

# Cocoa beans hitting the spot



The USA-based company Seguire Cacao Cocoa & Chocolate Advisors carries out extensive research into studying and assessing cocoa beans and their flavors.

Cocoa beans are his life:

When it comes to evaluating the quality and flavor of cocoa beans and chocolate, Ed Seguire is the leading specialist in the field. Ed Seguire is the chairman of various international organizations of countries that produce and import cocoa and sits on several committees. In 2013, he founded Seguire Cacao Cocoa & Chocolate Advisors, headquartered in Hanover, Pennsylvania, in order to meet the demand for consul-

tancy services across the entire cocoa industry and among chocolate producers. The company specializes in the evaluation – i.e., the study and assessment – of cocoa beans and their flavors. The results are required by producers (cultivators), collectors, exporters, and end consumers of cocoa. The company's investigations and liquor (unsweetened chocolate) and chocolate samples are also used by international committees for the evaluation of cocoa and chocolate. What's more, the company also supports small farming operations by assessing the quality of cocoa bean samples at nominal cost. This is because being able to maximize the taste potential of a bean requires extensive measures

## Tasks and objectives

- Reproducible conditions
- Stable and even temperature conditions
- Absolute unit reliability
- Good insulation

## BINDER solutions

- Drying and heating chambers with forced convection (FD)
- Drying and heating chambers with natural convection (ED)
- High temperature uniformity thanks to APT.line™ technology
- Identical test conditions throughout the entire usable space
- Short heating up and recovery times
- Excellent thermal insulation



› Roasting process in a BINDER drying chamber

– from selecting the tree, harvesting, fermentation and drying, roasting, and the processing methods that follow.

Chocolate producers each have their own criteria for assessing the quality of how cocoa tastes. In the past, there was little agreement within the industry about how flavors (apart from foreign flavors) could be assessed, as different terminology and interpretations were being used all across the sector. For this reason, various international initiatives came together to identify the flavors and develop an understanding of the effects of genetics, the environment, and processing after harvesting.

One important aspect of these initiatives was the introduction of shared protocols and terminology with the result that a standardized aroma evaluation was able to be carried out. For these processes, Seguíne Cacao Cocoa & Chocolate Advisors uses two ED-series drying and heating chambers with natural convection and a FD-series drying and heating chamber with forced convection from BINDER. Both ED-series units are primarily used to preheat the broken pieces of the cocoa beans before grinding and to keep the grinding stones warm. During this process, the ED runs continuously for 6 to 24 hours – at a temperature of between 38 and 52°C depending on the cycle selected. For a qualitative assessment of the beans to be possible, they must be



› Cocoa beans are pre-heated before grinding

roasted first. This roasting process is performed in an FD 53. The beans are roasted at temperatures between 110 and 155°C for 20 to 45 minutes.

**“In pre-defined roasting processes, the results are always the same.”**

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Ed Seguíne,  
Seguíne Cacao Cocoa & Chocolate Advisors

„The unit meets all the criteria necessary for evaluating cocoa bean quality,” says Ed Seguíne. „It also meets the standards defined by CoEX and FCIA-HCP for cocoa bean production. These are single internationally recognized documents and protocols for evaluating bean quality and flavor in laboratories in the cocoa

industry. The FD 53 is explicitly recommended in these documents.”

In addition, it meets the criteria set forth in the internationally accepted ECA/CAOBISCO/FCC Cocoa Quality Guide. In order to achieve valid results, the tests need to be reproducible. „Our trust in the stability BINDER drying and heating chambers knows no bounds,” says Ed Seguíne. „In pre-defined roasting processes, the results are always the same; we have so far been unable to detect any variability in the roast flavors in a test series. The oven has near perfect temporal and spatial temperature accuracy and uniformity. “

## New Drying and heating chambers Avantgarde.Line

- Excellent temporal and spatial temperature accuracy
- High energy efficiency
- USB connection for recording data
- Temperature range up to 300 °C



› New FD series, Avantgarde.Line

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