

ANALYSIS CATALOG 2024

Fine analysis in oenology and brewing revolutionized process control: validation of inputs and oenology and brewing practices, precise control of fermentations according to raw materials, optimization of aromatic potential, control of defects and their appearance...

These numerous applications complement sensory analysis and support the oenologist and brewer's work.

Contact our chemists and oenologist: they are at your disposal to discuss your needs and evaluate with you the feasibility of these analyses in your context.

Legend

Matrices



Raw material and must analysis



Final beverage analysis

Applications



Positive aromatic compounds



Negative aromatic compound



Positive aromatic compounds precursors



Negative aromatic compound precursors



Yeast nutritional factors (fermentation kinetic and aroma production) and yeast metabolites



Antioxidant oxidation marker

NB : the negative/positive compound or interest/defect molecule classification can be reductive, as the impact of molecules depends on their concentration and the environment in which they are found.






































































Analytical methods































































































Our analyses are based on mass spectrometry techniques, coupled with liquid or gas chromatography (LC-MS, GC-MS).



Analyses marked with this symbol benefit from isotopic dilution method. Isotopic dilution is a quantitative analysis technique based on the use of specific internal standards, which significantly improves the accuracy and repeatability of the results obtained. This technique relies on the ability to synthesize standard molecules, a unique NYSEOS know-how.

Code	Matrix	Analyzed compounds	Applications
THIOLS AND OTHER SULFUR COMPOUNDS			
VA-2THIOLS		3SH et 3SHA <i>3-sulfanylhexanol (3SH), 3-sulfanylhexyleacetate (3SHA)</i>	  Grapefruit Passion fruit
VA-THIOLS.OX		% of 3SH AND 3SHA OXYDE <i>In addition of 3SH and 3SHA analysis</i>	  Thiols / Oxidation
VA-4MMP		4MSP <i>4-methyl-4-sulfanylpentan-2-one (4MSP)</i>	  Boxwood / Blackcurrant
VA-3THIOLS		3 THIOLS MENU <i>3SH and 3SHA + 4MSP</i>	  Grapefruit Passion fruit Boxwood / Blackcurrant
VA-BMT		BENZYLTHIOL (BT)	  Thiols / Flint
VA-FFT		FURFURLTHIOL (FFT)	  Thiols / Woody / Coffee Roasted / Grilled
VA-5THIOLS		5 THIOLS MENU <i>3SH and 3SHA + 4MSP + BT + FFT</i>	  Thiols
VA-PRTHI		THIOLS PRECURSORS <i>cysteine-3SH, cysteinyl-glycine-3SH, γ-glutamyl-cysteine-3SH, glutathion-3SH, cysteine-4MSP and glutathion-4MSP</i>	  Thiols precursors
VA-C6		C6 COMPOUNDS <i>(E)-2-hexenal, (E)-2-hexenol, (Z)-3-hexenol</i>	  Thiols precursors Plant, cur grass
VA-PRTHI-AL		COMPLEMENTRAY 3SH PRECURSORS <i>cysteinyl-glycine-3SH-al, γ-glutamyl-cysteine-3SH-al and glutathion-3SH-al</i>	  Thiols precursors
VA-DMS		DMS <i>Dimethyl sulfur</i>	  Woodland / Truffle Fruity enhancer
VA-PDMS		DIMETHYLE SULFUR POTENTIAL <i>Indirect measure of dimethyl sulfur after chemical release</i>	  DMS precursor
VA-SMM		S-METHYLMETHIONINE	  DMS precursor
VA-GSH		GLUTATHIONE	  Antioxidant / Oxidation
VA-GSH.OX		TOTAL GLUTATHIONE <i>Analysis of free GSH and oxidized in disulfur GSH</i>	  Antioxidant / Oxidation
VA-SL2		LIGHT SULFUR COMPOUNDS <i>2-mercaptoethanol, Ethanethiol, Methanethiol and hydrogen sulfide</i>	  Rotten egg / stale water / onion
VA-METH		METHIONOL <i>3-(methylthio)-1-propanol</i>	  Cooked cabbage
VA-SL3		REDUCTION MENU (13 molecules) <i>Hydrogen Sulfide, Methanethiol, Ethanethiol, 2-mercaptoethanol, 2-(methylthio)-1-ethanol, 3-(methylthio)-1-propanol, 5-(2-hydroxyethyl)-4-methylthiazole, benzothiazole, diethyl disulfide, diethyl sulfide, dimethyl disulfide, ethyl thioacetate and methyl thioacetate</i>	  Reduction / Negative sulfur
VA-CYS		CYSTEINE	  Antioxidant / Oxidation
VA-MENU-ANTIOX		ANTIOXIDANT MENU <i>Glutathion, Cysteine</i>	  Antioxidant / Oxidation
LIPIDS			
VA-STEROL		STEROLS <i>β-sitosterol, Ergosterol, Stigmastanol, Stigmasterol,</i>	  Fermentation kinetics Aroma production
VA-AGL		ACIDES GRAS LIBRES (12 molecules) <i>Hexanoic acid, Octanoic acid, Decanoic acid, Lauric acid, Myristic acid, Palmitic acid, Palmitoleic acid, Stearic acid, Oleic acid, Linoleic acid, γ-Linolenic acid et Arachidic acid</i>	  Fermentation kinetics Aroma production
VA-MENU-LIP		LIPIDS MENU <i>Combination of VA-STEROL and VA-AGL analyses</i>	  Fermentation kinetics Aroma production

Code	Matrix	Analyzed compounds	Applications
OTHER KEY AROMA COMPONENTS			
VA-TERP		TERPENOLS (7 molecules) <i>Linalol, Geraniol, Nerol, Citronellol, α-Terpineol, cis-Rose Oxyde and trans-Rose Oxyde</i>	  Floral / Muscat
VA-ESTERS		ESTERS (12 molecules) <i>Hexyl acetate, isoamyl acetate, 2-phenylethyl acetate, ethyl decanoate, ethyl hexanoate, ethyl octanoate, ethyl butanoate, ethyl 2-hydroxypropanoate, ethyl 3-hydroxybutanoate, ethyl 2-methylbutanoate, ethyl 2-methylpropanoate, ethyl 2-hydroxyisocaproate</i>	  Fruity
VA-ALCOOL		HIGHER ALCOHOLS (7 molecules) <i>2-phenylethanol, propanol, isobutanol, butanol, hexanol and sum of 2-methyl butanol and 3-methyl butanol</i>	  Esters precursors
VA-C13		C13-NORISOPRENOIDS <i>β-damascenone, α-ionone, β-ionone, TDN</i>	  Violet / Kerosene Fruity enhancer
VA-PYR	 	PYRAZINES (included IBMP) <i>2-isobutyl-3-methoxypyrazine, 2-ethyl-3-methoxypyrazine, 2-isopropyl-3-methoxypyrazine, 2-secbutyl-3-methoxypyrazine</i>	  Green bell pepper / Green peas
VA-BOISE		WOODY MARKERS (16 molecules) <i>4-methyl guaiacol, 5-methyl furfural, cis-iso Eugenol, cis-whiskey lactone, ethyl vanillin, eugenol, furfural, guaiacol, maltol, o-cresol, syringaldehyde, syringol, trans-2-nonenal, trans-iso Eugenol, trans-whiskey lactone et vanillin</i>	  Woody / Vanilla / Smoked
VA-ROTUN	 	ROTUNDONE	  Pepper
VA-FRUITE		FRUITY MENU (25 molecules) <i>VA-ESTERS + VA-C13 + VA-TERP + IBMP + 2-phenylethanol</i>	  Fruity
VA-FRUITE-3		FRUITY MENU AND HIGHER ALCOHOLS (31 molecules) <i>VA-ESTERS + VA-C13 + VA-TERP + IBMP + VA-ALCOOL</i>	  Fruity
VA-FRUITE-2		FRUITE MENU AND WOODY MARKERS (51 molecules) <i>VA-FRUITE + VA-BOISE + VA-DMS + VA-PYR + furaneol + homofuraneol</i>	  Fruity
VA-GLYENZ		GLYCOSYL PRECURSORS <i>Analysis of released compounds (C13 / Terpenes / Alcohols / Phenols)</i>	  Aroma precursors
VA-AMINOA		AMINO ACIDS <i>L-aspartic acid, L-glutamic acid, γ-aminobutyric acid, L-alanine, L-arginine, L-asparagine, L-cysteine, L-glutamine, L-glycine, L-histidine, L-isoleucine, L-leucine, L-lysine, L-methionine, L-phenylalanine, L-proline, L-serine, L-threonine, L-tryptophane, L-tyrosine, L-valine</i>	  Fermentation kinetics Aroma production
VA-ACIDE		SHORT-CHAIN ACIDS <i>Butanoic acid, hexanoic acid, octanoic acid, decanoic acid</i>	  Rance / Parmesan
VA-AH	 	GRP AND HYDROXYCINNAMIC ACID-TARTARIC ACID ESTERS <i>t-caffeoyl tartaric acid, t-p-coumaroyl tartaric acid, t-p-feruloyl tartaric acid, GRP (Grape Reaction Product)</i>	  Oxidation
PHENOLS			
VA-PHEN2		ETHYLS PHENOLS <i>4-ethylguaiacol, 4-ethylphenol</i>	  Stable / Clove / Spicy
VA-PHEN4		ETHYLS AND VINYLS PHENOLS <i>4-ethylguaiacol, 4-ethylphenol, 4-vinylguaiacol, 4-vinylphenol</i>	  Stable / Clove / Gouache
VA-AH2		PHENOLS ACIDS <i>Ferulic acid, p-coumaric acid</i>	  Volatile phenols precursors
VA-MENU-PHEN		PHENOLS MENU <i>VA-PHEN4 + VA-AH2</i>	  Stable / Clove / Gouache Phenols precursors

Code	Matrix	Analyzed compounds	Applications
CONTAMINANTS AND OTHER DEFECT-CAUSING COMPOUNDS			
VA-HA		HALOHANISOLES 2,3,4,5,6-pentachloroanisole (PCA) 2,3,4,6-tetrachloroanisole (TeCA) 2,4,6-trichloroanisole (TCA) 2,4,6-tribromoanisole (TBA)	 → Musty smell / « cork taste »
VA-HP		HALOPHENOLS AND LINDANE 2,3,4,5,6-pentachlorophenol (PCP), 2,3,4,6-tetrachlorophenol (TeCP), 2,4,6-trichlorophenol (TCP), 2,4,6-tribromophenol (TBP)	 → « cork taste » precursors 
VA-HA-HP		HALOHANISOLES, HALOPHENOLS AND LINDANE	 → Precursors / Musty smell / « cork taste » 
VA-2AAP		2-AMINOACETOPHENONE	 → Soapy / Beeswax
VA-ALDE2		2-PHENYLACETALDEHYDE AND METHIONAL	 → Oxidation / Honey / Potato
VA-ALDE		ALDEHYDES (16 molecules) 2,4-decadienal, 2-methylbutanal, 2-methylpropanal, 3-methylbutanal, 5-methylfurfural, benzaldehyde, decanal, furfural, heptanal, hexanal, methional, nonanal, octanal, pentanal, 2-phenylacetaldehyde, trans-2-nonenal	 → Oxidation
VA-MND		MND 3-methyl-2,4-nonanedione	 → Dried grass / Prune
VA-GMT		GEOSMINE	 → Earthy-musty taste / Wet ground
VA-ACF		1-OCTEN-3-OL	 → Fresh mushroom aroma / Undergrowth
VA-GH		2-BROMO-PARA-CRESOL	 → Oyster flavor / Shellfish / Mud
VA-DIACETYLE		DIACETYLE TOTAL butane-2,3-dione	 → Butter
VA-GDF-LIB	 	SMOKE TASTE : FREE MOLECULES 4-methylguaiacol, 4-methylsyringol, guaiacol, m-cresol, o-cresol, p-cresol and syringol	 → Smoke
VA-GDF-TOT	 	SMOKE TASTE : TOTAL (FREE + BOUNDED) 4-methylguaiacol, 4-methylsyringol, guaiacol, m-cresol, o-cresol, p-cresol and syringol (after hydrolysis of bounded compounds)	 → Smoke / Precursors 
VA-GDS		Mousy off-flavor 2-acetyl-1-pyrroline (APY), 2-acetyl-1,4,5,6-tetrahydropyridine (ATHP) and 2-ethyl-3,4,5,6-tetrahydropyridine (ETHP)	 → Mousy taste
VA-MENU-DEFAULT		DEFECTS MENU 1-octen-3-ol, 2-aminoacetophenone, 2-bromo-p-cresol, 2,3,4,5,6-pentachloroanisole, 2,3,4,6-tetrachloroanisole, 2,4,6-tribromoanisole, 2,4,6-trichloroanisole, 4-ethylguaiacol, 4-ethylphenol, 4-vinylguaiacol, 4-vinylphenol, geosmine, indole, 2-aminoacetophenone	 → Defects research

The list of analyzed parameters is not exhaustive:

Contact us for any request

Quotation on request



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