

LALVIN QA23®



ORIGIN AND APPLICATION

For fresh, fruit focused whites – A clean fermenter, rated highly in thiol conversion for optimum varietal expression. High in β -glucosidases to help aromatic expression.

Also used for fruit wine and cider production.

Selected in Portugal from the area of the appellation of Vinhos Verdes by the University of Trás-os-Montes e Alto Douro (UTAD) in co-operation with the Viticultural Commission of the Region Vinhos Verdes.

Lalvin QA23® has a very high β -glucosidase activity, enzymes which help cleave non-volatile aromatic compounds into their volatile state. Hence this yeast contributes to varietal / terroir fruit expression.

It is known to enhance citrus fruit type aromas including lime and grapefruit. Given many terpenes are bound to glucosides, the use of **Lalvin QA23®** in varieties high in terpenes such as Riesling is highly recommended.

This yeast is also a proven thiol converter, hence excellent thiol expression is achieved. Its use for Sauvignon Blanc is therefore highly recommended.

A very reliable, clean fermenter, **Lalvin QA23®** respects varietal fruit character, with minimal yeast flavour contribution. Depending on the terroir, some ester production has been reported.

Known for its Reliability and Robustness, **Lalvin QA23®** tends to ferment well in clarified juice, low in nutrients. In addition, its ability to ferment at relatively low temperatures makes it an ideal choice for the making of many white wines. The fructophilic yeast, hence tends to ferment well at the end of fermentation.

The **Lalvin QA23®** is one of the leading Riesling yeast in Australia, where it produces elegant, well structured, cool climate Rieslings.




The **Lalvin QA23®** yeast, was selected from nature, and has since been improved using the Lallemmand proprietary process called YSEO®.



Lallemmand has developed a unique yeast production process called YSEO® (Yeast Security and Sensory Optimization). This process increases fermentation reliability and security and ensures fewer organoleptic deviations, but not all yeast can be prepared by this process. The process (when compared to non YSEO®):

- Improves the yeast cells assimilation of essential micronutrients and vitamins.
- Improves the yeasts ability to implant in the must for a more reliable fermentation.
- Linked to a reduction in yeast stress thereby reducing H₂S, VA and SO₂ production.
- Shorter lag phase.
- Improves the resistance and adaption of the yeast under difficult fermentation conditions.

MICROBIAL AND OENOLOGICAL PROPERTIES

- Recommended for white wine production.   
- *Saccharomyces cerevisiae* var. *cerevisiae*
- Desirable fermentation temperature: 14-28°C (57°F-82°F). Can ferment at 10°C (50°F), once the fermentation has started. *subject to fermentation conditions.
- Alcohol tolerance 16% v/v *subject to fermentation conditions.

MICROBIAL AND OENOLOGICAL PROPERTIES (cont'd)

- Low relative nitrogen demand (under controlled laboratory conditions) and can ferment under low nutrient conditions such as low turbidity juices.
- Average lag phase and high fermentation vigour.
- Very low production of H₂S under low YAN conditions.
- Moderate relative potential for SO₂ production.
- Competitive factor active.
- Very malolactic-bacteria compatible.
- Low foam producer.
- Suggested varieties include: Chardonnay, Chenin Blanc, Colombard, Gewürztraminer, Muscadelle, Pinot Grigio, Pinot Gris, Riesling, Sauvignon Blanc, Semillon and Viognier.

FURTHER READING *(Please request this booklet from your Lallemand representative).*

Lallemand Winemaking Update – Number 1 2008: 'The YSEO® Process'

Evaluation of the YSEO® Process to prepare dried winemaking yeast – Summary of a study done by Washington State University and Lallemand.

Lallemand FOCUS paper: Yeast options for fruit wine and cider making.

INSTRUCTION FOR USE

Dosage Rate:

- 25g/hL (2lb/1000gal) of Active Dried Yeast (this will provide an initial cell population of approximately 5 x10⁶ viable cells/mL)
- 30g/hL (2.4lb/1000gal) of Go-Ferm Protect Evolution™
- Nitrogen source from the Fermaid™ range

Procedure for 1000L (264gal) ferment.

- 1) Add 300g (10.6oz) of Go-Ferm Protect Evolution™ to 6L (1.5gal) of 40-43°C (104-110°F) clean, chlorine free water. Stir until an homogenous suspension free of lumps is achieved.
- 2) When the temperature of this suspension is between 35-40°C (95-104°F), sprinkle 250g (8.8oz) of yeast slowly and evenly onto the surface of the water, whilst gently stirring. Ensure any clumps are dispersed.
- 3) Allow to stand for 20 minutes before further gently mixing.
- 4) Mix the rehydrated yeast with a little juice, gradually adjusting the yeast suspension temperature to within 5-10°C (9-18°F) of the juice/must temperature.
- 5) Inoculate into the must.

Further Notes

- Steps 1-5 should be completed within 30 minutes.
- It is best to limit first juice/must volume addition to one tenth the yeast suspension volume and wait 10 minutes before the addition to juice.
- To minimize cold shock, ensure temperature changes are less than 10°C (18°F).
- It is recommended that juice / must be inoculated no lower than 18°C (64°F).
- It is recommended to use complex nutrition source such as **Fermaid®**.

PACKAGING AND STORAGE

All Active Dried Yeast should be stored dry, best practice between 4-12°C (39-54°F) and the vacuum packaging should remain intact.

The information herein is true and accurate to the best of our knowledge; however, this data sheet is not to be considered as a guarantee, expressed or implied, or as a condition of sale of this product.

*A safety data sheet is not required for this product under US, CAN and EU regulation.
This document has been created on a voluntary basis to pass on safety information.*

SECTION 1 – IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

- 1.1 Product identifier:** **Wine Active Dry Yeast**
- 1.2 Identified use:** For use in wine making
- 1.3 Supplier details:** DANSTAR FERMENT AG
Subsidiary of Lallemand Inc.
Vejlevej 10
Fredericia
DK-7000 Denmark
Tel: +45 76 22 32 85 Email: fb.france@lallemand.com
- 1.4 Emergency telephone:** Contact your local doctor or hospital.

SECTION 2 – HAZARD IDENTIFICATION

- 2.1 Classification of the substance/mixture according to the Globally Harmonized System (GHS) and to Regulation 1272/2008/CE (CLP):** Not dangerous
- 2.2 Label elements:** None
- 2.3 Other Hazards:** None

SECTION 3 – INFORMATION ON INGREDIENTS

Substance component(s) which may pose a health hazard: none.

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

- Eye contact: Adequately flush eyes with water.
- Skin contact: Wash affected area with soap and water.
- Inhalation: Immediately remove person to fresh air.
- Ingestion: Rinse mouth and throat thoroughly with water. Drink plenty of water.

4.2 Most important symptoms and effects, both acute and delayed:

- Eye contact: Possible irritation
- Skin contact: May cause irritation
- Inhalation: May cause coughing (irritation) or irritate asthma. May cause sensitization.
- Ingestion: Possible bloating, gas, and bowel discomfort.

4.3 Indication of any immediate medical attention and special treatment needed:

None; if any symptom persists seek medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Extinguishing media:

- Suitable: Water, foam, carbon dioxide, dry powder.
- Unsuitable: None

5.2 Special hazards arising from the material:

None

5.3 Advice to firefighters:

Wear a self-contained breathing apparatus (SCBA) when exposed to confined or enclosed fires as product powder could be in the air.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personnel precautions:

Avoid contact with the eyes, skin and clothing. Use appropriate protective equipment (see Section 8).

6.2 Environmental precautions: None

6.3 Method and materials for clean up:

Small accidental spillage or leak: Avoid the formation of dust or spray. Mop up with appropriate material. Place in an appropriate container. Clean the area affected with plenty of water.

Large accidental spillage or leak: Avoid the formation of dust or spray. Prevent spillage into the drains, subsoil or confined areas. Contain if necessary. Mop up the product spilled with inert material (e.g. dry sand or dry earth) and place in a chemical waste container. Recycle if possible.

6.4 References to other sections:

See Section 8 for personal protective equipment and section 13 for waste disposal.

SECTION 7 – HANDLING & STORAGE

7.1 Precautions for safe handling:

Handling:..... Avoid breathing dust. Avoid contact with eyes.

Occupational hygiene: Wash hands thoroughly after handling.

7.2 Conditions for safe storage:

Risks: Not at risk for corrosion, fire, explosion, or chemical reaction.

Place of storage:..... No special instruction to minimize risks (see above).

Store according to label directions to maintain label guarantees.

Fire/explosion protection: None needed

7.3 Specific end use: None

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Exposure limits: No limit

Biological limits: No limit

8.2 Exposure controls:

Engineering: None

Eye/face protection: Protective glasses should be worn in conditions of excessive dusting.

Skin protection:..... Hand: None

Other: None. Wear appropriate clothing for work.

Respiratory protection: P3 protective mask should be worn.

Thermal protection: None

Environmental exposure: None

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:..... Beige to light brown powder

Odour:..... Typical yeast smell

Solubility:..... Partially soluble

Odour threshold; pH; Melting point/Freezing point; Initial boiling point and boiling range; Flash point; Evaporation rate; Flammability; Vapour pressure; Vapour density; Relative density; Partition coefficient (n-octanol/water); Auto-ignition temperature; Decomposition temperature; Viscosity; Explosive properties; Oxidising properties: Not Applicable

9.2 Other information: None

SECTION 10 – STABILITY AND REACTIVITY

- 10.1 Reactivity:.....Not reactive
10.2 Chemical stability:Stable
10.3 Possibility of hazardous reactions:None
10.4 Conditions to avoid:.....None
10.5 Incompatible materials:None
10.6 Hazardous decomposition products:None

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

- Acute toxicity:No known effects.
Skin corrosion/irritation:.....Possible irritation to skin
Eye damage/irritation:.....Possible irritation to eye
Respiratory /Skin sensitization:Possible allergic reaction or sensitization
CMR (Carcinogenity, germ cell Mutagenicity, Reproductive toxicity): ..No known effects
Chronic effects:No known effects

SECTION 12 – ECOLOGICAL INFORMATION

- 12.1 Toxicity:.....No known ecological effects.
12.2 Persistence and degradability:No persistence and the substance is bio-degradable.
12.3 Bioaccumulative potential:None
12.4 Mobility in soil:Not relevant
12.5 Results of PBT and vPvB assessment:Not relevant
12.6 Other adverse effects:None

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Product and packaging can be disposed of in regular trash or waste. No special disposal method required. Follow all applicable local laws for recycling, bagging, and disposal of trash.

SECTION 14 – TRANSPORT INFORMATION

- 14.1 UN Number:Not relevant
14.2 UN proper shipping name:Not relevant
14.3 Transportation hazard class:Not classified as dangerous
14.4 Packing group:.....Not relevant
14.5 Environmental hazards:None
14.6 Special precautions:None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not relevant

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

The format and content of this voluntary safety data sheet is based on regulations requirements However, some information may not be included because it is not relevant for this type of product.

- 15.2 Chemical safety assessment: Not relevant

SECTION 16 – OTHER INFORMATION

Disclaimer: The information, data and recommendations contained in this SDS are provided in good faith, obtained from reliable sources, and believed to be true and accurate as of the date of revision. The SDS serves as description of the products in regard to necessary safety measures. No warranty, expressed or implied, regarding the product described in this SDS shall be created or inferred by any statement in this SDS.

Revision date: September 2016 - The whole datasheet has been revised to ensure conformity with EC Regulation 1907/2006 (consolidated version).

Date of preparation: February 1, 2018

Declaration for Active Dry Yeasts for oenological use.

2018/02/07

Food Ingredient Fit for Human Consumption

We hereby confirm that raw materials/ ingredients used in the production of aforementioned products have a high purity level. The aforementioned products do not contain components or admixtures injurious to the health of the consumers. They meet applicable standards for food for human consumption as defined in the *Australia New Zealand Food Standards Code*, United States Code of Federal Regulations, United States Department of Agriculture and European Food Commission.

Under the aforementioned manufacturing conditions these products are safe for their intended use.

Food Safety / Food Defense

These products have been processed in a manner consistent with current Good Manufacturing Practices and HACCP. Practices include traceability, non-conformance, and recall. The facilities have written, implemented, recorded, and reviewed plans for manufacturing, processing, packaging, and holding food items. Additionally each production and storage facility has a plan specific to their building to address facility security and food security (food defense).

Food Allergens

The product(s) sold have been produced without the foods or their derivatives that account for the majority of human food allergic reactions as listed in EU Reg.1169/2011 as amended.

These products are considered free of the following:

- Cereals containing GLUTEN and products thereof
- Crustaceans and products thereof
- Eggs and products thereof
- Fish and products thereof
- Peanuts and products thereof
- Soy and products thereof
- Milk (including lactose) and products thereof
- Tree Nuts and products thereof
- Celery and products thereof
- Mustard and products thereof
- Sesame seeds and products thereof
- Lupine and products thereof
- Molluscs and product thereof

Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO₂

OIV (Organisation Internationale de la Vigne et du Vin)

The products we market for use in oenology are listed in the OIV Code as allowed in wine production. These products are in conformance with the current oenological OIV Codex regulations.

European regulation

European regulation 606/2009 laying down certain detailed rules for implementing Council Regulation (EC) No 479/2008 as regards the categories of grapevine products, oenological practices and the applicable restrictions allows the aforementioned products in oenological practices and processes.

Food Additives

Active Dry Yeasts contains Sorbitan Monosterate (E491) as an additive.

Food Additives are defined in (EC) No. 1333/2008 and 21 CFR § 170-178. All Food Additive used comply with applicable Food Additive legislation (EC) No. 231/2012 and 21 CFR § 170-178.

No preservatives or colourings have been used in the production processes of the aforementioned products.

Food Contact Packaging

We hereby confirm that the packaging materials of these products are suitable for the packaging of food.

The product contact packaging is consistent with EC 1935/2004 and EU 10/2011 as amended.

In addition, we have statements from our suppliers that phthalates or its derivatives [bis-phenol A, and poly brominated substances (PBBs & PBDEs)] will not be added or are present in any package or packaging component during the manufacturing process.

Furthermore, these substances are not used in the production of micro-organisms or in the manufacture of ingredients used in the final products.

Genetic Modification

According to our knowledge, the microorganisms are as they were found in nature and have not been modified through genetic engineering. They have been rigorously checked and analyzed for identity and purity. Based on our suppliers' declarations, the raw materials used in the production process do not contain GMO. In these conditions, the aforementioned products do not contain GMO.

Nano-material

The aforementioned products have not been produced with the use of nanotechnology and therefore do not contain any engineered nano-materials in accordance with Regulation (EU) No 1169/2011 of the European Parliament.

Radioactivity and Ionization

The aforementioned products have not been ionized or irradiated and do not contain any ionized or irradiated components. They are compliant with directive 1999/2/EC of the European Parliament concerning foods and food ingredients treated with ionizing radiation and 21 CFR § 179 on irradiation in the production, processing and handling of food.

Use of Sewage Sludge

Sewage sludge has not been used in the production of the aforementioned products.

Growth on Petrochemical Substrate

The aforementioned products have not been grown on petrochemical substrate or sulphate waste liquor.

Ingredients of Animal Origin

The manufacture and development of the aforementioned products and their ingredients do not involved the use of any animal product, by product or derivative. These products are therefore free of any risk from BSE (Bovine Spongiform Encephalopathy) and TSE (Transmissible Spongiform Encephalopathy).

The aforementioned products and their ingredients do not and have not involved testing of any sort on animal.

Antibiotics

No antibiotics are used in the aforementioned products manufacturing process.

Dioxins and PCB

There is no limit requirement for these products or their ingredients on dioxin levels under Commission Regulation (EC) No 1881/2006 "Setting maximum levels for certain contaminants in foodstuffs" section 5.

The manufacturing process of the aforementioned products is not susceptible of releasing dioxins. Additionally, the aforementioned products have not been manufactured near industrial or natural processes susceptible of releasing dioxins; nor were they manufactured using raw materials, processing aids or water resulting from such processes

Heavy Metals

The aforementioned products are produced from ingredients that are not considered as a risk of Heavy metal content. The production processes themselves do not bring any risk of introducing heavy metals in these products. The products are in compliance with the OIV Codex.

Hazardous Substances

These products are not listed on the EU REACH CMR (Carcinogenic, Mutagenic or toxic to Reproduction) and SVHC (Substances of Very High Concern), the US NTP (National Toxicology Program), and the WHO IARC monographs. The use of the aforementioned products does not represent a risk of exposure to the substances listed on California Proposition 65.

Solvents

No solvents have been used in the aforementioned products production process or in the ingredients used in the production process.



Charlotte Nielsen

QA Manager, Lallemand Oenology

This document is valid for 3 years from date of issue. Changes in production or legislation will result in document updates.

The information in this document has been carefully compiled to the best of our knowledge. Our products are sold subject to the understanding that prospective purchasers will conduct their own evaluations to determine the suitability of the products in their applications. Local food regulations should always be consulted with respect to specific applications and necessary declarations. Legislation may vary from country to country.

Specification Sheet

LALVIN QA23 YSEO™

FOR OENOLOGICAL USE

Oenology active dry yeast in the form of round or vermiculated pellets obtained by drying a concentrated yeast culture. Product packaged in laminated foil under vacuum.

10081-06-Y9 : 20x500 g pack in a 10 kg carton.

10081-01-Y9 : 10 kg carton.

PHYSICAL PROPERTIES

APPEARANCE & ODOUR

- Beige to light brown colour
- Typical yeast smell

INGREDIENT

- **Active dry yeast** *Saccharomyces cerevisiae*, E491

PRODUCT SPECIFICATIONS (in compliance with OIV Codex)

Viable yeast	> 10 ¹⁰ CFU/g
Dry matter	> 92 %
Coliform	< 10 ² CFU/g
<i>E. coli</i>	Absent in 1 g
<i>S. aureus</i>	Absent in 1 g
<i>Salmonella</i>	Absent in 25 g
Lactic Acid Bacteria	< 10 ⁵ CFU/g
Acetic bacteria	< 10 ⁴ CFU/g
Moulds	< 10 ³ CFU/g
Yeast of different species	< 10 ⁵ CFU/g

HEAVY METALS TYPICAL ANALYSIS

Lead	< 2 mg / kg
Mercury	< 1 mg / kg
Arsenic	< 3 mg / kg
Cadmium	< 1 mg / kg

PREPARATION

1. Rehydrate yeast in 10 times its weight of clean water (temperature between 35° and 40°C).
2. Stir gently to dissolve and wait for 20 minutes.
3. Add to the must. The temperature difference between the must to be inoculated and the rehydration medium should never be greater than 10°C (if any doubt, please contact your supplier or Lallemand).
4. The total duration of rehydration should not exceed 45 minutes.
5. Always rehydrate the yeast in a clean container.
6. Rehydration in the must is not advisable.

DOSAGE

White wine : 25 - 40 g/hL

Red wine : 30 - 50 g/hL

STORAGE and SHELF LIFE

Store in a dry and cool place.

4 years in original sealed packaging. Do not use active dry yeast if the packaging has lost its vacuum.



www.lallemandwine.com

Product of
DANSTAR FERMENT AG
Vejlevej 10
Fredericia
DK-7000 Denmark
Subsidiary of Lallemand Inc.

The information herein is based on current available data and is believed to be correct. No warranty, express or implied, is made regarding data accuracy, merchantability or hazards associated with product use. The user is responsible for determining product suitability, conditions of use and all associated hazards.

This document is valid for 3 years unless superseded or otherwise indicated.

Rev. Date : 2017/12/11

Lallemand Oenology



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OENOLOGIE

Vous trouverez dans la liste ci-dessous les produits vérifiés⁽¹⁾ ou attestés⁽²⁾ par ECOCERT pour une utilisation en Oenologie et conformes aux règlements de l'Agriculture Biologique Européen ou Américain.

Produit	Fournisseur	Catégorie	Pays	Produit utilisable selon le règlement	Informations complémentaires
QA23	lallemand	Toutes	Tous	Tous	Rechercher
LALVIN QA23	LALLEMAND SAS	Levure	FRANCE	<p>Conforme selon le règlement européen CE 834/2007 - RUE 283/2012</p> <p>Conforme selon le règlement américain NOP (National Organic Program)</p> <p>Pour le NOP le produit certifié devra, selon le cas, être identifié comme "made with organic..." (utilisation possible si indisponibilité d'un produit équivalent en BIO)</p>	

INFORMATIONS IMPORTANTES :

La liste du site www.intrants.bio recense les intrants volontairement soumis par le fabricant ou distributeur à la société Ecocert SA, en vue d'une vérification non-obligatoire de leur caractère UAB via une prestation de Revue documentaire ou d'Attestation avec audit.

Le fait qu'un intrant ne figure pas/plus dans la présente liste ne signifie pas, en soi, que cet intrant ne serait pas/plus utilisable en Agriculture Biologique, la revendication « UAB » restant de la seule responsabilité du metteur en marché (fabricant ou distributeur).

Par ailleurs, les intrants soumis à obligation réglementaire de certification en Agriculture Biologique ne sont dans tous les cas pas disponibles dans cette liste, nous vous invitons à consulter les certificats délivrés par les organismes de certification concernés. Pour les intrants certifiés selon les règlements (CE) no 834/2007 et (CE) no 889/2008 par Ecocert France SAS (FR-BIO-01, agréée par l'INAO) : certificat@ecocert.com

N'oubliez pas de vérifier que le produit que vous recherchez est bien conforme au règlement selon lequel vous êtes certifié (colonne « Produit utilisable selon le Règlement »).

Par exemple, un intrant dont le statut est « Conforme selon règlement américain NOP (National Organic Program). Utilisation possible si indisponibilité d'un produit équivalent en BIO » ne doit être considéré comme conforme que selon le règlement NOP et sous réserve d'indisponibilité d'un même produit certifié Bio NOP. Ce produit ne pourrait, par exemple, pas être considéré comme conforme au règlement Bio Européen.

⁽¹⁾ La Revue Documentaire d'un intrant par Ecocert est réalisée sur base documentaire exclusivement.

⁽²⁾ L'Attestation d'intrants d'Ecocert est émise après un audit sur le site de fabrication et sur présentation de documents complémentaires. Pour plus d'informations, consulter <http://ecocert.com/intrants/contact@ecocert.fr>.