

**Dominique
Delteil
Consultant**



Dominique Delteil Consultant

International Wine Consulting



▶ Français

▶ English

▶ Italiano

▶ Español

www.Delteil-Consultant.com

**Coinoculation and good practices for
managing MLF, fruit, longevity and
prevention of microbial spoilage in red
wines**

LALLEMAND

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1. What is yeast-bacteria coinoculation?

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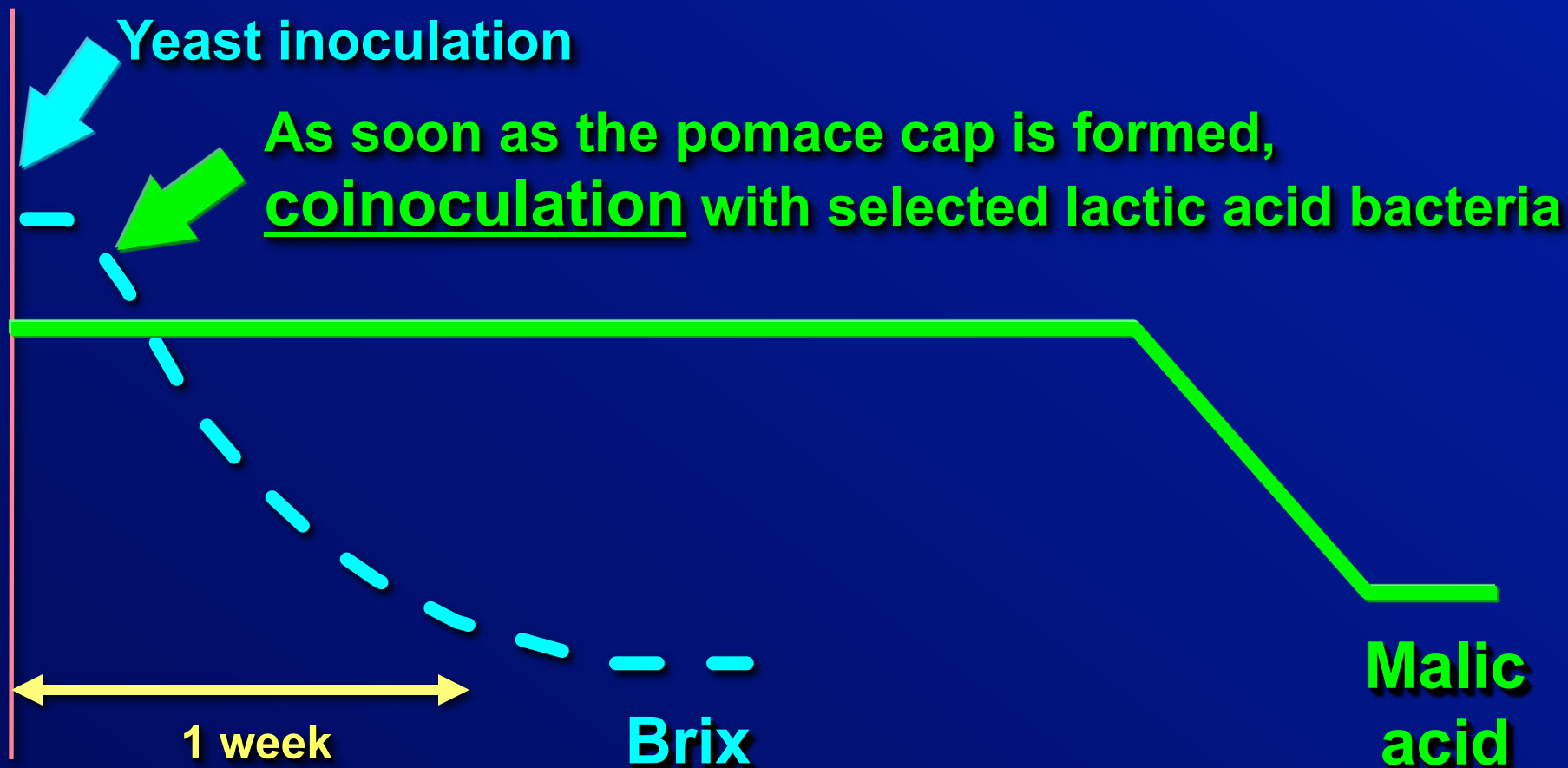
The winemaker vision

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Brix and malic curves during a coinoculated yeast - bacteria fermentation

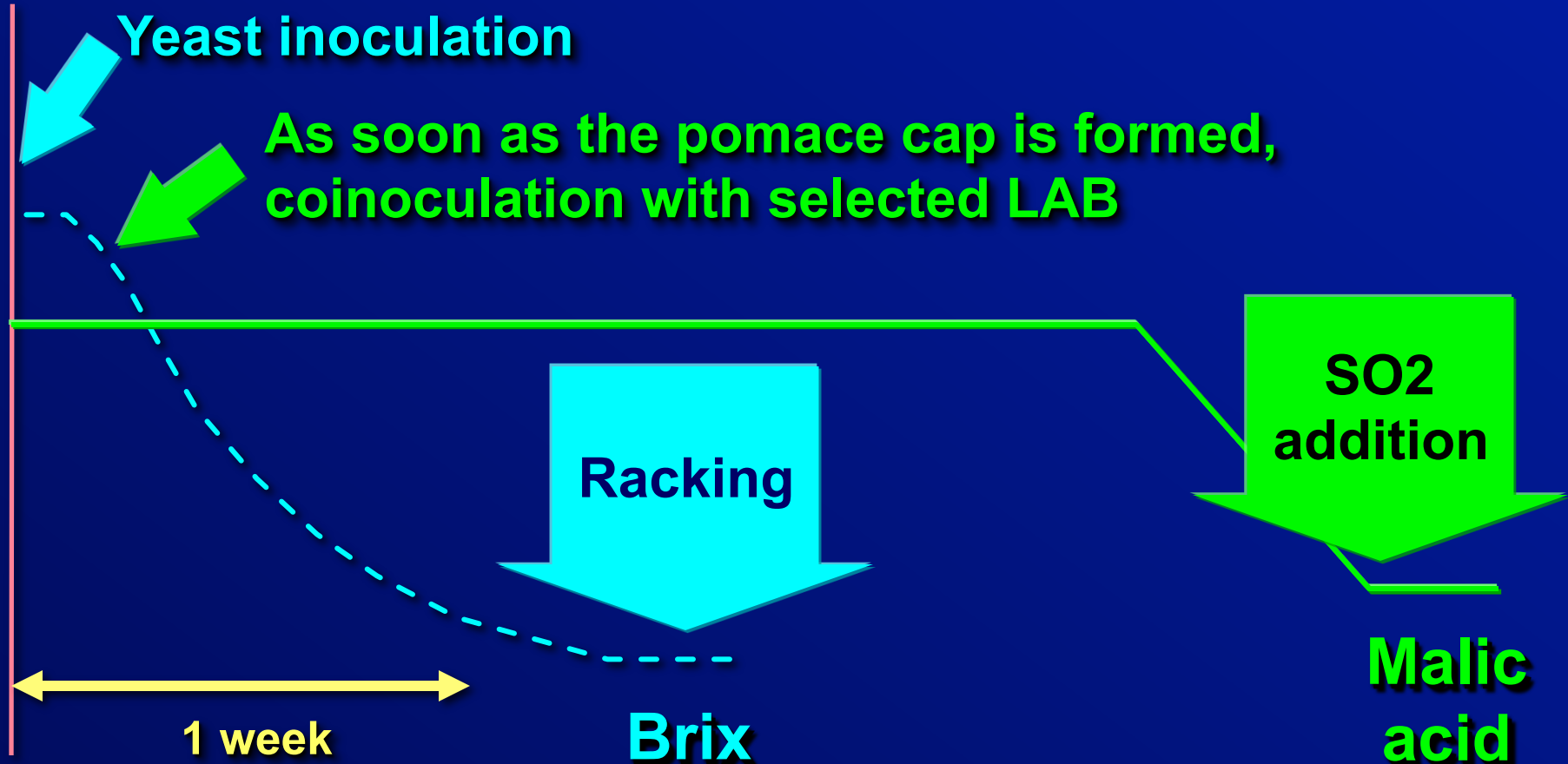


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Two key winemaking actions

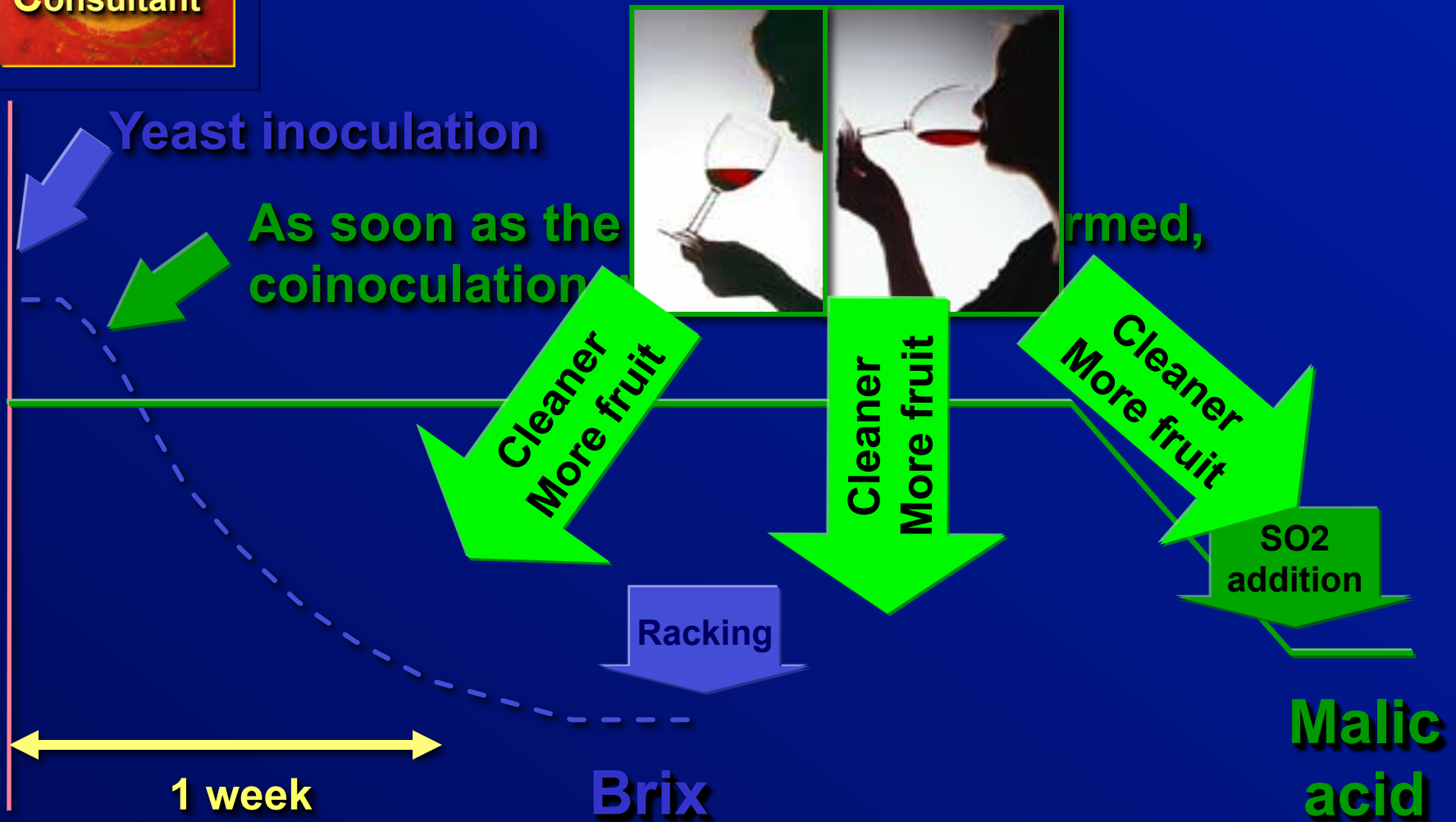


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Sensory goals of coinoculation during fermentation



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Sensory goals of coinoculation during aging



Yeast inoculation

As soon as the pomace cap is formed, coinoculation with selected LAB

Cleaner
More fruit

Cleaner
More fruit

Cleaner
More fruit

Malic acid

Brix

Aging

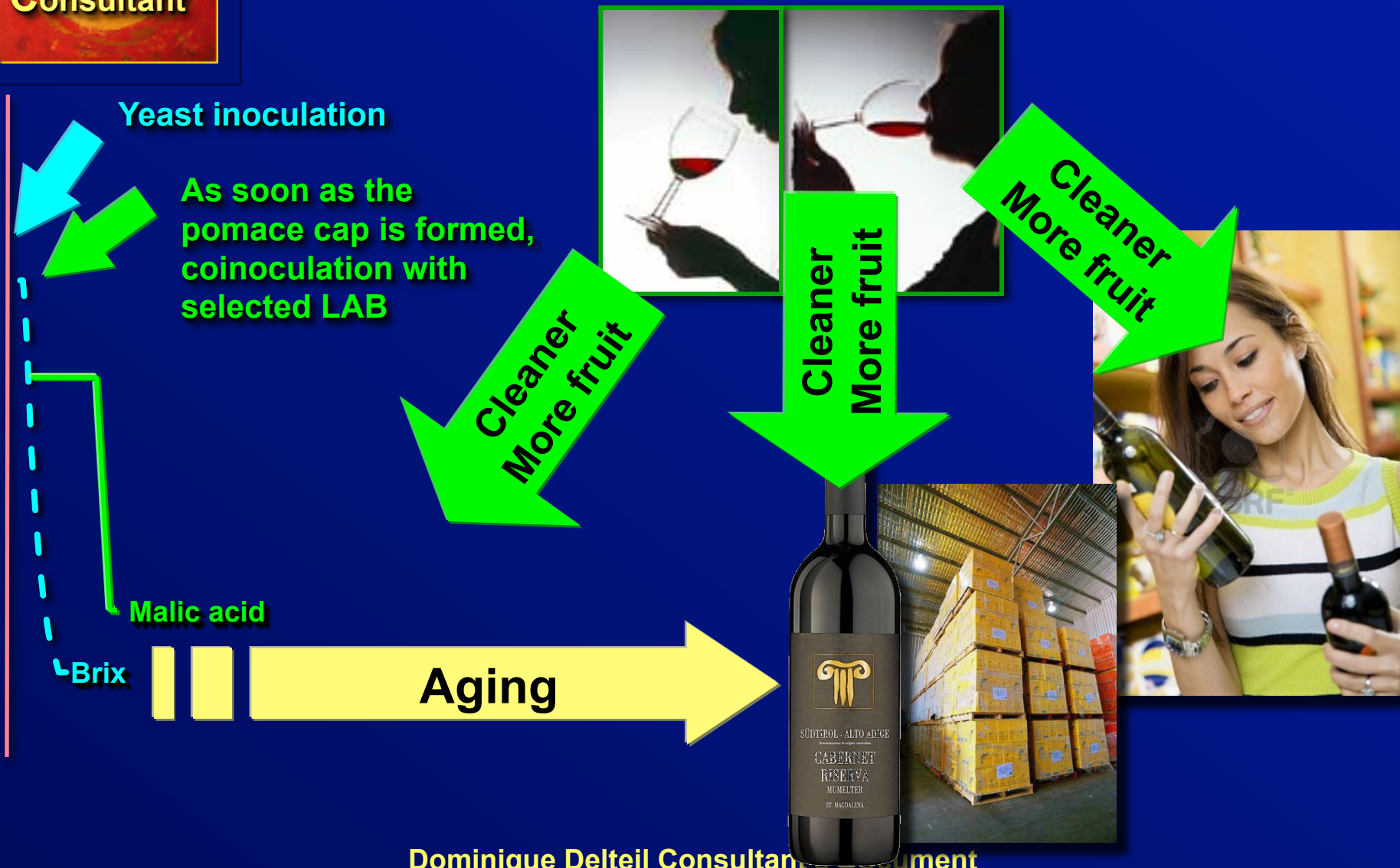
1 month

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Sensory goals of coinoculation during aging, bottling, sales



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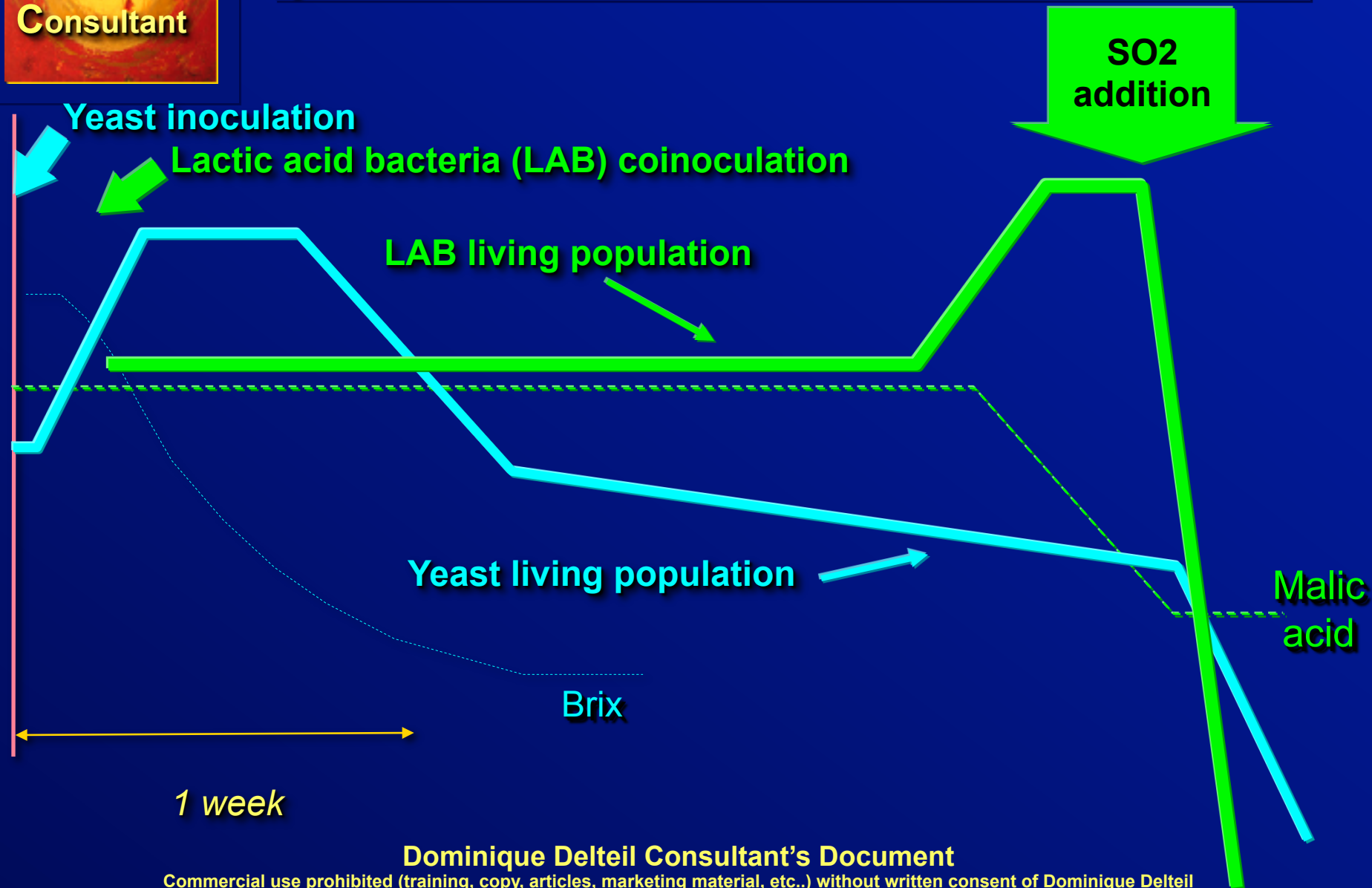
The microbiologist vision

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Population curves during a co-inoculated yeast - bacteria fermentation

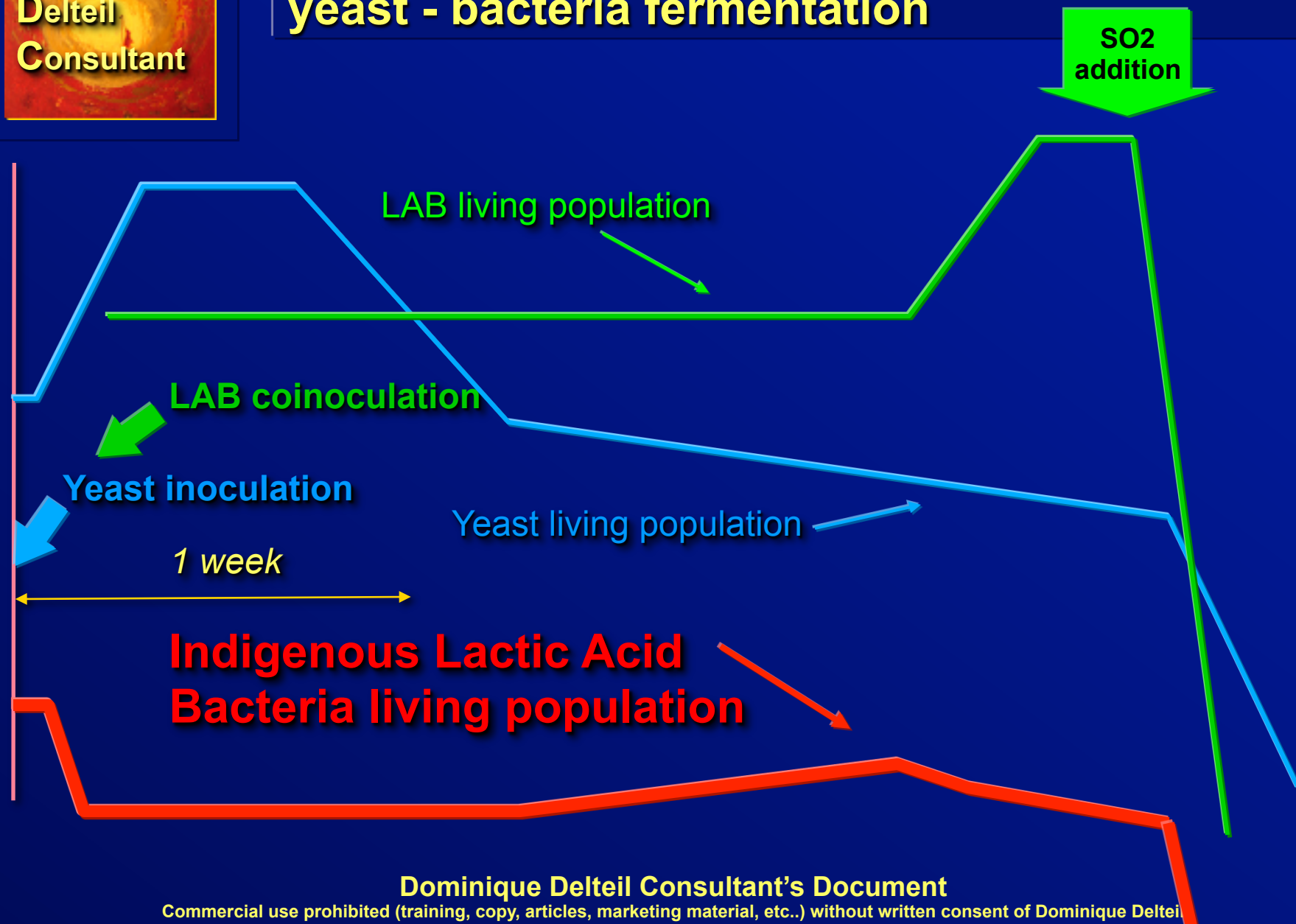


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Population curves during a co-inoculated yeast - bacteria fermentation



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Post alcoholic fermentation LAB inoculation : indigenous LAB

SO2
addition

Selected LAB living
population

LAB inoculation,
post AF

Yeast living population

Yeast inoculation

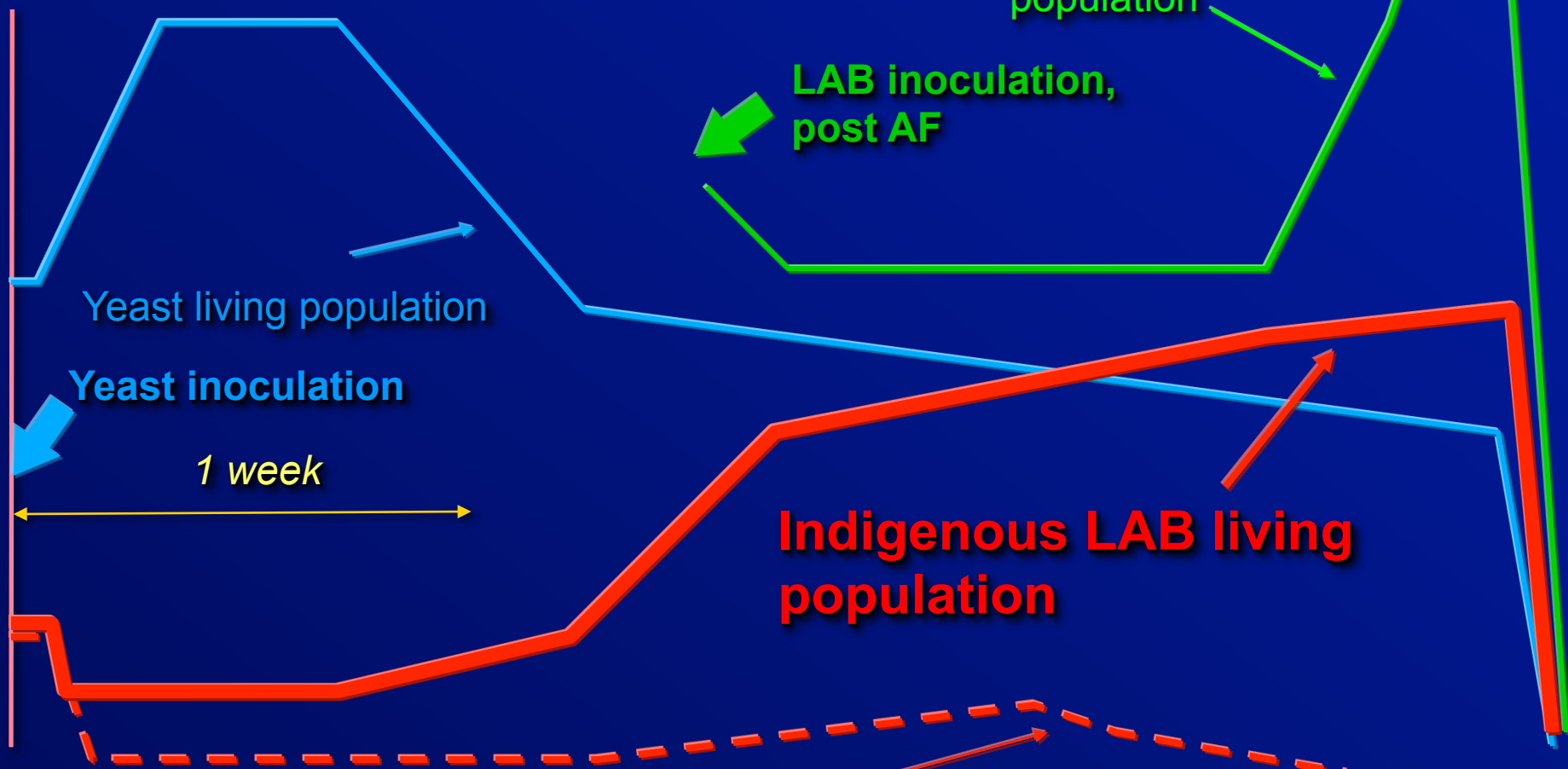
1 week

Indigenous LAB living
population

Reminder: Indigenous Lactic Acid Bacteria living population with yeast -
bacteria coinoculation

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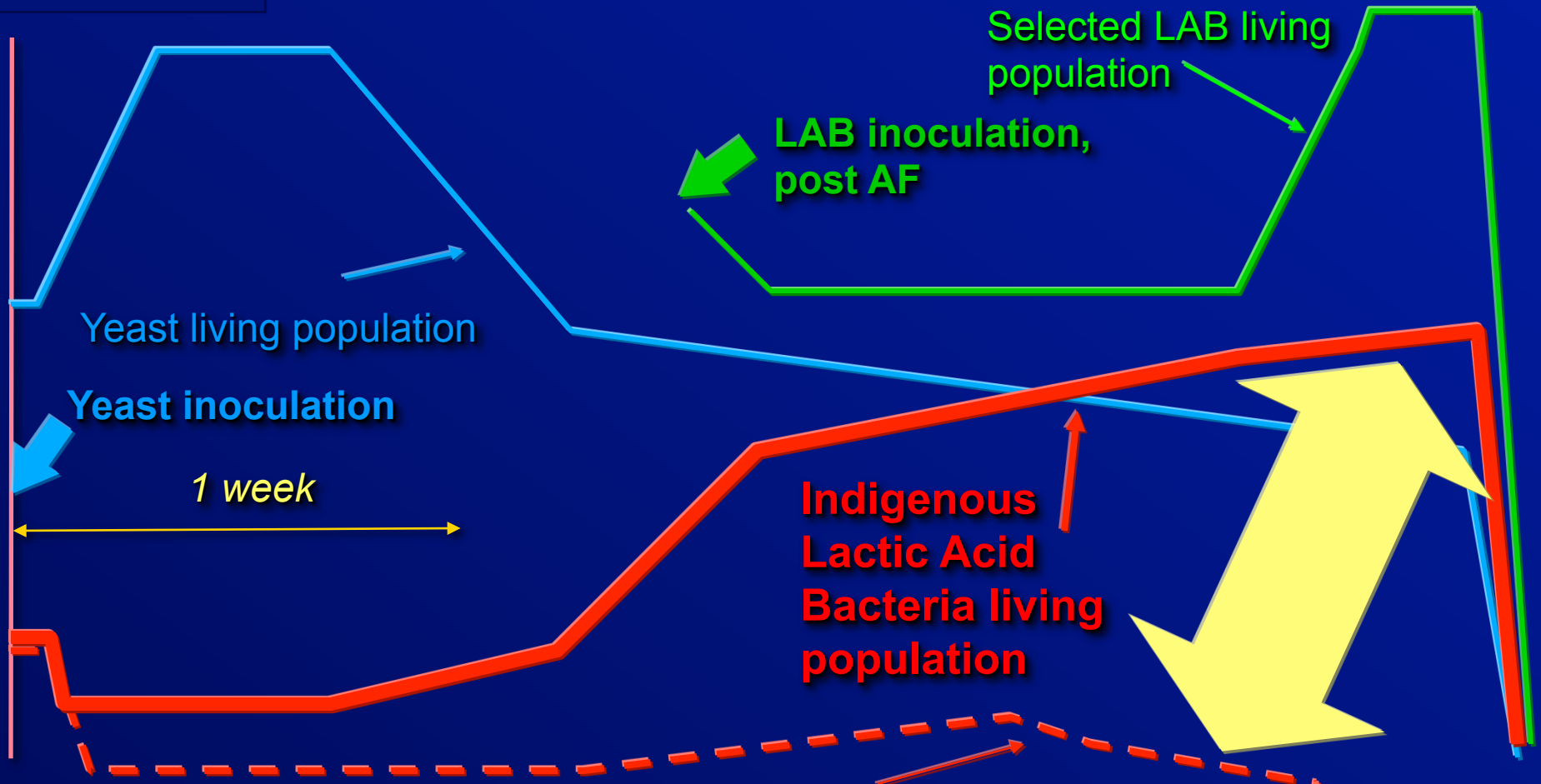
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Even with hygiene and fermentation Good Practices, these are the potential risk differences

SO2
addition



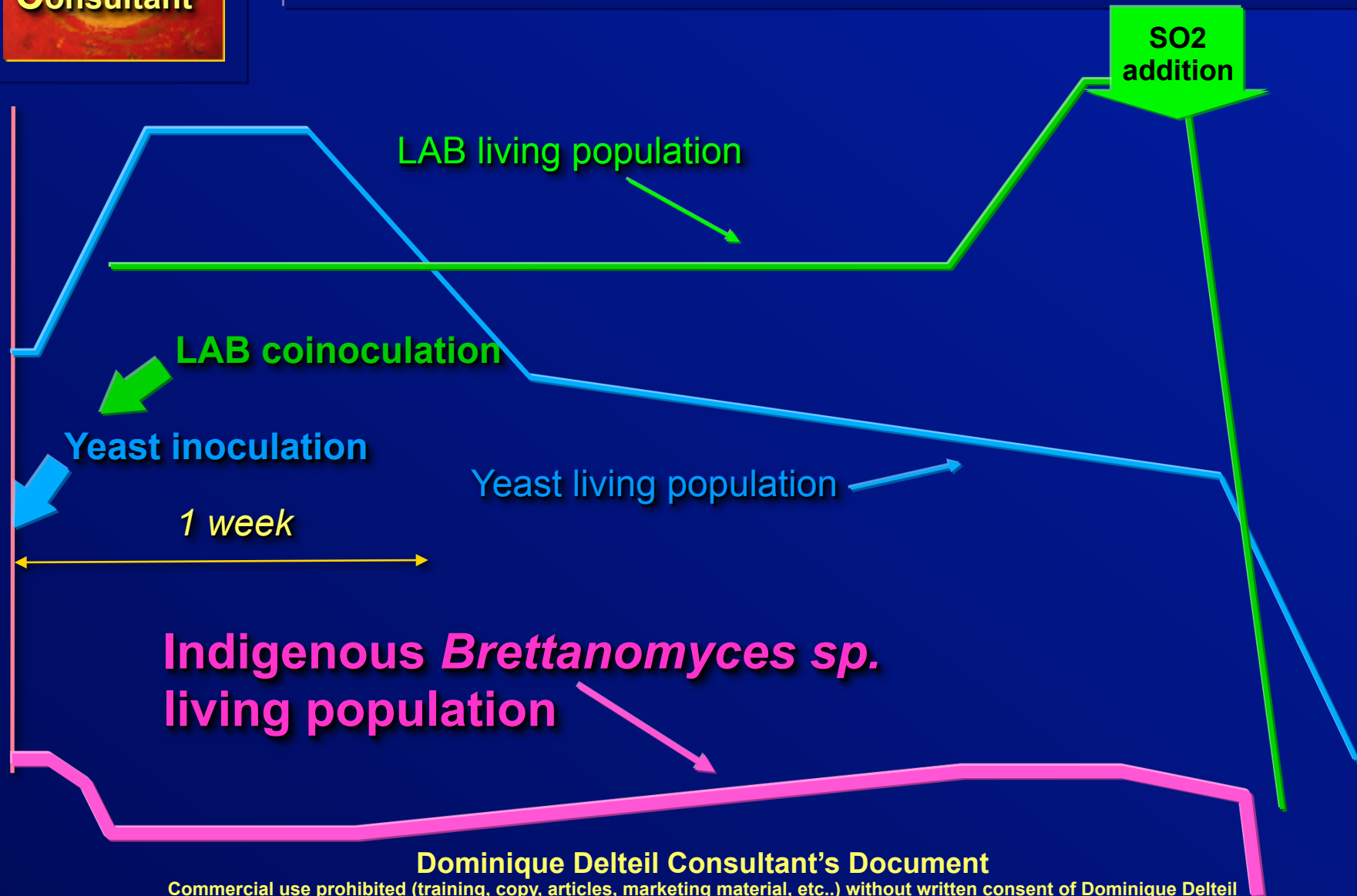
Reminder: Indigenous Lactic Acid Bacteria living population with yeast - bacteria coinoculation

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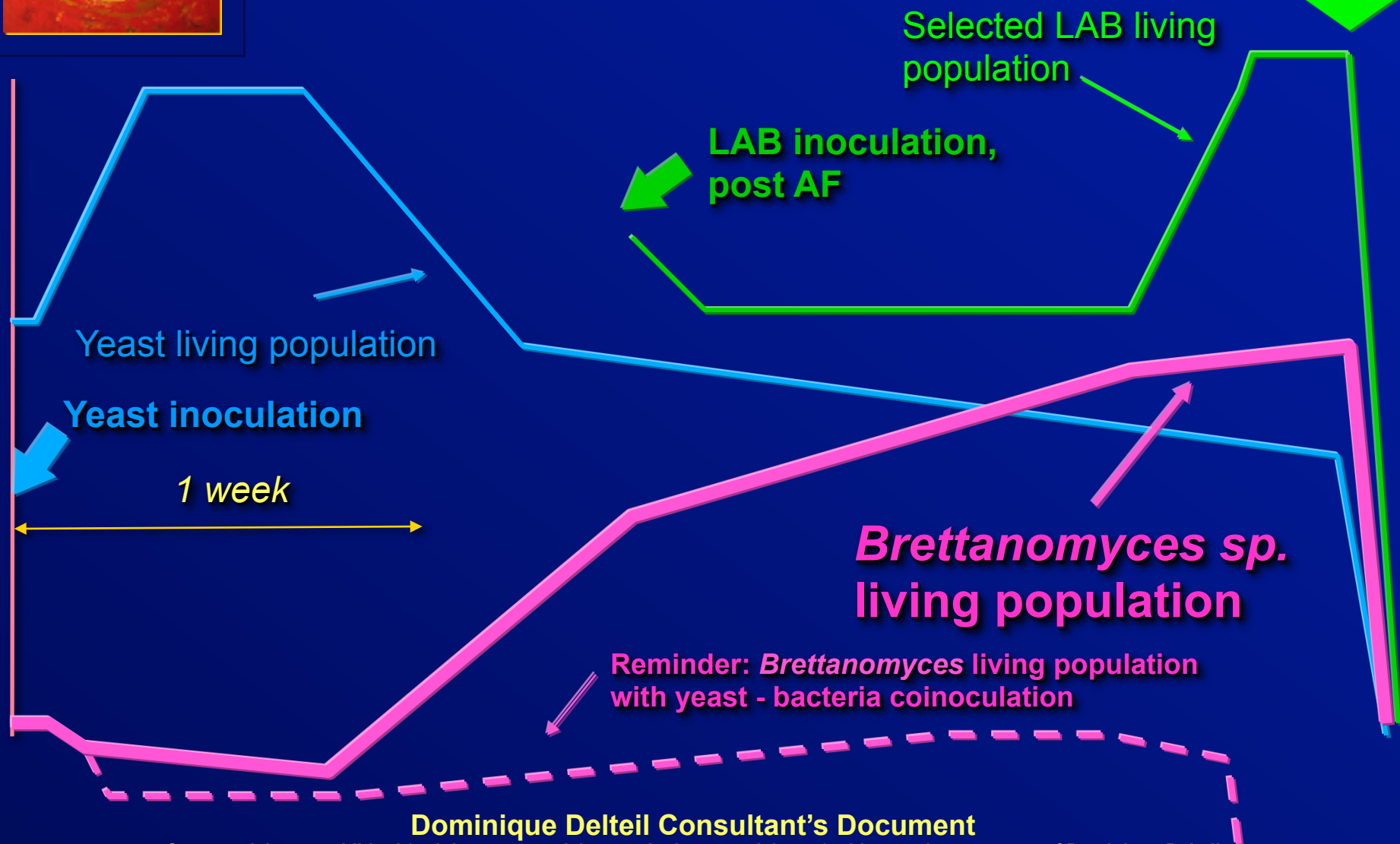
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Brettanomyces sp. population curves during a co-inoculated yeast - bacteria fermentation



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Post alcoholic fermentation LAB inoculation: Brett !



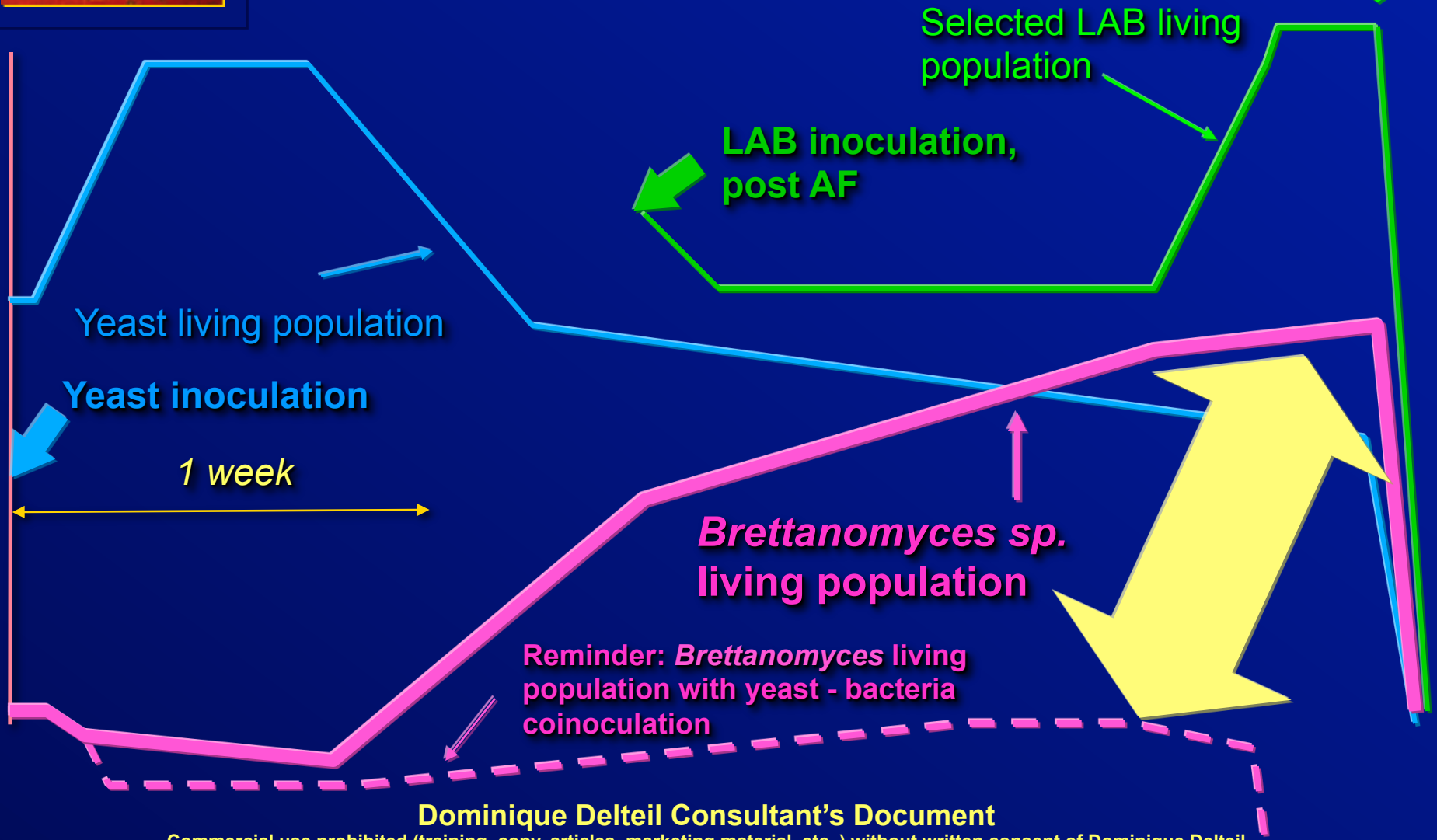
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Even with hygiene and fermentation Good Practices, these are the potential risk differences

SO2
addition

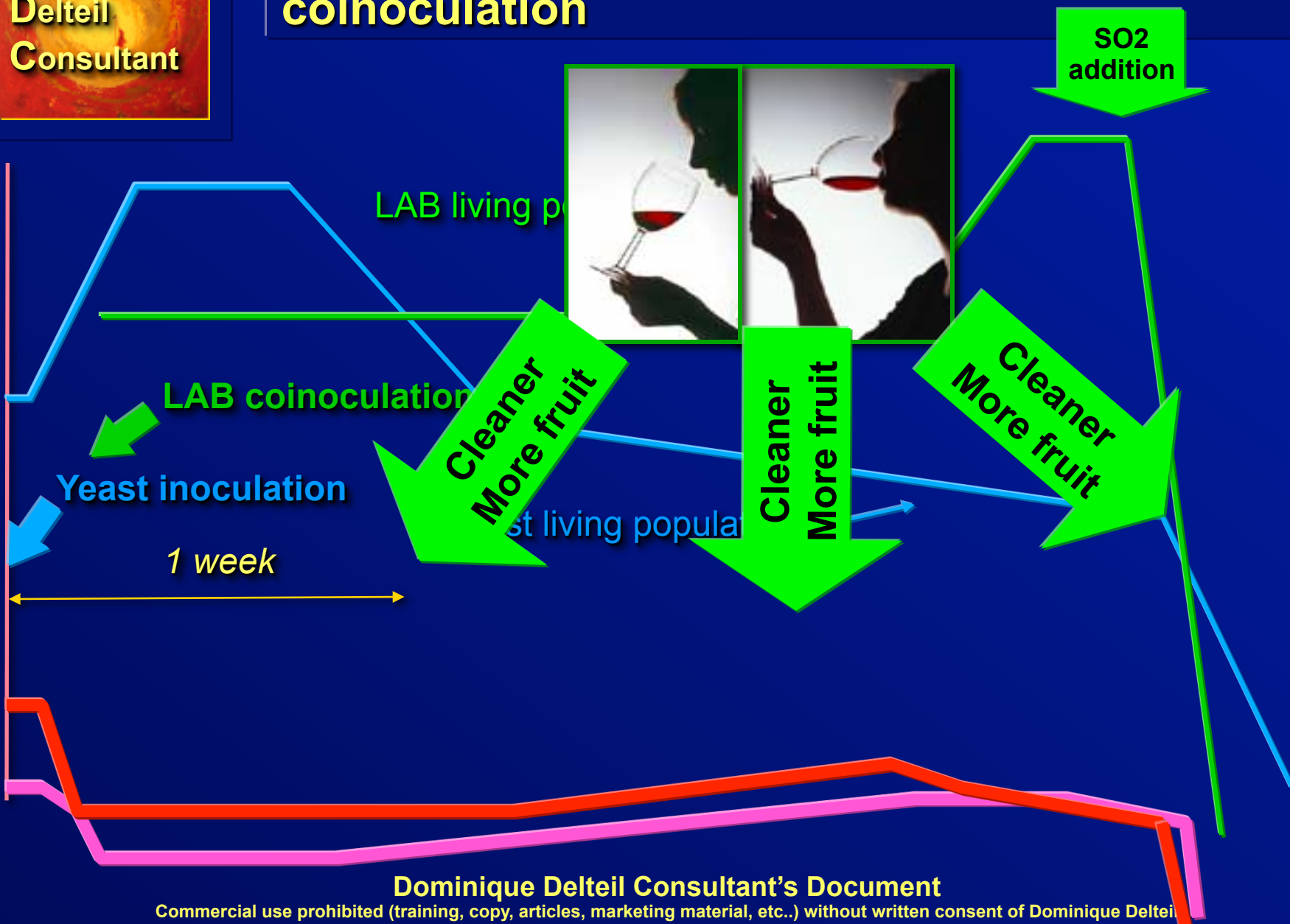


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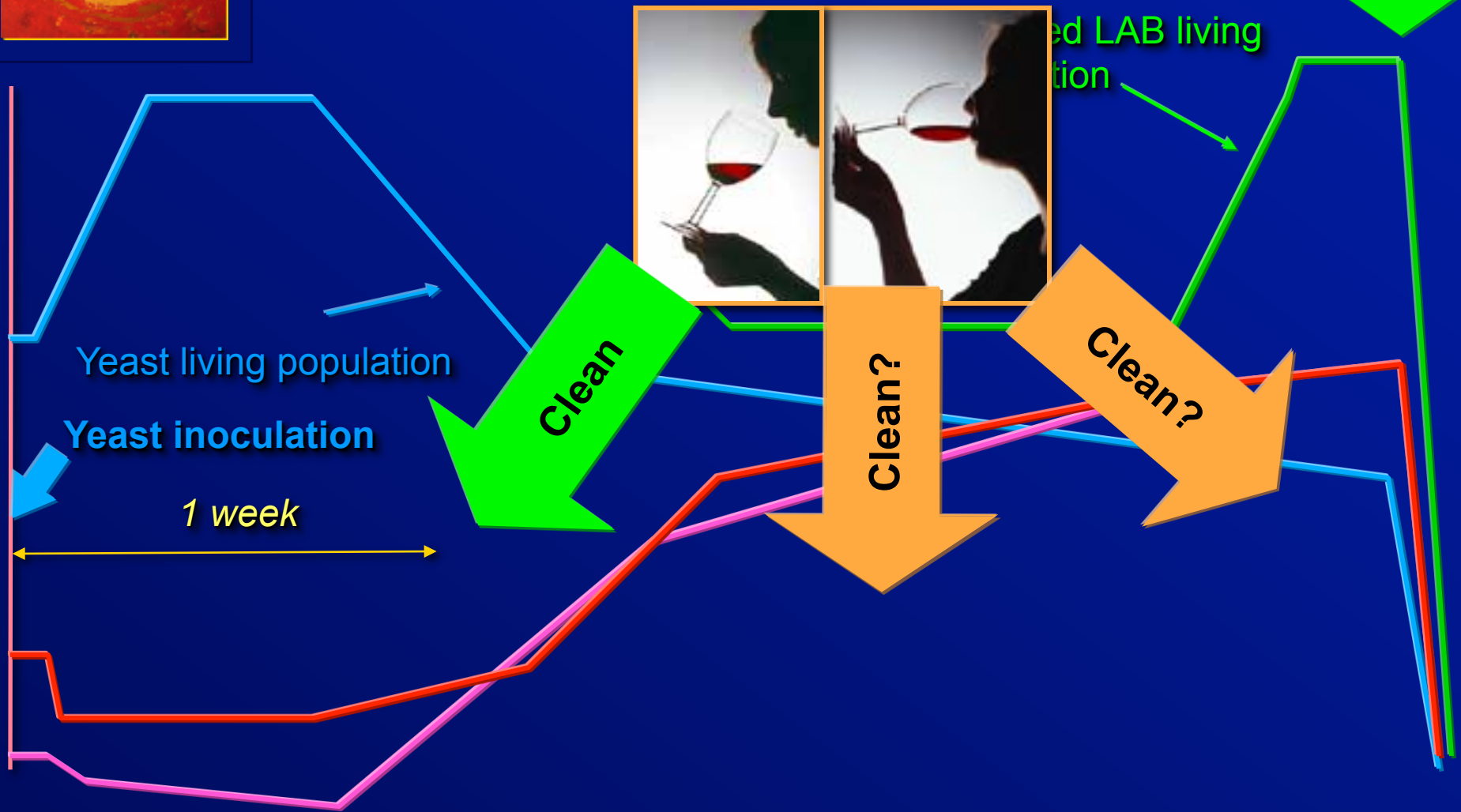
As a sensory consequence, with coinoculation



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As a sensory consequence, with post-AF inoculation

SO2
addition



Yeast living population

Yeast inoculation

1 week

Clean

Clean?

Clean?

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