



QUALIFICATIONS & PUBLICATION LIST

DR. CARIEN COETZEE

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QUALIFICATIONS

BSc Agric (Oenology Spes)

Stellenbosch University
Major subjects: Viticulture and Oenology
2005 – 2008
Graduated *Cum Laude*

MSc Agric (Oenology)

Stellenbosch University
Thesis title:
Oxygen and Sulphur Dioxide addition to Sauvignon blanc: effect on must and wine composition
2009 – 2011
Graduated *Cum Laude*

PhD Agric (Oenology)

Stellenbosch University
Dissertation title:
Oxidation treatments affecting Sauvignon blanc wine sensory and chemical composition
2011 – 2014

WORK EXPERIENCE

- **Managing Director**, Basic Wine (2019 – present)
 - **Technical Manager**, Vinlab, Distillery Road, Stellenbosch, 7600, South Africa (2017-2018)
 - **Principal Technical Officer**, Institute for Grape and Wine Sciences, Stellenbosch University (2016)
 - **Postdoctoral Fellow**, Department of Viticulture and Oenology, Stellenbosch University (2014 – 2015)
 - **Guest lecturer**, Department of Viticulture and Oenology, Stellenbosch University (2012 – 2014)
 - **Lecturing assistant** Department of Viticulture and Oenology, Stellenbosch University (2009 – 2011)
 - **Part-time technical assistant**, Stellenbosch University (2009 – 2013)
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- Coetzee, C.** and Du Toit, W.J. 2012. A comprehensive review on Sauvignon blanc aroma with a focus on certain positive volatile thiols. *Food Research International Journal* 45:287-298
- Coetzee, C.**, Lisjak, K., Nicolau, L., Kilmartin, P. and Du Toit, W.J. 2013. Oxygen and sulphur dioxide additions to Sauvignon blanc must: effect on must and wine composition. *Flavour and Fragrance Journal* 28:155-167
- Fracassetti, D., **Coetzee, C.**, Vanzo, A., Ballabio, D. and Du Toit, W.J. 2013. Oxygen consumption in South African Sauvignon blanc wines: role of glutathione, sulphur dioxide and certain phenolics. *South African Journal of Enology and Viticulture* 34(2):156-169
- Coetzee, C.**, Brand, J., Emerton, G., Jacobson, D., Silva Ferreira, A.C. and Du Toit, W.J. 2015. Sensory interaction between 3-mercaptohexan-1-ol, 3-isobutyl-2-methoxypyrazine and oxidation-related compounds. *Australian Journal of Grape and Wine Research* 21:179-188
- Coetzee, C.**, Brand, J., Jacobson, D. and Du Toit, W.J. 2016. The sensory effect of acetaldehyde on the perception of 3-mercaptohexan-1-ol and 3-isobutyl-2-methoxypyrazine. *Australian Journal of Grape and Wine Research* 22(2):197-204
- Coetzee, C.** and Du Toit, W.J. 2016. Sauvignon Blanc Wine: Contribution of Ageing and Oxygen on Aromatic and Non-aromatic Compounds and Sensory Composition – A Review. *South African Journal of Enology and Viticulture* 36(3):347-364
- Langen, J., Fischer, U., Cavalari, M., **Coetzee, C.**, Wegmann-Herr, P. and Schmarr, H-G. 2016. Enantiodifferentiation of 1,2-propanediol in various wine as phenylboronate ester with multidimensional gas chromatography-mass spectrometry. *Analytical & Bioanalytical Chemistry* 408(10):2425-2439
- Coetzee, C.**, Van Wyngaard, E., Suklje, K., Silva Ferreira, A.C. and Du Toit, W.J. 2016. A Chemical and Sensory study on the Evolution of Aromatic and Non-aromatic Compounds during the Progressive Oxidative Storage of a Sauvignon Blanc Wine. *Journal of Agricultural and Food Chemistry* 64 (42):7979-7993
- Coetzee, C.**, Buica, A., Du Toit, W.J. Research Note: The Use of SO₂ to Bind Acetaldehyde in Wine: Sensory Implications. *South African Journal of Enology and Viticulture* 39(2)
- Coetzee, C.**, Schulze, A., Mokwena, L., Du Toit, W.J., Buica, A. Investigation of thiol levels in young commercial South African Sauvignon Blanc and Chenin Blanc wines using propiolate derivitization and GC-MS/MS. *South African Journal of Enology and Viticulture*. Accepted for publication.

Local conferences (*presenter underlined*)

Coetzee, C., Lisjak K., Nicolau, L. and Du Toit, W.J. 2010. Different oxygen and sulphur dioxide concentrations in Sauvignon blanc must: effect on the composition of the must and wine. 32nd Conference of the South African Society for Enology and Viticulture, Lord Charles Hotel, Somerset West. (**POSTER**) (17-19 November)

Deloire, A.J., **Coetzee, C.**, Proper, H., Coetzee, Z.A. and Du Toit, W.J. 2010. Effect of bunch microclimates on the berry temperature evolution in a cool climate of the Western Cape area. Consequence on the Sauvignon blanc style of wine. 32nd Conference of the South African Society for Enology and Viticulture, Lord Charles Hotel, Somerset West. (17-19 November)

Du Toit, W.J., **Coetzee, C.**, Kritzinger, E. and Fracassetti, D. 2012. Glutathione: recent developments on our knowledge on this important anti-oxidant. 34th Conference of the South African Society for Enology and Viticulture, Allée Bleue, Franschoek, South Africa. (14-16 November)

Coetzee, C., Silva Ferreira A and Du Toit, W.J. 2012. Effect of oxidation on Sauvignon blanc wine sensory and chemical composition. 34th Conference of the South African Society for Enology and Viticulture, Allée Bleue, Franschoek, South Africa. (**POSTER**) (14-16 November)

Coetzee, C., Silva Ferreira A and Du Toit, W.J. 2013. Repetitive oxidation of Sauvignon blanc wine: the evolution of aroma compounds. 35th SASEV/WINETECH International Conference, Lord Charles Hotel, Somerset-West, South Africa. (13-15 November)

Coetzee, C. and Du Toit, W.J. 2016. South Africa's top 10 Sauvignon blanc wines Chemical and sensory profiles elucidated. 38th Conference of the South African Society for Enology and Viticulture, Lord Charles Hotel, Somerset West. (**POSTER**) (23-25 August)

Coetzee, C., Buica, A. and Du Toit, W.J. 2016. Addition of sulphur dioxide to reduce "green apple" odour. But at what cost? 38th Conference of the South African Society for Enology and Viticulture, Lord Charles Hotel, Somerset West. (23-25 August)

Coetzee, C. 2017. Oxygen Update, Old Problem, New Solutions. 40th Conference of the South African Society for Enology and Viticulture, Allée Bleue Estate, Simondium. (29-31 August)
https://vinlab.com/wp-content/uploads/2017/09/170831_SASEV-oxygen-FOR-WEBSITE.pdf

International conferences (*presenter underlined*)

Coetzee, C. and Du Toit, W.J. 2009. Effect of different oxygen and SO₂ levels on Sauvignon blanc must. Fourth International conference of the South African Society for Enology and Viticulture- beyond 2010, Cape Town, South Africa.

Du Toit, W.J., Coetzee, C., Lisjak, K. and Nicolau, L. 2010. Different oxygen and sulphur dioxide concentrations in Sauvignon blanc must: effect on the composition of the must and wine. Third International Symposium MacroWine 2010 on Macromolecules and Secondary Metabolites of Grapevine and Wines, Torino, Italy. (16-18 June)

Du Toit, W.J., Buica, A., Coetzee, C., Van Wyngaard, E., Moffat, E. and Strever, A. 2011. Handling grapes from a warm area: how not to burn your fingers. 16th International Oenology Symposium in Bolzano, Italy.

Young, P., Alexandersson, E., Jacobson, D., Lashbrooke, J., Eyeghe-Bickong, H., Coetzee, Z., Coetzee, C., Kritzinger, E., Du Toit, W., Deloire, A. and Vivier, M.A. 2012. Profiling of carotenoid metabolism and quality parameters in grapes and wines from a model vineyard where the microclimate of the developing bunches has been altered. Macrowine Conference, Bordeaux, France. (18-21 June).

Du Toit, W.J., Coetzee, C., Kritzinger, E., and Fracassetti, D. 2013. Glutathione : and important antioxidant in wine. XXIV Entreiens Scientifiques Lallemand, Lisbon, Portugal (18 April)

Du Toit, W.J., Coetzee, C., Parish, K, Silva Ferreira, A. and Kilmartin, P. 2013. Oxidative versus reductive handling of Sauvignon blanc grapes and wine. 15th Australian Wine Industry Technical Conference, Sydney, Australia (13- 18 July).

Coetzee, C., Silva Ferreira, A. and Du Toit, W.J. 2013. Repetitive oxidation of Sauvignon blanc wine: the evolution of aroma compounds. 10th Pangborn Sensory Science Symposium, Windsor Barra Hotel, Rio de Janeiro, Brazil. **(POSTER)** (11-15 August).

Coetzee, C., Silva Ferreira, A. and Du Toit, W.J. 2015. Repetitive oxidation of Sauvignon blanc wine: Comparison of chemical and sensory data. 10th International Symposium of Enology of Bordeaux, Bordeaux, France **(POSTER and Presentation)** (29 June-1 July)

Coetzee, C., Brand, J., Emerton, G., Jacobson, D., Silva Ferreira, A.C. and Du Toit, W.J. 2015. Sensory interaction between oxidation-related compounds and Sauvignon blanc character impact compounds. Ninth Edition of the In Vino Analytica Scientia Symposium, Trento, Italy. (14-17 July).

Coetzee, C., Buica, A. and Du Toit, W.J. 2015. Sensory effect of acetaldehyde bound to sulphur: is it really odourless? AfroSense 2015, STIAS Conference Centre, Stellenbosch, South Africa. (23-26 November).

Coetzee, C., and Du Toit, W.J. 2016. South Africa's top 10 Sauvignon blanc wines. How do the chemical and sensory profiles compare? Macrowine 2016 Changins, Nyon, Switzerland. (27-30 June).

Coetzee, C., Du Toit, W.J. and Buica, A. 2017 Thiol levels in young commercial South African Sauvignon Blanc and Chenin Blanc wines using propiolate derivatization and GC-MS/MS. 10th In Vino Analytica Scientia Symposium, Salamanca, Spain. (POSTER) (17 to 20 July 2017)

Walls, J., Coetzee, C., and Du Toit, W.J. 2018. Factors affecting the efficacy of sparging in South African white wines. 41th International Conference of the South African Society for Enology and Viticulture, Lord Charles Hotel, Somerset West. (POSTER) (2-4 October)

Du Toit, W.J., Walls, J., Alexandre-Tudo, J.L. and Coetzee, C. 2018. Novel findings on effects of oxygen in white and red wines. 41th International Conference of the South African Society for Enology and Viticulture, Lord Charles Hotel, Somerset West. (2-4 October)

Popular articles

- Du Toit, W.J., Visagie, M. and **Coetzee, C.**. 2013. Comparing the Glories, Iland and Bovine serum albumin tannin precipitation methods when measuring phenolic compounds and is there a correlation between grape and wine content? *WineLand August 2013*
<http://www.wineland.co.za/comparing-glories-iland-bovine-serum-albumin-measuring-phenolic-compounds-whether-correlation-grape-wine-content/>
- Van der Merwe, H., **Coetzee, C.**, Nieuwoudt, H., De Beer, D. and Du Toit, W.J. 2013. Colour and phenolics in red grapes: Comprehensive survey of the distribution of these parameters in different red grape blocks from Robertson area. *WineLand October 2013*
<http://www.wineland.co.za/colour-and-phenolics-in-red-grapes-a-comprehensive-survey-of-the-distribution-of-these-parameters-in-different-red-grape-blocks-from-the-robertson-area/>
- Du Toit, W.J., Fracassetti, D., **Coetzee, C.**, Vanzo, A. and Ballabio, D. 2014. Factors influencing the consumption of oxygen in wine. *WineLand September 2014*
<http://www.wineland.co.za/factors-influencing-the-consumption-of-oxygen-in-wine/>
- Coetzee, C.** 2016. Guava tree and Cat's pee. Produced for the Sauvignon blanc Interest group *Technical workshop. 23 November 2016*
- Coetzee, C.** 2017. Guava tree and Cat's pee. *WineLand Part 1, Part 2, Part 3, Part 4. 2017.*
<http://www.wineland.co.za/guava-tree-cats-pee-part-1/>
<http://www.wineland.co.za/guava-tree-cats-pee-part-2/>
<http://www.wineland.co.za/guava-tree-cats-pee-part-3/>
<http://www.wineland.co.za/guava-tree-cats-pee-part-4/>
- Coetzee, C.** 2017. Everyone's buzzing about 4MMP. Produced for the Sauvignon blanc Interest group *Technical workshop. November 2017*
- Coetzee, C.** 2018. Adjusting Sauvignon Blanc aroma and flavor complexity. May 2018 Issue of Wines & Vines. Part 1 & Part 2
<https://www.winesandvines.com/features/article/197002/Grape-Derived-Fruity-Volatile-Thiols>
<https://www.winesandvines.com/features/article/198327/Preserving-and-Increasing-Thiols>
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Technology Transfer (*presenter underlined*)

Du Toit, W.J. and **Coetzee, C.** 2009. Oxygen in Sauvignon blanc aroma. Sauvignon blanc interest group annual meeting (October 2009).

Du Toit, W.J., and **Coetzee, C.** 2009. Oxygen and Sauvignon blanc. Sauvignon blanc association technical seminar, Stellenbosch (12 November 2009).

Du Toit, W.J., **Coetzee, C.**, Lisjak, K. and Nicolau, L. 2010. Different oxygen and sulphur dioxide concentrations in Sauvignon blanc must: effect on the composition of the must and wine. Faculty of AgriSciences Research Day, Stellenbosch University. (1 December 2010)

Du Toit, W.J., **Coetzee, C.** and Deloire, A. 2010. Using Dyostem to monitor ripening in Sauvignon blanc. Western Cape Viticulture interest group. (12 November 2010)

Du Toit, W.J., **Coetzee, C.** and Kritzinger, E. 2010. Recent findings on Sauvignon blanc aroma. Sauvignon blanc interest group annual meeting (7 October 2010).

Coetzee, C. 2011. Thiols and glutathione in Sauvignon blanc berries and wine: a review and recent results. Western Cape Viticulture interest group. (20 April 2011)

Coetzee, C. and Du Toit, W.J. 2011. Overview of Sauvignon blanc aroma compounds. WINETECH/ SU/SASEV Information Day. (18 October 2011)

Coetzee, C. 2013. Radio interview with Chris Viljoen from RSG Landbou. Aired 22 November 2013 on RSG radio.

Coetzee, C., Kritzinger, E. and Du Toit, W.J. 2015. Role of glutathione in winemaking: Legalisation of pure glutathione usage in winemaking SASEV/IGWS Industry Workshop (6 May 2015)

Coetzee, C. 2015. University of Stellenbosch Research on Sauvignon Blanc: Past, present and future. SBIG Technical Seminar, Kleine Zalze Lodge, Stellenbosch (23 April 2015)

Coetzee, C. and Hopkins, C. 2015. Feedback about FNB Sauvignon Blanc Top 10 Competition. SBIG Technical Seminar, Allée Bleue, Simondium (2 December 2015)

Coetzee, C. 2016. Recent research at the University of Stellenbosch, and South African Sauvignon blanc top 10 wines unravelled. Technology transfer to New Zealand research industry, Auckland New Zealand (11 February 2016)

Coetzee, C. 2016. Vinpro SBIG Information session and feedback from visit to Marlborough, New Zealand. Vinpro, Paarl (17 March 2016)

Coetzee, C. 2016. New Zealand Sauvignon blanc research and applications. What are the Kiwis focusing on? Sauvignon blanc Interest Group Technical Workshop, Joostenberg, Stellenbosch (21 April 2016)

Sauvignon blanc roadshows: Communication of 2016 top 10 Sauvignon blanc sensory and chemical composition at the following locations: Merwida (Breedekloof), La Viege (Hemel-en-Aarde), Kleine Zalze (Stellenbosch), De Grendel (Tygerberg)

Coetzee, C. and Du Toit, W.J. 2016. Faulty wines workshop. Cape Wine Academy, Johannesburg, South Africa. (5 August 2016)

Coetzee, C., Smit, H. 2017. Post harvest information. VinPro day, Paarl (March 2017)
<https://vinlab.com/wp-content/uploads/2017/06/VinPro-Presentation-vir-website.pdf>

Coetzee, C. Wine aroma stability and preservation. Enartis Satbilisation school. Stellenbosch, Vredendal, Robertson (May 2017)

<https://vinlab.com/wp-content/uploads/2017/06/ENARTIS-Presentation-vir-website-1.pdf>

Coetzee, C. The future of paper chromatography in the wine industry due to alternative methods. South African Wine Laboratories Association Information Day (May 2017)

https://vinlab.com/wp-content/uploads/2017/06/170526_SAWLA-Presentation-vir-website.pdf

Coetzee, C. SO₂ in wine: Back to basics. Breedekloof Study group (21 September 2017)

https://vinlab.com/wp-content/uploads/2017/09/170921_SO2-in-wine-Back-to-Basics-FOR-WEBSITE.pdf

Coetzee, C. Lessons learned from the Sauvignon Blanc Experience. Sauvignon blanc Interest Group Technical Workshop, Joostenberg, Stellenbosch (23 May 2018)

Sauvignon blanc roadshows: Communication of 2017 top 10 Sauvignon blanc sensory and chemical composition at the following locations: Mountain Ridge (Breedekloof), La Vierge (Hemel-en-Aarde), Kleine Zalze (Stellenbosch).

Coetzee, C., Steyn, S. Testing Wine Stability: Fining, analysis and interpretation. Enartis Stabilisation school. Stellenbosch, Vredendal (July 2018)

Coetzee, C., Unravelling the 2018 FNB Top 10 Sauvignon Blanc wines. Sauvignon blanc Interest Group Technical Seminar. Allée Bleue Estate, Simondium (November 2018)

Walls, J., Coetzee, C., Du Toit, WJ., Sparging of South African white wine. Sauvignon blanc Interest Group Technical Seminar. Allée Bleue Estate, Simondium (November 2018)

Vinlab

- Méthode Cap Classique, Part 1: Viticulture
- Méthode Cap Classique, Part 2: Processing and primary fermentation
- Méthode Cap Classique, Part 3: From the end of primary fermentation to preparation and commence of secondary fermentation
- Méthode Cap Classique, Part 4: Aging, riddling, disgorging and corking
- The ins and outs of a copper fining trial
- Delle Units: Alcohol-sugar combination to achieve microbial stabilization in sweet wines
- Geosmin...soiling my wine
- Glucose & Fructose for the prediction of final alcohol
- Sugars in grapes and wines demystified

Sauvignon Blanc Interest Group of South Africa

- Sauvignon blanc under investigation. Current research at the University of Stellenbosch (Oenology)
 - Increasing methoxypyrazines using skin contact and increased pressures...more trouble than it is worth?
 - Stability of Sauvignon blanc aroma after fermentation
 - SA a favourite at Concours Mondial du Sauvignon
-