

LUXURY
BY NATURE



WhiteTop Series

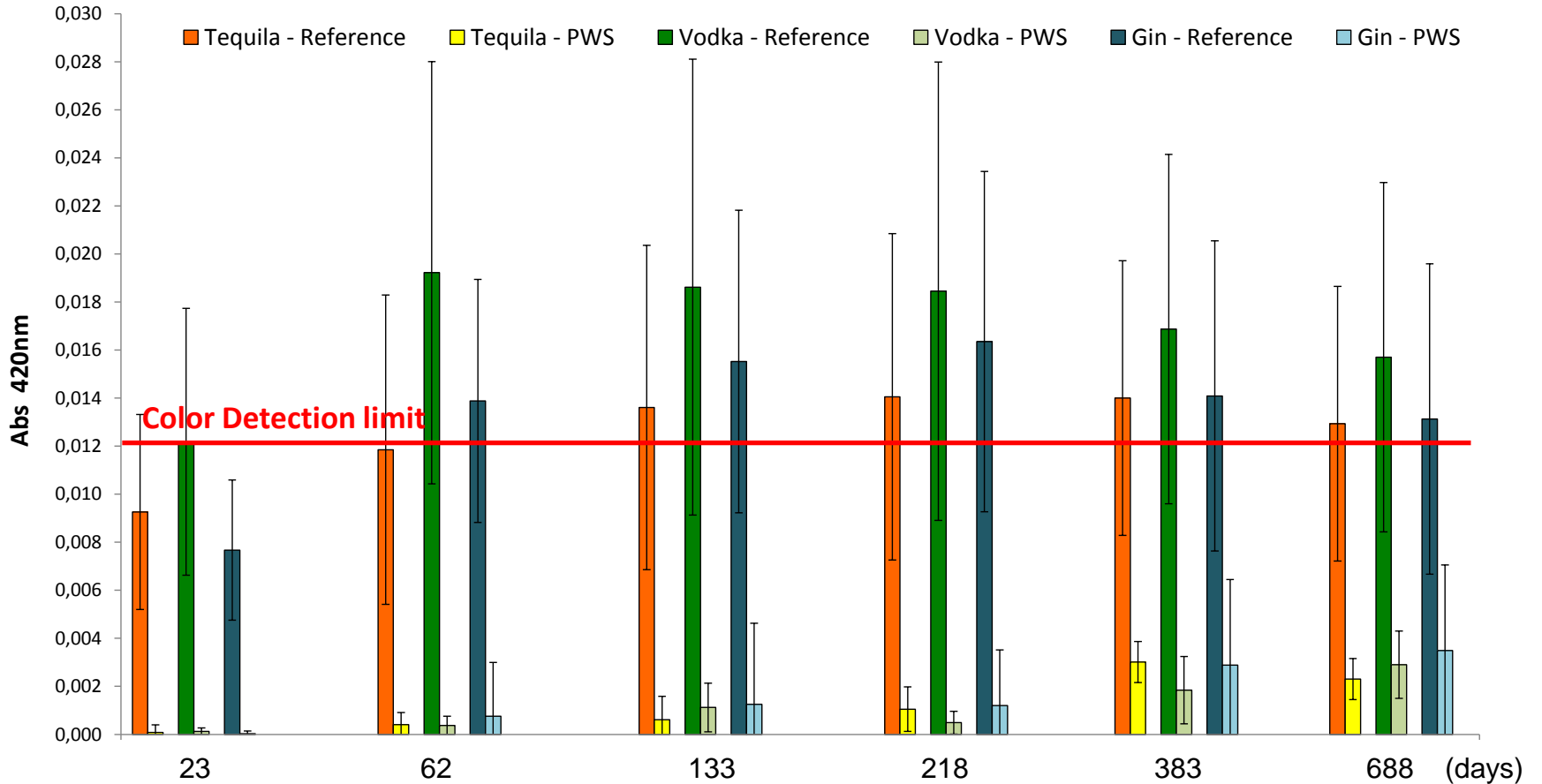
PWS Technology

2014



WhiteTop DEVELOPMENT | Validation tests

Color Migration results in bottle: Tequila, Vodka and GIN



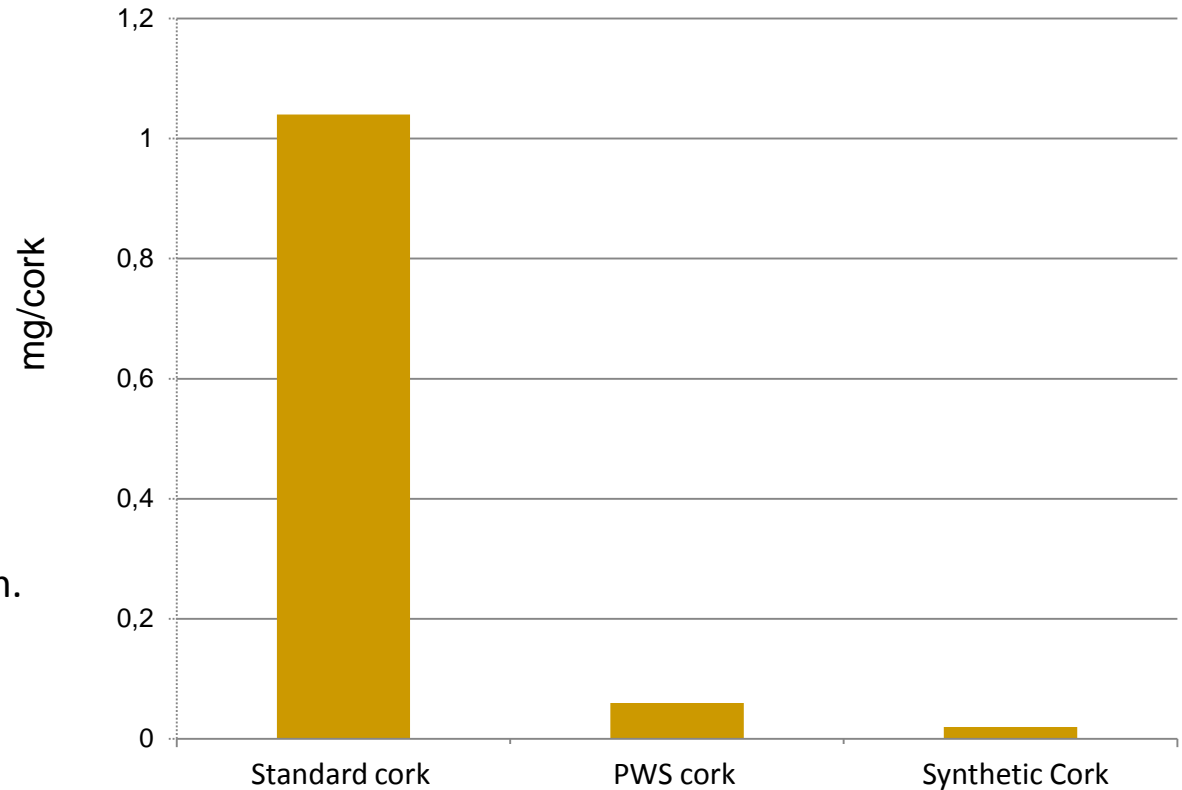
WhiteTop DEVELOPMENT | Validation tests

Dust content

Standard method:

Cork soak

- 8 corks/200mL water;
- 30 min with continuous agitation.



WhiteTop DEVELOPMENT | Validation tests

Dust content

Method: Test in bottle/ Drink: whisky / 4 weeks

Week 1:

35°C, horizontal position with agitation (60 rpm);

Week 2:

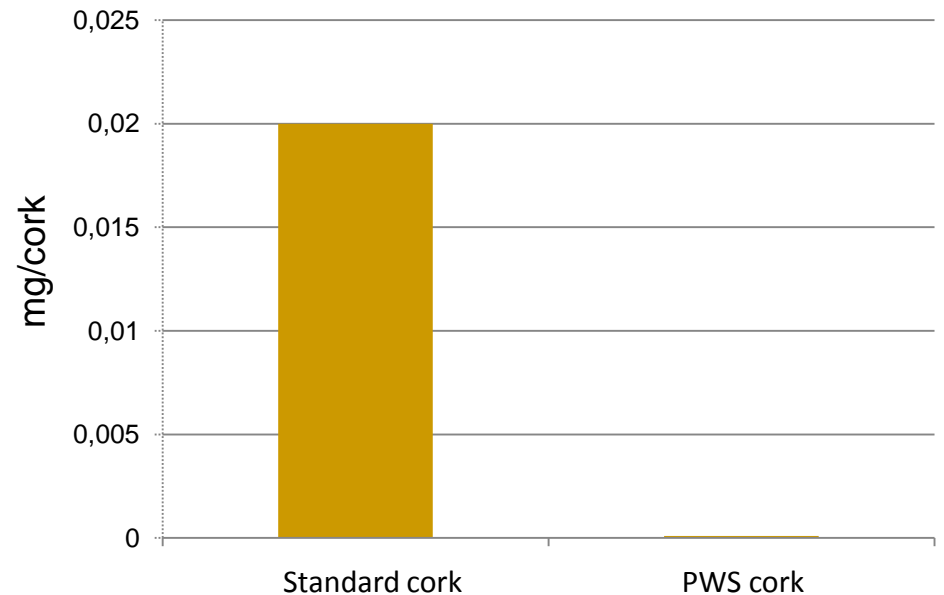
20°C, vertical position;

Week 3:

35°C, horizontal position with agitation (60 rpm);

Week 4:

20°C, vertical position.



WhiteTop TECHNICAL SPECIFICATION

A. Characteristics and tolerances

Characteristic	Method	Tolerances
Visual grading	ME.RA.DCQ.02	Deviation $\leq 5\%$
Length		$\pm 1,0$ mm
Diameter	ME.DQL.18	$\pm 0,4$ mm
Ovality		$\leq 0,3$ mm
Humidity	ME.DQL.04	4-8% RH
Residual Peroxydes	ME.DQL.03	$< 0,2$ mg/cork
Cork dust content	ME.DQL.02	$< 0,5$ mg/cork
Organoleptic	ME. DQL.37	$< 6\%$ (2% CD + 4% NCD)
Colour migration	ME.RA.DCQ.06	$< 0,012$ at $\lambda = 420$ nm

WhiteTop TECHNICAL SPECIFICATION

B. Guarantee

At recommended storage and transport conditions, migration of coloring matter is not detected in the beverage up to 24 months

C. Storage and transport recommendation

- Order your stoppers for immediate or short term use (up to 6 month);
- Store stoppers in a well-ventilated room at a controlled temperature between 15°C and 20°C and 50% to 70% humidity;
- After bottling, always keep bottle upright;
- Ideal bottle storage conditions are 15°C and 20°C and humidity between 50-70%;
- During the transport of the bottles the above conditions should be kept in mind.

D. Food Contact

- Regulation (CE) nº 1935/2004 | FDA Norms – C.F.R. 21, Section 175 | Resolution AP(2004)2



Client PRODUCT VALIDATION PROTOCOL

- Prepare 10 bottles (minimum) with PWS cork;
- Prepare 3 bottles for reference with a standard cork;
- Evaluate the color migration in the White Spirit, visually or, if possible by UV / Vis spectrophotometry with a wavelength of 420 nm, after:
 - 1 month (vertical and horizontal position)
 - 3 months (vertical and horizontal position)
 - 6 months (vertical position)
 - 12 months (vertical position)
 - 24 months (vertical position)
- Acceptance of the absorbance ≤ 0.012 (limit detection of color).

Recommendation: please send 3 bottles (minimum) for analysis and validation at AMORIM



Conclusions

- PWS corks represent a totally new myriad of possibilities for natural cork. It is a new segment in which cork will now be constantly present, adding value to both the products and market recognition;
- All tests have shown us that the careful selection , the technologically developed solutions enhance the sensory performance, migration of dust and color to white spirits;
- PWS corks guarantee the integrity of Client's products at all levels, from the visual to organoleptic points of view.



Put a TopSeries cork in it...



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