

Sourcing and managing botanicals for a global gin brand

Alessandro Garneri
Master of Botanicals, Bacardi



The Gin Guild



Ginposium 2024



Sourcing & Managing Botanicals for a Global Gin Brand

Alessandro Garneri
Master of Botanicals for Bombay Sapphire Gin

PRIVATE & CONFIDENTIAL



Alessandro Garneri

Master of Botanicals Bombay Sapphire Gin

(MASTER OF BOTANICALS FOR ENTIRE BACARDI GROUP)

- M.SC AGRONOMIST
- 18+ YEARS working for Bacardi, experience in quality, sustainability, health & SAFETY AND OPERATIONS
- Leading the botanical center in Geneva since 2017
- Italian, married with a 12yr old daughter..







GLOBAL BOTANICALS CENTER

Key Data

110 BOTANICALS SOURCED
FROM ALL OVER THE WORLD



SITE: GENEVA,
SWITZERLAND



500,000 kg
Herbal blend
formulations



500,000 kg
extracts



ST-GERMAIN



BOMBAY SAPHIRE





THE QUALITY OF OUR BOTANICALS

Our final goal is to ensure consistency of our finished products... but we use ingredients drawn from nature and consistency is NOT a natural concept...



THE QUALITY OF OUR BOTANICALS

To get there, it's important to ensure for **each batch**:

- Origin, traceability
- Macroscopic quality
- GC / HPLC Profiles
- SENSORY EVALUATIONS
- MICROBIOLOGY

The overall evaluation takes into consideration **all aspects combined**. A Sensory EVALULATION is performed by DEDICATED panel (**a minimum of 8 panelists is needed**). WITH A Final decision on the approval provided by THE **Technical Team**.









KEYSTONE BOTANICALS
09370
BAUER E.P.
75633
130
130
L-09-16
Imp

BOTANICALS - EVALUATION

Proposal Number: 2020130
Sample Name: ME-8300709370-2021-67

	Not Acceptable		Bottom Limit of Acceptable		Weaker (Acceptable)		Acceptable		Right		Stronger (Acceptable)		Date
	Seed	Comments	Seed	Comments	Seed	Comments	Seed	Comments	Seed	Comments	Seed	Comments	
A. Germination	2		2		3		4		4		4		2.2.2021
B. Protrusion	2		2		3		4		4		4		
C. Capsule	2		2		3		4		4		4		
D. Mammillaries	2		2		3		4		4		4		
E. Foliage	2		2		3		4		4		4		
F. Flowers	2		2		3		4		4		4		
G. Fruits	2		2		3		4		4		4		2.2.2021
H. Seeds	2		2		3		4		4		4		
I. Stems	2		2		3		4		4		4		
J. Leaves	2		2		3		4		4		4		
K. Bark	2		2		3		4		4		4		
L. Wood	2		2		3		4		4		4		



When do we need to check?

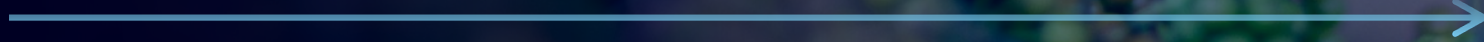
Along, the whole supply chain, **the sooner the better...**



THE FIELD



Botanical
supplier





When do we need to check?

General Measures:

- Technical visit at Botanical suppliers
- Field visits to oversee harvest quality
- Protocols defined and agreed between stakeholders (from the field, up to the sampling, storage and transportation).

Samples along the supply chain:

- “Proposal samples”
....if validated
- “Pre-shipment” samples
- “At arrival” samples
- During utilization



VALIDATION
PROCESS



KEY EXAMPLE - Juniper



Macroscopic quality is a very important parameter for the selection.

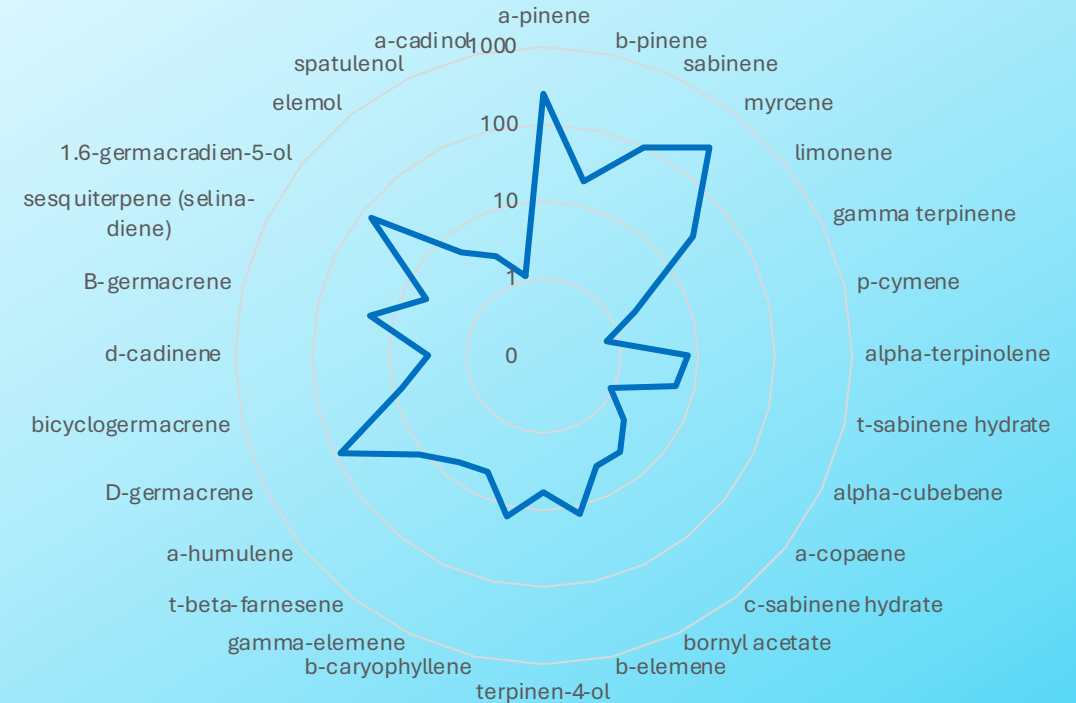
Color, appearance, dryness of berries, dimension, ratio blue vs green berries

+ HR, water activity.



Sensory is a key moment of evaluation. Sensory evaluation are given by each panelist independently on:

- Dry botanical
- Extracts at high strength ABV



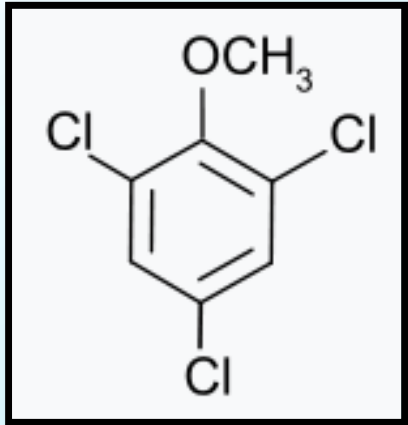
Analytics (GC, HPLC and specific quantification, i.e. TCA) are paramount to complete the overall evaluation and to build knowledge DB. *Historical data could highlight trends, evolution and prevent potential issues.*

** Microbiology: to evaluate moulds presence and toxins*



QUALITY ISSUES (1/2)- Despite Everything

The case of *TCA* for juniper berries



2,4,6-Trichloroanisole (TCA) is a chemical compound that represents one of the strongest of off-flavors, substances "generated naturally in foods/beverages that considerably deteriorate the quality" of such products. TCA is considered the primary chemical compound responsible for the phenomenon of **cork taint** in wines (*and other beverages*), and it has an unpleasant **earthy, musty and moldy smell**.

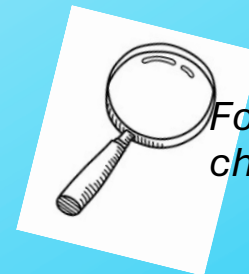
Sensory threshold extremely low in final gin @ 5 ppt (ng/l)



*When detected,
it's too late!!*



*Corrective measures not
effective OR detrimental to
aromatics.*



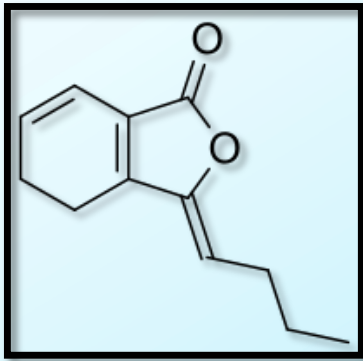
*Focus on the Supply
chain and GMP, GWP, ...*

** Phenomena is still under investigation; looking to other analytical technologies*



QUALITY ISSUES (2/2)- Despite Everything

The case of *ligustilide* for Angelica



Ligustilide is a natural chemical compound found in the highest concentration in wild celeries (*Apium graveolens*), lovage (*Levisticum officinale*), wild angelica (*Angelica sinensis*) and a variety of other plants. All the above species are known weeds of angelica.

Higher sensory threshold (PPB Levels)



Angelica archangelica

Ligustilide normally at 10-20 PPM (mg/Kg)



Minor contamination in the field could increase levels at 50-100 PPM (mg/Kg)



Levisticum officinale

Ligustilide content normally at 4'000 PPM (mg/Kg)

Main compound 75% on total aromatic compounds.

3%



FULL INTEGRATION OF SUPPLY CHAIN

The importance of relationships/partnerships with suppliers & growers

- The quality of the final product is influenced by many factors, starting from the field, which is a significant component.
- Collaborating with suppliers and growers is the most effective way to control and enhance the quality of raw materials, benefiting all stakeholders.
- Beyond quality, full integration can ensure other crucial aspects such as traceability, food safety, and sustainability.
- We learn from each other every single day!

A photograph of a man and a woman sitting on a balcony, peeling lemons. The woman is on the left, wearing a striped shirt, and the man is on the right, wearing a striped polo shirt and glasses. They are both smiling and focused on their task. In front of them is a large sack filled with lemons. To the left and right are red plastic crates, also containing lemons. The background shows a cityscape with buildings and a range of mountains under a clear sky.

The human factor and
quality of relationships is
the other key ingredient.



FUTURE & SUSTAINABILITY

Our legacy is to ensure a **more sustainable future for...**

- Our companies
- Our brands
- Our people, growers & suppliers

Different levels of maturity:

Within the boundaries of our operation facilities (Scope 1 and 2)

Energy savings, green electricity, biofuel/biomass, energy recovery, water recovery.

Full supply chain (Scope 3)

- Ingredients/Raw materials → **Regenerative Agriculture**
- Packaging
- Transportations/logistics
- Post-selling initiatives



Questions?

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Audience Q&A Session

① Start presenting to display the audience questions on this slide.

Thank you.

BOMBAY  SAPPHERE

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