

## PUBLICATIONS 2016

**ALEIXANDRE TUDO JL, ALVAREZ I, LIZAMA V, NIEUWOUDT H, GARCIA MJ, ALEIXANDRE J-L, DU TOIT WJ.** Modelling phenolic and volatile composition to characterize the effects of pre-fermentative cold soaking in Tempranillo wines. *LWT-Food Science and Technology*. *LWT-Food Science and Technology* 2016; **66**:193-200.

**ALEIXANDRE TUDO JL, LIZAMA V, ALVAREZ I, NIEUWOUDT H, GARCIA MJ, ALEIXANDRE J-L, DU TOIT WJ.** Effect of acetaldehyde addition on the phenolic substances and volatile compounds of red Tempranillo wines. *Australian Journal of Grape and Wine Research* 2016; **22**(2):205-214.

**SJ, HOFFMAN JE, JACOBS SM, STREVER AE, VAN ZYL JL.** Ecophysiology, Vigour, Berry and Wine Characteristics of Grapevines Growing on and off Heuweltjies. *South African Journal of Enology and Viticulture* 2016; **37**:176-192.

**COETZEE C, BRAND J, JACOBSON D, DU TOIT WJ.** Sensory effect of acetaldehyde on the perception of 3-mercaptohexan-1-ol and 3-isobutyl-2-methoxypyrazine Australian Society of Viticulture and Oenology Inc. *Australian Journal of Grape and Wine Research* 2016; **22**:197-204

**COETZEE C, VAN WYNGAARD E, SUKLJE K, FERREIRA ACS, DU TOIT WJ.** Chemical and Sensory Study on the Evolution of Aromatic and Nonaromatic Compounds during the Progressive Oxidative Storage of a Sauvignon Blanc Wine. *Journal of Agricultural and Food Chemistry* 2016; **64**:7979-7993.

**DE VRIES CJ, BUICA AS, BRAND J, MCKAY MA.** The Impact of Smoke from Vegetation Fires on Sensory Characteristics of Cabernet Sauvignon Wines Made From Affected Grapes. *South African Journal of Enology and Viticulture* 2016; **37**(1):22-30.

**DE VRIES CJ, MOKWENA LM, BUICA AS, MCKAY MA.** Determination of Volatile Phenol in Cabernet Sauvignon Wines, Made from Smoke-affected Grapes, by using HS-SPME GC-MS. *South African Journal of Enology and Viticulture* 2016; **37**(1):15-21.

**GAO Y, FANGEL JU, WILLATS WGT, VIVIER MA, MOORE JP.** Effect of Commercial Enzymes on Berry Cell Wall Deconstruction in the Context of Intravineyard Ripeness Variation under Winemaking Conditions. *Journal of Agricultural and Food Chemistry* 2016; **64**:3862-3872.

**HOWELL CL, MYBURGH PA, LATEGAN EL, SCHOEMAN C, HOFFMAN JE.** Effect of Irrigation using Diluted Winery Wastewater on *Vitis vinifera* L. cv. Cabernet Sauvignon in a Sandy Alluvial Soil in the Breede River Valley - Vegetative Growth, Yield and Wine Quality. *South African Journal of Enology and Viticulture* 2016; **37**(2):211-225.

**JOUBERT C, YOUNG PR, EYEGHE-BICKONG H, VIVIER MA.** Field-Grown Grapevine Berries Use Carotenoids and the Associated Xanthophyll Cycles to Acclimate to UV Exposure Differentially in High and Low Light (Shade) Conditions. *Frontiers in Plant Science* 2016; **7**:1-17.

LOUW M, DU TOIT M, ALEXANDRE H, DIVOL BT. Comparative morphological characteristics of three *Brettanomyces bruxellensis* wine strains in the presence/absence of sulfur dioxide. *International Journal of Food Microbiology* 2016; **238**:79-88.

**MUSINGARABWI DM, NIEUWOUDT H, YOUNG PR, EYEGHE-BICKONG H, VIVIER MA.** A rapid qualitative and quantitative evaluation of grape berries at various stages of development using Fourier-transform infrared spectroscopy and multivariate data analysis. *Food Chemistry* 2016; **190**:253-262.

**SMITH B, DIVOL BT.** *Brettanomyces bruxellensis*, a survivalist prepared for the wine apocalypse and other beverages. *Food Microbiology* 2016; **59**:161-175.

**SUKLJE K, ANTALICK G, BUICA AS, COETZEE ZA, BRAND J, SCHMIDTKE LM, VIVIER MA.** Inactive dry yeast application on grapes modify Sauvignon Blanc wine aroma. *Food Chemistry* 2016; **197**:1073-1084.

**SUKLJE K, ANTALICK G, BUICA AS, LANGLOIS J, COETZEE ZA, GOUOT JC, SCHMIDTKE LM, DELOIRE AJ.** Clonal differences and impact of defoliation on Sauvignon Blanc (*Vitis vinifera* L.) wines:

a chemical and sensory investigation. *Journal of the Science of Food and Agriculture* 2016; **96**:915-926.

**VESTNER J, DE REVEL G, KRIEGER-WEBER S, RAUHUT D, DU TOIT M, DE VILLIERS AJ.** Toward automated chromatographic fingerprinting: A non-alignment approach to gas chromatography mass spectrometry data. *Analytica Chimica Acta* 2016; **911**:42-58

**WHITENER MEB, STANSTRUP J, PANZERI V, CARLIN S, DIVOL BT, DU TOIT M, VRHOVSEK U.** Untangling the wine metabolome by combining untargeted SPME-GCxGC-TOF-MS and sensory analysis to profile Sauvignon blanc co-fermented with seven different yeasts. *Metabolomics* 2016; **12**(3):1-25.

**YOUNG PR, EYEGHE-BICKONG H, DU PLESSIS K, ALEXANDERSSON EO, JACOBSON DA, COETZEE ZA, DELOIRE AJ, VIVIER MA.** Grapevine plasticity in response to an altered microclimate: Sauvignon Blanc modulates specific metabolites in response to increased berry exposure. *Plant Physiology* 2016; **170**:1235-1254.

## **PUBLICATIONS 2015**

**ALEIXANDRE TUDO JL, NIEUWOUDT HH, ALEIXANDRE J-L, DU TOIT WJ.** Robust Ultraviolet-Visible (UV-Vis) Partial Least-Squares (PLS) models for tannin quantification in red wine. *Food Chemistry* 2015; **63**:1088-1098.

**ALEIXANDRE TUDO JL, WEIGHTMAN CJ, PANZERI V, NIEUWOUDT HH, DU TOIT WJ.** Effect of Skin Contact before and During Alcoholic Fermentation on the Chemical and Sensory Profile of South African Chenin Blanc White Wines. *South African Journal of Viticulture and Oenology* 36(3):366-377. *South African Journal of Enology and Viticulture* 2015; **36**(3):366-377.

**ANTALICK G, SUKLJE K, BLACKMAN JW, MEEKS C, DELOIRE AJ, SCHMIDTKE LM.** Influence of grape composition on red wine ester profile: Comparison between Cabernet Sauvignon and Shiraz cultivars from Australian warm climate. *Journal of Agricultural and Food Chemistry* 2015; **63**:4664-1667.

**ANTALICK G, TEMPERE S, SUKLJE K, BLACKMAN JW, DELOIRE AJ, DE REVEL G, SCHMIDTKE LM.** Investigation and sensory characterization of 1, 4-Cineole: A potential aromatic marker of Australian Carbernet Sauvignon wine. *Journal of Agricultural and Food Chemistry* 2015; **63**:9103-9111.

**CHIDI BS, ROSSOUW D, BUICA AS, BAUER FF.** Determining the impact of industrial wine yeast strains on organic acid production under white and red wine-like fermentation conditions. *South African Journal of Enology and Viticulture* 2015; **36**:316-327.

**COETZEE C, BRAND J, EMERTON GR, JACOBSON DA, DA SILVA FERREIRA AC, DU TOIT WJ.** Sensory interaction between 3-mercaptohexan-1-ol, 3-isobutyl-2-methoxypyrazine and oxidation-related compounds. *Australian Journal of Grape and Wine Research* 2015; **21**:179-188.

**COETZEE C, DU TOIT WJ.** 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* 2015; **36**(3):347-365.

**GABRIELLI M, BUICA AS, FRACASSETTI D, STANDER MA, TIRELLI A, DU TOIT WJ.** Determination of sotolon content in South African white wines by two novel HPLC-UV and UPLC-MS methods. *Food Chemistry* 2015; **169**:180-186.

**GAO Y, FANGAL JU, WILLATS WGT, VIVIER MA, MOORE JP.** Dissecting the polysaccharide-rich grape cell wall changes during winemaking using combined high-throughput and fractionation methods. *Carbohydrate Polymers* 2015; **133**:567-577.

**GHOSH S, BAGHERI B, MORGAN HH, DIVOL BT, SETATI ME.** Assessment of wine microbial diversity using ARISA and cultivation-based methods. *Annals of Microbiology* 2015; **65**:1833-1840.

**GIACOSA S, MARENGO F, GUIDONI S, ROLLE L, HUNTER JJ.** Anthocyanin yield and skin softening during during maceration, as affected by vineyard row orientation and grape ripeness of *Vitis vinifera* L. cv. Shiraz. *Food Chemistry* 2015; **174**:8-15.

**MONFORTE AR, JACOBSON DA, DA SILVA FERREIRA AC.** Chemiomics: Network reconstruction and kinetics of Port wine aging. *Journal of Agricultural and Food Chemistry* 2015; **63**:2576-2581.

**MOORE JP, ZHANG S, NIEUWOUDT HH, DIVOL BT, TRYGG J, BAUER FF.** A multivariate approach using attenuated total reflectance mid-infrared spectroscopy to measure the surface mannoproteins and  $\beta$ -glucans of yeast cell walls during wine fermentations. *Journal of Agricultural and Food Chemistry* 2015; **63**:10054-10063.

**OLIVEIRA CM, BARROS AS, DA SILVA FERREIRA AC, SILVA AMS.** Influence of the temperature and oxygen exposure in red Port wine: A kinetic approach. *Food Research International* 2015; **75**:337-347.

**PIANO F, FRACASSETTI D, BUICA AS, STANDER MA, DU TOIT WJ, BORSA D, TIRELLI A.** Development of a novel liquid/liquid extraction and ultra-performance liquid chromatography tandem mass spectrometry method for the assessment of thiols in South African Sauvignon Blanc wines. *Australian Journal of Grape and Wine Research* 2015; **21**:40-48.

**VAZ-MOREIRA I, NARCISO-DA-ROCHA C, DE BRANDT E, VANDAMME V, DA SILVA FERREIRA AC, LOBO-DA-CUNHA A, NUNES OC, MANAIA CM.** *Hydromonas duriensis* gen. nov., sp. nov., isolated from freshwater. *International Journal of Systematic and Evolutionary Microbiology* 2015; **65**:4134-4139.

**WHITENER MEB, CARLIN S, JACOBSON D, WEIGHILL DA, DIVOL BT, CONTERNO L, DU TOIT M, VRHOVSEK U.** Early fermentation volatile metabolite profile of non-Saccharomyces yeast in red and white grape must: A targeted approach. *LWT-Food Science and Technology* 2015; **64**:412-422.

**ZIETSMAN JJ, MOORE JP, FANGAL JU, WILLATS WGT, VIVIER MA.** Profiling the hydrolysis of isolated grape berry skin cell walls by purified enzymes. *Journal of Agricultural and Food Chemistry* 2015; **63**:8267-8274.

## **PUBLICATIONS 2014**

**AMORIN CL, SILVA FERREIRA AC, CARVALHO F, AFONSO CMM, CASTRO PML.** Mineralization of 4-fluorocinnamic acid by a *Rhodococcus* strain. *Applied Microbiology and Biotechnology* 2014; **98**: 1893-1905.

**CARVALHO LM, CARVALHO F, DE LOURDES BASTOS M, BAPTISTA P, MOREIRA N, MONTFORTE AR, SILVA FERREIRA AC, GUEDES DE PINHO P.** Non-targeted and targeted analysis of wild toxic and edible mushrooms using gas chromatography-ion trap mass spectrometry. *Talanta* 2014; **118**: 292-303.

**CASTRO CC, MARTINS RC, TEIXEIRA JA, SILVA FERREIRA AC.** Application of high-throughput process analytical technology metabolomics pipeline to Port wine forced ageing process. *Food Chemistry* 2014; **143**: 384-391.

**DU TOIT WJ, PIQUET C.** Research Note: Effect of Simulated Shipping Temperatures on the Sensory Composition of South African Chenin Blanc and Sauvignon Blanc Wines. *South African Journal of Enology and Viticulture* 2014; **35**(2): 278-282.

**FRANCO AR, SILVA FERREIRA AC, CASTRO PML.** Co-metabolic degradation of mono-fluorophenols by the ectomycorrhizal fungi *Psilolithus tinctorius*. *Chemosphere* 2014; **111**: 260-265.

**HUNTER JJ, VOLSCHENK CG, NOVELLO V, PISCIOTTA A, BOOYSE M, FOUCHE GW.** Integrative effects of vine water relations and grape ripeness level of *Vitis vinifera* L. cv. Shiraz/Richter 99. II: Grape composition and wine quality. *South African Journal of Enology and Viticulture* 2014; **35**(2): 359-374.

**HUNTER JJ, VOLSCHENK CG, NOVELLO V, STREVER AE, FOUCHE GW.** Integrative effects of vine water relations and grape ripeness level of *Vitis vinifera* L. cv. Shiraz/Richter 99. I: Physiological changes and vegetative-reproductive growth balances. *South African Journal of Enology and Viticulture* 2014; **35**(2): 332-358.

**LOUW L, OELOFSE S, NAES T, LAMBRECHTS MG, VAN RENSBURG P, NIEUWOUDT HH.** Trained sensory panellists' response to product alcohol content in the projective mapping task: observations on alcohol content, product complexity and prior knowledge. *Food Quality and Preference* 2014; **34**: 37-44.

**SERRA-STEPKE IM, STREVER AE, MYBURGH PA, DELOIRE AJ.** Review: the interaction between rootstocks and cultivars (*Vitis vinifera* L.) to enhance drought tolerance in grapevine. *Australian Journal of Grape and Wine Research* 2014; **20**: 1-14.

**SILVA FERREIRA AC, MONTFORTE AR, TEIXEIRA CS, MARTINS RC, FAIRBAIRN S, BAUER FF.** Monitoring alcoholic fermentation: An untargeted approach. *Journal of Agricultural and Food Chemistry* 2014; **62**: 6784-6793.

**SUKLJE K, ANTALICK G, COETZEE ZA, SCHMIDTKE LM, BASA CESNIK H, BRAND J, DU TOIT WJ, LISJAK K, DELOIRE AJ.** Effect of leaf removal and ultraviolet radiation on the composition and sensory perception of *Vitis vinifera* L. cv. Sauvignon Blanc wine. *Australian Journal of Grape and Wine Research* 2014; **20**: 223-233.

**VAN WYNGAARD E, BRAND J, JACOBSON D, DU TOIT WJ.** Sensory interaction between 3-mercaptopentan-1-ol and 2-isobutyl-3-methoxy-pyrazine in de-aromatized Sauvignon Blanc wine. *Australian Journal of Grape and Wine Research* 2014; **20**(2): 178-185.

## **PUBLICATIONS 2013**

**ALEIXANDRE-TUDO JL, ALVAREZ I, LIZAMA V, GARCIA MJ, ALEIXANDRE JL, DU TOIT WJ.** Impact of caffeic acid addition on phenolic composition of Tempranillo wines from different winemaking techniques. *Journal of Agricultural and Food Chemistry* 2013; **61**: 11900-11912.

**BODOR P, BARANYAI L, BALO B, STREVER AE, BISZTRAY GYD, HUNTER JJ.** Stability of ampelometric characteristics of vitis vinifera L cv. 'syrah' and 'sauvignon blanc' leaves: Impact of within-vineyard variability and pruning method/bud load. *South African Journal of Enology and Viticulture* 2013; **34**(1): 129-137.

**COETZEE C, LISJAK KL, NICOLAU L, KILMARTIN P, DU TOIT WJ.** Oxygen and sulfur dioxide additions to Sauvignon blanc must: Effect on must and wine composition. *Flavour and Fragrance Journal* 2013; **28**: 155-167.

**FRACASSETTI D, COETZEE C, VANZO A, BALLABIO D, DU TOIT WJ.** Oxygen consumption in South African Sauvignon blanc wines: role of glutathione, sulphur dioxide and certain phenolics. *South African Journal of Enology and Viticulture* 2013; **34**(2): 156-169.

**KRITZINGER EC, BAUER FF, DU TOIT WJ.** Influence of yeast strain, extended lees contact and nitrogen supplementation on glutathione concentrations in wine. *Australian Journal of Grape and Wine Research* 2013; **19**: 161-170.

**KRITZINGER EC, BAUER FF, DU TOIT WJ.** Role of glutathione in winemaking: A review. *Journal of Agricultural and Food Chemistry* 2013; **61**(2): 269-277.

**KRITZINGER EC, STANDER MA, DU TOIT WJ.** Assessment of glutathione levels in model solution and grape ferments supplemented with glutathione-enriched inactive dry yeast preparations using a novel UPLC-MS/MS method. *Food Additives and Contaminants Part A-Chemistry Analysis Control Exposure & Risk Assessment* 2013; **30**(1): 80-92.

**MAKHOTKINA O, HERBST JOHNSTONE M, LOGAN G, DU TOIT WJ, KILMARTIN P.** Influence of Sulfur Dioxide Additions at Harvest on Polyphenols, C6-Compounds, and Varietal Thiols in Sauvignon blanc. *American Journal of Enology and Viticulture* 2013; **64**(2): 203- 213.

**MARTINS RC, MONTFORTE AR, SILVA FERREIRA AC.** Port wine oxidation management: A multiparametric kinetic approach. *Journal of Agricultural and Food Chemistry* 2013; **61**: 5371-5379.

**OBERHOLSTER A, CARSTENS L-M, DU TOIT WJ.** Investigation of the effect of gelatine, egg albumin and cross-flow microfiltration on the phenolic composition of Pinotage wine. *Food Chemistry* 2013; **138**: 1275-1281.

**PICCIRILLO C, DEMIRAY S, SILVA FERREIRA AC, PINTADO ME, CASTRO PML.** Chemical composition and antibacterial properties of stem and leaf extracts from Ginja cherry plant. *Industrial Crops and Products* 2013; **43**: 562-569.

**SMIT AY, DU TOIT WJ, STANDER MA, DU TOIT M.** Evaluating the influence of maceration practices on biogenic amine formation in wine. *LWT-Food Science and Technology* 2013; **53**: 297-307.

**VERSARI A, DU TOIT WJ, PARPINELLO GP.** Oenological tannins: A review. *Australian Journal of Grape and Wine Research* 2013; **19** (1): 1-10.

## **PUBLICATIONS 2012**

**ALEIXANDRE-BENAVENT R, ALEIXANDRE-TUDO JL, ALCAIDE GG, FERRER-SAPENA A, ALEIXANDRE JL, DU TOIT WJ.** Bibliometric analysis of publications by South African viticulture and oenology research centers. *South African Journal of Science* 2012; **108**(5): 1-11.

**BAUER R, BASSON CE, BEKKER J, EDUARDO I, ROHWER JM, UYS L, VAN WYK JH, KOSSMANN J.** Reuteran and levan as carbohydrate sinks in transgenic sugarcane. *Planta* 2012; **236**: 1803-1815.

**BODOR P, BARANYAI L, BALO B, TOTTH E, STREVER AE, HUNTER JJ, BISZTRAY GYD.** GRA.LE.D (GRApevine Leaf Digitalization) software for the detection and graphic reconstruction of ampelometric differences between Vitis leaves. *South African Journal of Enology and Viticulture* 2012; **33**(1): 1-6.

**CASTRO CC, GUNNING C, OLIVEIRA CM, COUTO JA, TEIXEIRA JA, MARTINS RC, SILVA FERREIRA AC.** *Saccharomyces cerevisiae* oxidative response evaluation by cyclic voltammetry and gas chromatography-mass spectrometry. *Journal of Agricultural and Food Chemistry* 2012; **60**(29): 7252-

**COETZEE C, DU TOIT WJ.** A comprehensive review on Sauvignon blanc aroma with a focus on certain positive volatile thiols. *Food Research International* 2012; **45**: 287-298.

**DU TOIT WJ, VISAGIE M.** Correlations between South African red grape and wine colour and phenolic composition: comparing the Glories, Iland and Bovine Serum Albumin tannin precipitation methods. *South African Journal of Enology and Viticulture* 2012; **33**(1): 33-41.

**GELDENHUYS L, OBERHOLSTER A, DU TOIT WJ.** Monitoring the effect of micro-oxygenation before malolactic fermentation on South African Pinotage red wine with different colour and phenolic analysis. *South African Journal of Enology and Viticulture* 2012; **33**(2): 150-160.

**GREEFF AE, ROBILLARD B, DU TOIT WJ.** Short- and long-term efficiency of carboxymethylcellulose (CMC) to prevent crystal formation in South African wine. *Food Additives and Contaminants Part A-Chemistry Analysis Control Exposure & Risk Assessment* 2012; **29**(9): 1374-1385.

**STREVER AE, BEZUIDENHOUT D, ZORER R, MOFFAT T, HUNTER JJ.** Optical and thermal applications in grapevine (*Vitis vinifera* L.) research – an overview and some novel approaches. *SAIEE Africa Research Journal (Transactions of the South African Institute of Electrical Engineers)* 2012; **103**(1): 55-60.

**SUKLJE K, LISJAK KL, CESNIK HB, JANES L, DU TOIT WJ, COETZEE ZA, VANZO A, DELOIRE AJ.** Classification of grape berries according to diameter and total soluble solids to study the effect of light and temperature on methoxypyrazines, glutathione and hydroxycinnamates evolution during berry ripening of Sauvignon Blanc (*Vitis vinifera* L.). *Journal of Agricultural and Food Chemistry* 2012; **60**: 9454-9461.

**VAN DER MERWE H, NIEUWOUDT HH, DE BEER D, DU TOIT WJ.** Comprehensive survey of the distribution of colour and phenolics of different red grape wine vineyard blocks from the Robertson area in South Africa. *South African Journal of Enology and Viticulture* 2012; **33**(1): 58-71.

**VAN ZYL S, VIVIER MA, WALKER MA.** *Xiphinema index* and its relationship to grapevines. *South African Journal of Enology and Viticulture* 2012; **33**(1): 21-32.

**VINK N, DELOIRE AJ, BONNARDOT VMF, EWERT JW.** Climate change and the future of South Africa's wine industry. *International Journal of Climate Change Strategies and Management* 2012; **4**(4): 420-441.