

## FD-DVS Viniflora® CiNe™

### Product Information

Version: 4 PI-EU-EN 11-13-2012

Description	<p>Viniflora® CiNe™ is a freeze-dried pure culture of <i>Oenococcus oeni</i>. It is a heterofermentative malolactic bacteria which has been selected to ensure a fast and safe malolactic fermentation when inoculated directly into wine. It has an excellent allround tolerance towards pH, alcohol, temperature and SO<sub>2</sub>. The culture can be used both in red, rosé/blush and white wines.</p>		
Packaging	Material No: 702574	Size 5X2500 L	Type Pouch(es) in box
Physical Properties	Color:	Off-white to slightly brown	
	Form:	Granulate	
Application	<p><b>Application</b></p> <p>This culture has been selected for its overall outstanding performance and capability to perform a fast and safe malolactic fermentation in most red, rosé/blush and white wines. Among the features are:</p> <ul style="list-style-type: none"> <li>• Direct inoculation into wine</li> <li>• High numbers of active cells which ensure a quick start of fermentation</li> <li>• High level of microbiological purity</li> <li>• No degradation of citric acid into acetic acid and diacetyl (2,3-butanediol)</li> <li>• Low production of volatile acidity</li> <li>• Excellent all round tolerance towards pH, alcohol, temperature and SO<sub>2</sub></li> <li>• Does not produce biogenic amines*</li> </ul> <p>* During malolactic fermentation indigenous bacteria produce biogenic amines from amino acids. Viniflora® strains have been selected by Chr. Hansen using state-of-the-art techniques in screening, analyses or production to deliver malolactic cultures unable to produce the following biogenic amines: histamine, tyramine, putrescine, phenylethylamine, isoamylamine, cadaverine.</p> <p>For further information about biogenic amines in wines and how Viniflora® products can help to reduce this food safety concern, please visit the following site: <a href="http://www.chr-hansen.com/wine">www.chr-hansen.com/wine</a>.</p>		

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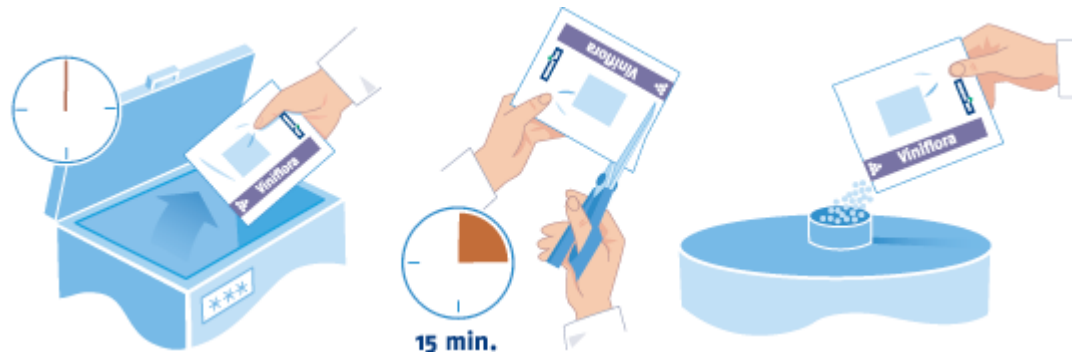
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Storage and handling < -18 °C / < 0 °F

Shelf life When stored according to recommendation the product has a shelf life of 24 months.

Directions for use Viniflora® freeze-dried cultures are adapted for direct inoculation into wine. No rehydration or reactivation is required.

1. Remove the pouch from the freezer 15 min. before use and place at room temperature. Make sure that the dosage complies with the amount of wine to be inoculated.
2. Open the pouch and add the granulated culture directly to wine. The culture can be dissolved in a smaller volume first and added to the total volume right after, if required. Make sure that the culture is completely dissolved in the wine.



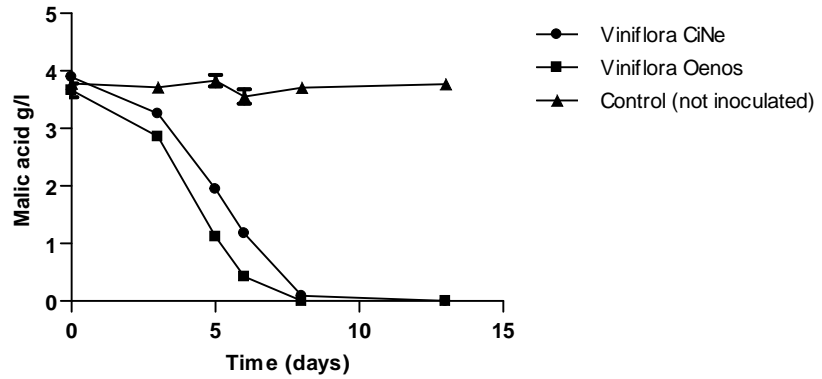
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Technical Data

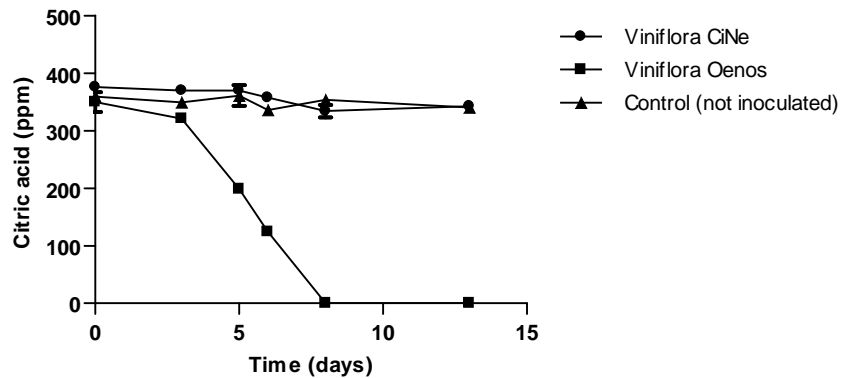
Performance graph 1



Viniflora CiNe compared to Viniflora Oenos: Conversion of malic acid.

Comparison of Viniflora CiNe and Viniflora Oenos during malolactic fermentation:

Viniflora CiNe does not degrade citric acid like other commercial (and spontaneous) bacteria for malolactic fermentation. Hence less production of acetic acid and diacetyl will be observed when using Viniflora CiNe.

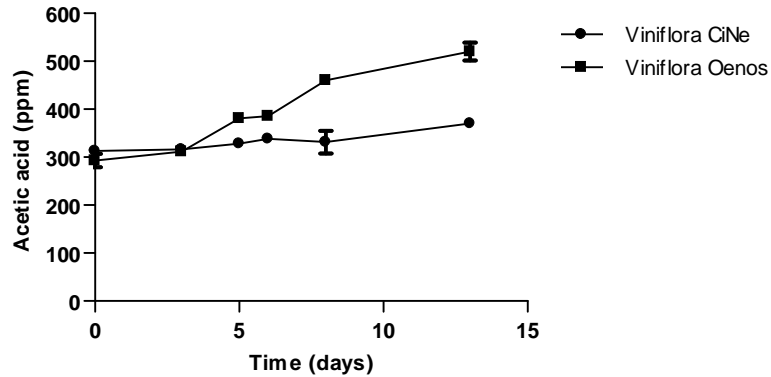


Viniflora CiNe compared to Viniflora Oenos: Conversion of citric acid.

**FD-DVS Viniflora® CiNe™**

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Viniflora CiNe compared to Viniflora Oenos: Formation of acetic acid.

Physiological data

<b>Inoculation temperature</b>	<b>17-25 °C / 62-77 °F</b>
<b>pH*</b>	<b>&gt; 3.2</b>
<b>Total SO<sub>2</sub>* (at inoculation)</b>	<b>&lt; 30 ppm</b>
<b>Alcohol*</b>	<b>&lt; 14 % vol</b>

*\* note that these inhibitory factors are antagonistic towards each other.*

*The individual tolerances are valid only if other conditions are favourable.*

*Check level of SO<sub>2</sub> produced by the yeast used for primary fermentation and be aware of level of free SO<sub>2</sub>.*

Legislation

Chr. Hansen's cultures comply with the general requirements on food safety laid down in Regulation 178/2002/EC. Malolactic bacteria are generally recognized as safe and can be used in food, however, for specific applications we recommend to consult national legislation.

The product is intended for food use.

Food Safety

Good Manufacturing Practise (GMP) is implemented in all plants manufacturing Chr. Hansen cultures. Chr. Hansen has made a risk assesment of microbiological, physical and chemical risks in our manufacturing and distribution plants for dairy, wine and meat cultures. Control points (CP´s) and Critical Control Points (CCP´s) are based on the risk assesment. A HACCP team as well as HACCP plans are established for each plant. No guarantee of food safety is implied or inferred should this product be used in applications other than those stated above. Should you wish to use this product in another application, please contact your Chr. Hansen representative for assistance.

Labeling

No labeling required, however please consult local legislation if in doubt.

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Trademarks	Product names, names of concepts, logos, brands and other trademarks referred to in this document, whether or not appearing in large print, bold or with the ® or TM symbol are the property of Chr. Hansen A/S or used under license. Trademarks appearing in this document might not be registered in your country, even if they are marked with an ®.
Technical support	Chr. Hansen's Application and Product Development Laboratories and personnel are available if you need further information.
Additional Information	Check the latest news on <a href="http://www.chr-hansen.com/wine">www.chr-hansen.com/wine</a>

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## GMO Information

In accordance with the legislation in the European Union\* we can state that FD-DVS Viniflora® CiNe™ does not contain GMOs and does not contain GM labeled raw materials\*\*. In accordance with European legislation on labeling of final food products\*\* we can inform that the use of FD-DVS Viniflora® CiNe™ does not trigger a GM labeling of the final food product. Chr. Hansen's position on GMO can be found on: [www.chr-hansen.com/About us/Policies and positions/Quality and product safety](http://www.chr-hansen.com/About us/Policies and positions/Quality and product safety).

\* Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC.

\*\* Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed.

Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labeling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC.

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## Allergen Information

List of common allergens in accordance with the US Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA) and EU labeling Directive 2000/13/EC with later amendments	Present as an ingredient in the product
Cereals containing gluten* and products thereof	No
Crustaceans and products thereof	No
Eggs and products thereof	No
Fish and products thereof	No
Peanuts and products thereof	No
Soybeans and products thereof	No
Milk and products thereof (including lactose)	No
Nuts* and products thereof	No
List of allergens in accordance with EU labeling Directive 2000/13/EC only	
Celery and products thereof	No
Mustard and products thereof	No
Sesame seeds and products thereof	No
Lupine and products thereof	No
Mollusks and products thereof	No
Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO <sub>2</sub>	No

\* Please consult the EU Labeling Directive 2000/13 Annex IIIa for a legal definition of common allergens, see European Union law at: [www.eur-lex.europa.eu](http://www.eur-lex.europa.eu)