along the roasting process is a great tool to control roasted coffee acidity. Technology for sophisticated and accurate profile roasting control is available nowadays and offers to all those in the coffee business a great flexibility and amazing cupping results.

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