



Catalogue



Enzymes

All SIHAZYM enzymes are **purified granulates**, which have several advantages over liquids such as no loss of activity, cleaner wine aromatics and a long shelf life.

SIHAZYM Claro

SIHAZYM Claro is a pectolytic enzyme preparation specifically for **juice clarification, settling and flotation**. The enzyme's activity is exceptionally high, resulting in rapid depectinisation of juices even at low temperatures. Free-run juice yield is higher and lower juice NTU is achieved in rapid time. The purification of this product to remove cinnamyl esterase means that fruit-suppressing volatile phenols cannot be formed, leading to better fruit expression in the wine.

SIHAZYM Extro

SIHAZYM Extro is a special **pectolytic and skin extraction** enzyme preparation with very high activity, specifically formulated for **red grape processing** and **skin extraction in reds and whites**. Polysaccharide release is another feature of SIHAZYM Extro, which contributes to wine mouthfeel and mid-palate weight. Fruit expression is increased, in addition to enhanced colour and tannin extraction, improved pressing and **wine filterability** is also improved. SIHAZYM Extro is purified of both cinnamyl esterase (to remove the pathway for *Brettanomyces* substrate formation) and anthocyanase (for increased colour). SIHAZYM Extro is also able to replace traditional cold soaking for colour extraction in a fraction of the normal time.

SIHAZYM Uni

SIHAZYM Uni is a **generic skin extraction and pectolytic enzyme** preparation. It can be used on either white or red grapes, for **juice clarification, settling or maceration**. It is purified of cinnamyl esterase activity for cleaner fruit expression in white wines and the removal of phenolic acid production for *Brettanomyces* to metabolise. SIHAZYM Uni provides a unique option for winemakers who wish to use only one enzymatic preparation, or for those seeking skin extraction and clarification/settling capability.

SIHAZYM Fine

SIHAZYM Fine is a multi-function enzyme, containing both **pectolytic and β -glucanase** activities. It can be used to **enhance lees autolysis** for increased mannoprotein extraction from yeast cell walls and thus mouthfeel and complexity, and also to **improve wine filterability**, and so is highly suitable for wines destined for bâtonnage. SIHAZYM Fine is an essential component of wine production when *Botrytis* rot is found in the grapes, since if untreated the glucans released into the wine by this mould will lead to poor settling of both juice and wine during maturation, reduced wine quality and significant filtration problems at bottling. SIHAZYM Fine can also be used for **cross-flow and filtration membrane regeneration** where chemical CIP does not increase flow rates.



CONZYM Pex Uni

CONZYM Pex Uni is a unique **purified liquid pectolytic and maceration enzyme** preparation. It can be used on both white juice and red must. If some skin extraction of white skins is desired ConZym Pex Uni is perfectly suited. It offers the convenience of a liquid enzyme format but, unlike other liquid enzyme formulations, it is **purified of cinnamyl esterase**. In both whites and reds this means stronger fruit expression, a cleaner aromatic profile, increased free-run volumes and **improved filterability**. The removal of cinnamyl esterase confers a reduced risk of the *Brettanomyces* marker chemicals 4-ethyl phenol and 4-ethyl guaiacol, and improves fruit expression. Colour extraction from the skin is also enhanced by using ConZym Pex Uni.

Yeast



SIHA yeast are produced by Lallemand™, with strain exclusivity to SIHA. SIHA yeasts focus on strong fermentation kinetics, aromatic expression, colour retention (in reds) and enhanced mouthfeel.

SIHA 3

Rheinhessen isolate. Aromatic expression, for fruit-forward and bâtonage wines (suitable for lees ageing). Used on all varietals, including premium Chardonnay for varietal expression.

SIHA 4

German isolate for tirage. For secondary fermentation with enhanced mouthfeel.

SIHA 7

Aromatic varietal white wines. A Riesling isolate from the Mosel, delivering a rich mouthfeel, pristine varietal aromatics and moderate fermentation ester production for excellent varietal expression.

SIHA 8 Burgunder

A Burgundian isolate with strong fermentation kinetics, high alcohol tolerance and high killer activity. Delivers enhanced mouthfeel with increased tannin structure and fruit-forward wines. Excellent for restarts.

SIHA 10 Red Roman

Moderate fermentation kinetics for increased extraction, high alcohol tolerance with enhanced mouthfeel through polysaccharide release for textured red wines. Simply outstanding.

SIHA WhiteArome

Selected for intense aromatic expression of both varietal and fermentation aromas. Produces exceptionally fruit-expressive wines and is useful where extra aromatic intensity is required.

SIHA CryArome

A cold-fermenting strain for thiolic varieties where both clean and strong varietal aromatic expression and fermentation ester production are desired.

SIHA VarioFerm

3 *Saccharomyces* strains for increased aromatic and mouthfeel complexity. Used on reds and whites alike to deliver mid-palate weight and complexity. Suitable for all varietals. Moderate fermentation kinetics.

SIHA Element

A Riesling isolate from the biodynamic Pechstein vineyard in the Pfalz. Very strong terpene release for floral prominence and varietal aromatic expression. Excellent on terpenic varietals.

SIHA Rubino Cru

A hybrid strain selected for fruity aromatics, complexity and red wine colour retention. Delivers fruit-forward wines with superior colour and a softer structure.

SIHA Finesse Red

Selected for maximal wine colour retention in low anthocyanin varieties. POF⁻ for increased fruit expression and reduced *Brettanomyces* risk. Very elegant fruit-forward wines with a silky tannin structure.

ConFerm White and ConFerm Rouge

Strong fermentation kinetics, clean aromatics and high alcohol tolerance. Workhorse yeast strains.

Cider

Several SIHA yeast strains are suitable for cider production, such as SIHA 3, CryArome, WhiteArome and ConFerm White. For cider fermentation nutrients, see overleaf.

Nutrients

SIHA nutrients enhance yeast performance for stronger fermentation kinetics, increased aromatic expression during fermentation, reduced sulphides and VA, and for the preservation of aromatics and colour in the finished wine.

SIHA SpeedFerm

SIHA SpeedFerm is a **yeast rehydration nutrient**. Of all the nutrition-related actions a winemaker can take to secure a fermentation and increase wine quality, using SpeedFerm is the best. SIHA SpeedFerm is made from inactive yeast cells and contains vitamins, co-factors, minerals and amino acids – but no DAP. SIHA SpeedFerm enhances aromatic expression through the provision of enzymatic co-factors, and also contains sterols which provide intrinsic resistance to the ethanol toxicity generated as the fermentation proceeds, resulting in a cleaner and faster fermentation completion.

SIHA ProFerm H⁺₂

A **complex nutrient** combining yeast hulls and extract (80 %) and DAP (20 %), SIHA ProFerm H⁺₂ provides sterols for increased alcohol tolerance, in addition to the detoxifying effect of genuine yeast hulls, yeast-derived micronutrients and enzymatic co-factors, and inorganic nitrogen as a nutritional supplement. SIHA ProFerm H⁺₂ is intended for use during the early to mid stages of primary fermentation, either when the must is suspected of being nutritionally deficient (as in the case of highly-clarified juice), as a **general fermentation nutrient**, or when H₂S production is detected.

SIHA ProFerm Fit

SIHA ProFerm Fit is a complex nutrient containing genuine yeast hulls (for nutrition and detoxification) enriched with glutathione, but no DAP. It is specifically aimed at maximising wine quality through both **aromatic and colour protection**, and is added in the final third of fermentation. The use of SIHA ProFerm Fit not only sustains aromatic production and colour, it protects it throughout the life of the wine and extends wine shelf life.

Gelatine

SIHA Liquid Gelatine

A 20 % aqueous gelatine solution, making flotation and fining operations simple. High charge density makes this gelatine highly active. Suitable for **flotation or general fining**.



Bacteria

SIHALACT Oeno

A unique malolactic bacterium selected from German wine, suitable for white, rosé and red wines. SIHALACT Oeno has strong fermentation kinetics and is suited to low inoculation temperatures.

- ▶ Low diacetyl formation
- ▶ No histamine production
- ▶ Preservation of primary fruit characteristics
- ▶ Inoculation pH down to 3.2
- ▶ Inoculation temperature ≥ 17 °C
- ▶ FSO₂ < 15 ppm
- ▶ Alcohol tolerance to 15 %
- ▶ Suitable for late co-inoculation
- ▶ Small pack sizes for convenience

Store frozen. Simple usage instructions:

1. Allow SIHALACT Oeno to slowly warm to room temperature over 2 h (on the bench).
2. Use chlorine-free water at 20 °C at a rate of 1 L water per 25 hL sachet. Add sachet contents and stir lightly.
3. Wait 10 minutes.
4. Slowly adjust inoculum to wine temperature within ± 5 °C.
5. Add to wine tank with gentle homogenisation.

Speciality bentonite

SIHA has long been recognised as the global leader in the production of high quality speciality bentonites. Unlike regular bentonites, SIHA products exhibit **strong lees compaction**, resulting in much **higher wine recovery volumes**. It actually costs more to use a cheaper bentonite with diffuse lees because of the wine loss. A higher addition rate is required, yet SIHA bentonite will still **save you money** through greater compaction and increased wine recovery.

SIHA Bentonite G

The industry leader. SIHA Bentonite G is a granular, purified, pharmaceutical grade calcium bentonite. With the **smallest lees volume available**, SIHA Bentonite G represents excellent value for money. The use of SIHA Bentonite G saves the winemaker money over the use of conventional bentonites through its significantly greater lees compaction, resulting in the highest wine returns on racking. SIHA Bentonite G is also **very fast to prepare**, at just 2 hours using hot water and mechanical stirring. The sedimentation rate is very fast (see chart below, right), so the wine can be racked rapidly if required. The lower swelling capacity of SIHA bentonite G also means that wine aroma is preserved. SIHA Bentonite G is highly recommended for use during juice **flotation**, or can be used on wine.

SIHA Puranit UF

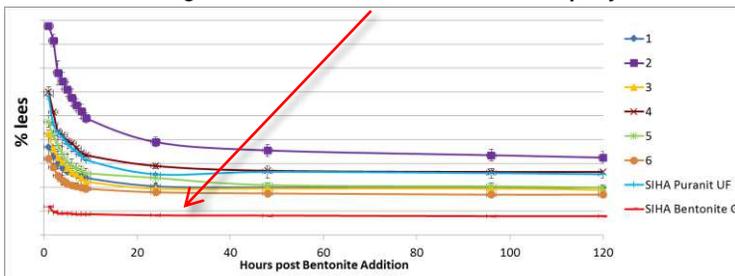
SIHA Puranit UF is **specifically formulated for cross-flow filtration** applications, and can be used for in-fermentation additions. Its sand-free formulation was developed directly to service wines where cross-flow filtration will be used, to help protect cross-flow membranes, pumps and pipework from the abrasive sand present in most bentonites.

1 2 3 4 5 6 SIHA Puranit UF SIHA Bentonite G



Bentonite	Type	Rate (g/L)	Lees (%)
1	Na	0.6	4.0
2	Na	0.7	3.8
3	Na	0.7	6.5
4	Ca/Na	0.9	4.6
5	Ca	1.1	4.0
6	Ca	0.9	3.5
SIHA Puranit UF	Ca	0.9	3.7
SIHA Bentonite G	Ca/Na	1.1	1.5

Settling kinetics: SIHA Bentonite G settles rapidly



Rehydration procedure for SIHA Bentonite G to minimise water addition:

1. Rehydrate @ 5-10 % with stirring. If 2 h preparation is desired, use hot water and constant stirring.
2. Use directly or allow the slurry to settle for 6 - 12 hours (overnight if possible).
3. If settled, decant and discard any liquid above the settled slurry (see image above) to remove excess water and bentonite fines.
4. The rehydrated slurry can now be added to the wine or juice using a venturi.
5. **Ensure complete mixing of the tank** (e.g. submersible pump) for at least **60 minutes**, or longer for larger tanks. **This is critical.**

Strain	Suitable wine types	Suitable Varietals	Characteristics	% Alc.	Killer	N
SIHA 3	White / red / rosé / sweet / bâtonnage	▶ All varietals	▶ Fruit-forward wines	16	Neutral	Moderate
SIHA 4	Sparkling	▶ Tirage	▶ Tirage yeast - complexity & texture (<i>S. bayanus</i>)	15	Neutral	Low
SIHA 7	White	▶ Riesling ▶ Gewürztraminer ▶ Sauvignon blanc	▶ Clean varietal expression ▶ Thiol and terpene expression ▶ Moderate ester production ▶ Textured wines	14	Neutral	Moderate
SIHA 8 Burgunder	Red / rosé / bâtonnage / restarts	▶ Pinot noir ▶ Grenache ▶ Merlot	▶ Vigorous fermenter ▶ Fruit-forward wines ▶ Tannin structural enhancement ▶ Mid-palate weight	17	Positive	Low
SIHA 10 Red Roman	Red / bâtonnage	▶ Shiraz ▶ Cabernet sauvignon ▶ Petit verdot	▶ Polysaccharide producer for mouthfeel ▶ Mid-palate tannin expression ▶ Strong colour expression ▶ Moderate fermentation kinetics	16.5	Positive	Moderate
WhiteArome	White / rosé / sweet / cider	▶ Riesling ▶ Pinot gris ▶ Rosé	▶ Strong aroma expression ▶ Cold fermenter ▶ Fruit-expressive wines	14	Neutral	Moderate
CryArome	White / sweet / cider	▶ Sauvignon blanc ▶ Riesling ▶ Verdelho	▶ Strong varietal thiol expression ▶ Cold fermenter ▶ Clean aromatic wines	16	Positive	Low
VarioFerm	White / red	▶ Chardonnay ▶ Shiraz	▶ Moderate fermenter ▶ Tri-strain complexity (all <i>S.c.</i>) ▶ Glycerol production for mouthfeel	16	Neutral	Moderate
Element	White	▶ Riesling ▶ Gewürztraminer	▶ Very strong terpene expression ▶ Cold fermenter	14	Neutral	Moderate
Rubino Cru	Red / rosé	▶ Pinot noir ▶ Merlot ▶ Sangiovese	▶ Strong fruit expression ▶ Aromatic complexity ▶ Minimal colour adsorption	16	Positive	Low
Finesse Red	Red / rosé	▶ Pinot Noir ▶ Grenache	▶ Minimal colour loss through lees adsorption ▶ Colour stabilisation via phenolic extraction ▶ POF- for no volatile phenol production	16	Neutral	Moderate-high
ConFerm White	All wine styles / cider	▶ All varietals	▶ Fruit-forward wines ▶ Strong fermentation kinetics	16	Neutral	Moderate
ConFerm Rouge	All wine styles	▶ All varietals	▶ Fruit-forward wines ▶ Strong fermentation kinetics ▶ High alcohol tolerance	17	Positive	Low

Enzyme	Action	Application	Timing	Purified of	Dosage	Duration
SIHAZYM Uni	<ul style="list-style-type: none"> ▶ Pectolytic ▶ Extraction 	<ul style="list-style-type: none"> ▶ White skin extraction and/or clarification & settling ▶ Red skin extraction and clarification 	<ul style="list-style-type: none"> ▶ At crush ▶ Ex-press 	<ul style="list-style-type: none"> ▶ Cinnamyl esterase 	<ul style="list-style-type: none"> 10 – 40 ppm 10 – 40 g/1000 kg 	1 – 6 h
SIHAZYM Claro	<ul style="list-style-type: none"> ▶ Pectolytic 	<ul style="list-style-type: none"> ▶ Clarification and settling ▶ Flotation 	<ul style="list-style-type: none"> ▶ At crush ▶ Ex-press 	<ul style="list-style-type: none"> ▶ Cinnamyl esterase 	<ul style="list-style-type: none"> 20 – 30 ppm 	2 – 6 h
SIHAZYM Extro	<ul style="list-style-type: none"> ▶ Extraction ▶ Pectolytic 	<ul style="list-style-type: none"> ▶ Red skin extraction and clarification 	<ul style="list-style-type: none"> ▶ At crush 	<ul style="list-style-type: none"> ▶ Cinnamyl esterase ▶ Anthocyanase 	<ul style="list-style-type: none"> 10 – 40 ppm 20 – 40 g/1000 kg 	4 – 6 h
SIHAZYM Fine	<ul style="list-style-type: none"> ▶ Pectolytic ▶ β-Glucanase 	<ul style="list-style-type: none"> ▶ High turbidity wines ▶ Poor wine filterability ▶ Lees autolysis – textural increase ▶ Cross-flow CIP 	<ul style="list-style-type: none"> ▶ Post-ferment 	<ul style="list-style-type: none"> ▶ Cinnamyl esterase 	<ul style="list-style-type: none"> 30 – 80 ppm 	1 – 6 weeks
CONZYM Pex Uni (liquid)	<ul style="list-style-type: none"> ▶ Pectolytic ▶ Extraction 	<ul style="list-style-type: none"> ▶ White skin extraction and/or clarification & settling ▶ Red skin extraction and clarification 	<ul style="list-style-type: none"> ▶ At crush ▶ Ex-press 	<ul style="list-style-type: none"> ▶ Cinnamyl esterase 	<ul style="list-style-type: none"> 30 – 60 mL/kL 30 – 60 mL/1000 kg 	1 – 6 h
Nutrient	Description	Application	Primary characteristics		Dosage	
SIHA SpeedFerm	<ul style="list-style-type: none"> ▶ Yeast rehydration nutrient made from inactivated yeast ▶ Contains no DAP 	<ul style="list-style-type: none"> ▶ Add to water of rehydration prior to yeast 	<ul style="list-style-type: none"> ▶ Enzymatic co-factors ▶ Micronutrients ▶ Improved aromatics ▶ Increased alcohol tolerance 	<ul style="list-style-type: none"> ▶ Toxin removal ▶ H₂S suppression 	200 – 300 ppm	
SIHA ProFerm H+²	<ul style="list-style-type: none"> ▶ General fermentation nutrient made from yeast components (80 %) and DAP (20 %) 	<ul style="list-style-type: none"> ▶ Add to the fermentation at any stage up to the final third of ferment 	<ul style="list-style-type: none"> ▶ Enzymatic co-factors ▶ Micronutrients ▶ Improved aromatics ▶ Toxin removal 	<ul style="list-style-type: none"> ▶ Inorganic nitrogen ▶ H₂S suppression 	200 – 400 ppm	
SIHA ProFerm Fit	<ul style="list-style-type: none"> ▶ Yeast-derived nutrient enhanced with glutathione for aroma preservation ▶ Contains no DAP 	<ul style="list-style-type: none"> ▶ Final third of fermentation 	<ul style="list-style-type: none"> ▶ Enzymatic co-factors ▶ Micronutrients ▶ Improved aromatics ▶ Improved colour stability in reds 	<ul style="list-style-type: none"> ▶ Aroma protection ▶ Toxin removal ▶ H₂S suppression 	300 – 400 ppm	

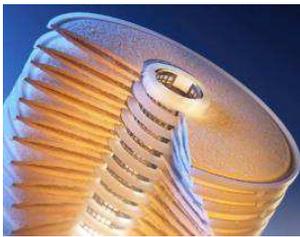


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