

**BHF**

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# Vintage catalogue 2024



# Enzymes

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. CONZYM Pex Uni is a **purified liquid enzyme**.

## SIHAZYM Claro

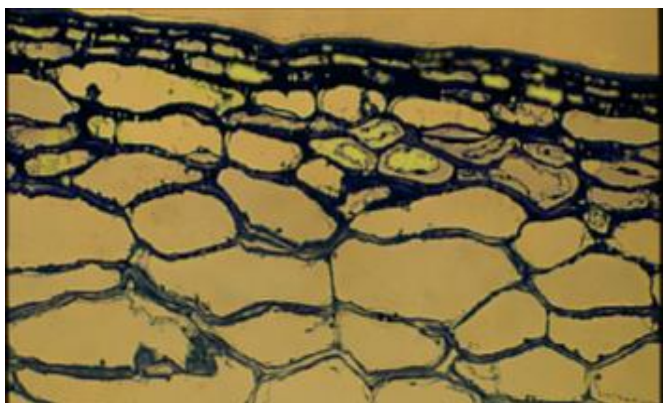
SIHAZYM Claro is a pectolytic enzyme preparation specifically for **juice clarification, settling and flotation**. The enzyme's activity is exceptionally high, resulting in rapid depectinisation of juices even at low temperatures. Free-run juice yield is higher and lower juice NTU is achieved in rapid 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

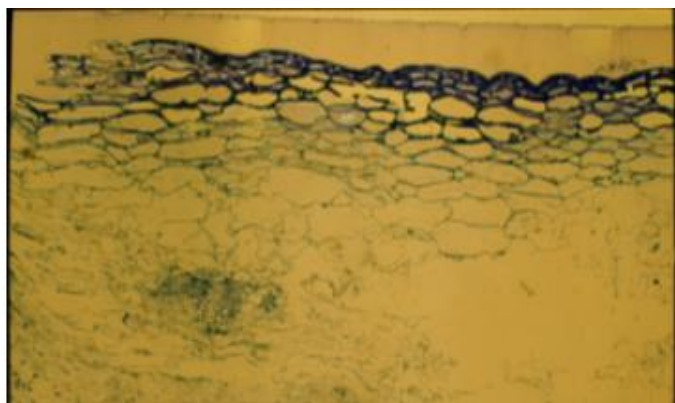
SIHAZYM Extro is a special **pectolytic and skin extraction** enzyme preparation with very high activity, specifically formulated for **red grape processing** and **skin extraction in reds and whites**. Polysaccharide release is another feature of SIHAZYM Extro, which contributes to wine mouthfeel, mid-palate weight and colour stabilisation. 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.



No enzyme



SIHAZYM Extro

## 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 yeasts offer strong fermentation kinetics, varietal aromatic expression, colour retention (in reds) and enhanced mouthfeel. Speak with your BHF representative for a recommendation.

## SIHA 3

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

## SIHA 7

A Palatinate isolate, for aromatic varietal whites. Delivers a rich mouthfeel, pristine varietal aromatics and moderate fermentation esters for excellent varietal expression.

## SIHA WhiteArome

A Mosel isolate, 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 Sauternes isolate that is cold-fermenting for thiolic varieties where clean and strong varietal aromatic expression and fermentation ester production are desired.

## 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 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 8 Burgunder

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

## SIHA 10 Red Roman

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

## SIHA Terra Rosso (New!)

Croatian isolate, selected for its strong fermentation kinetics, high alcohol tolerance, wine colour stability and low production of sulfur compounds for clean fruit expression.

## SIHA MM2 (New!)

Croatian isolate, a strong fermenter and killer<sup>+</sup> to ensure biome domination. Its low production of SO<sub>2</sub> makes it very complimentary to MLF, with clean aromatics.

## SIHA Finesse Red

A Württemberg Pinot isolate, selected for wine colour retention. POF<sup>-</sup> for increased fruit expression and reduced *Brettanomyces* risk. Very elegant fruit-forward wines with a silky tannin structure.

## 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, enzymatic co-factors, minerals and amino acids – but **no DAP**. SIHA SpeedFerm enhances aromatic expression, 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<sup>+</sup>

A **complex nutrient** combining yeast hulls and extract (80 %) and DAP (20 %), SIHA ProFerm H<sup>+</sup> 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<sup>+</sup> 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 H<sub>2</sub>S production is detected.

### SIHA ProFerm Red

SIHA ProFerm Red is a 100 % organic nutrient containing specially treated yeast cell wall extracts and **no DAP**. It is formulated to contain a **high concentration of polysaccharides and amino acids**, and is added in the **first third of fermentation**. The use of SIHA ProFerm Red increases the yeast cell count at the beginning of alcoholic fermentation, improves **colour stabilisation** through polysaccharide binding and increases wine aroma.

### SIHA OnLees (New!)

SIHA OnLees is a specific **no-DAP** inactivated yeast cell wall preparation with a high percentage of near-intact cell membranes, aimed at **increasing the mouthfeel** of wines, providing the effect of maturation on lees - without the hassles! It has the effects of **reducing astringency** and bitterness through subtle tannin binding and **increasing the perceived sweetness** of wines. Best added **after primary fermentation** with subsequent racking.



# 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 Active Bentonite G

The industry leader. SIHA Active Bentonite G is a granular, purified, pharmaceutical grade calcium bentonite. With the **smallest lees volume available**, SIHA Active Bentonite G represents excellent value for money. The use of SIHA Active 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 Active 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 Active bentonite G also means that wine aroma is preserved. SIHA Active Bentonite G is highly recommended for use during juice **flotation**, or can be used on wine.

## SIHA Puranit UF

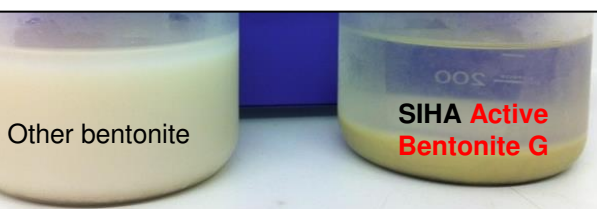
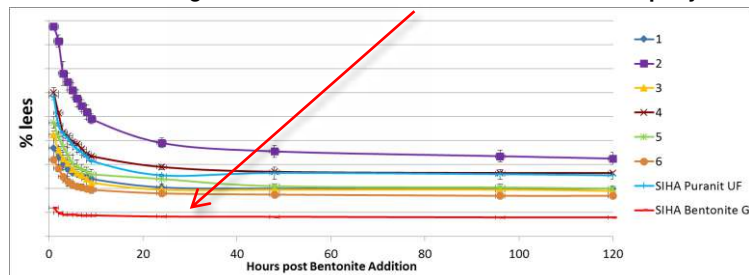
SIHA Puranit UF is specifically formulated for **cross-flow filtration** applications, and can be used for in-fermentation additions. Its sand-free formulation was developed directly to service wines where cross-flow filtration will be used, to help protect cross-flow membranes, pumps and pipework from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

1 2 3 4 5 6 SIHA Puranit UF SIHA Active 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 Active Bentonite G	Ca/Na	1.1	1.5

Settling kinetics: SIHA Active Bentonite G settles rapidly



### Rehydration procedure for SIHA Active Bentonite G to minimise water addition:

1. If planning to decant supernatant to minimise water addition, **increase stabilisation dosage by 5-10 %** to account for losses of fines.
2. Rehydrate over 12 h @ 5-10 % with hourly stirring. If 2 h preparation is desired, use hot water and constant stirring.
3. Use as is, or allow the slurry to settle for 6 - 12 hours (overnight if possible) in preparation to decant the following day.
4. Decant and discard any liquid above the settled slurry (see image above) to remove excess water and bentonite fines.
5. The rehydrated slurry can now be added to the wine or juice using a venturi.
6. **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		<ul style="list-style-type: none"> <li>▶ All varietals</li> </ul>	<ul style="list-style-type: none"> <li>▶ Fruit-forward wines</li> </ul>	16	Neutral	Moderate
SIHA 7		<ul style="list-style-type: none"> <li>▶ Riesling</li> <li>▶ Gewürztraminer</li> <li>▶ Sauvignon blanc</li> </ul>	<ul style="list-style-type: none"> <li>▶ Clean varietal expression</li> <li>▶ Thiol and terpene expression</li> <li>▶ Moderate ester production</li> <li>▶ Textured wines</li> </ul>	14	Neutral	Moderate
Element		<ul style="list-style-type: none"> <li>▶ Riesling</li> <li>▶ Gewürztraminer</li> </ul>	<ul style="list-style-type: none"> <li>▶ Very strong terpene expression</li> <li>▶ Cold fermenter</li> </ul>	14	Neutral	Moderate
WhiteArome	Sweet & cider	<ul style="list-style-type: none"> <li>▶ Riesling</li> <li>▶ Pinot gris</li> </ul>	<ul style="list-style-type: none"> <li>▶ Strong aroma expression</li> <li>▶ Cold fermenter</li> <li>▶ Fruit-expressive wines</li> </ul>	14	Neutral	Moderate
CryArome	Sweet & cider	<ul style="list-style-type: none"> <li>▶ Sauvignon blanc</li> <li>▶ Riesling</li> <li>▶ Verdelho</li> </ul>	<ul style="list-style-type: none"> <li>▶ Strong varietal thiol expression</li> <li>▶ Cold fermenter</li> <li>▶ Clean aromatic wines</li> </ul>	16	Positive	Low
VarioFerm		<ul style="list-style-type: none"> <li>▶ Chardonnay</li> <li>▶ Shiraz</li> </ul>	<ul style="list-style-type: none"> <li>▶ Moderate fermenter</li> <li>▶ Tri-strain complexity (all <i>S.C.C.</i>)</li> <li>▶ Glycerol production for mouthfeel</li> </ul>	16	Neutral	Moderate
SIHA 8 Burgunder	& restarts	<ul style="list-style-type: none"> <li>▶ Pinot noir</li> <li>▶ Grenache</li> <li>▶ Merlot</li> </ul>	<ul style="list-style-type: none"> <li>▶ Vigorous fermenter</li> <li>▶ Fruit-forward wines</li> <li>▶ Tannin structural enhancement</li> <li>▶ Mid-palate weight</li> </ul>	17	Positive	Low
SIHA 10 Red Roman		<ul style="list-style-type: none"> <li>▶ Shiraz</li> <li>▶ Cabernet sauvignon</li> <li>▶ Petit verdot</li> </ul>	<ul style="list-style-type: none"> <li>▶ Polysaccharide producer for mouthfeel</li> <li>▶ Mid-palate tannin expression</li> <li>▶ Strong colour expression</li> <li>▶ Moderate fermentation kinetics</li> </ul>	16.5	Positive	Moderate
Terra Rosso (New!)		<ul style="list-style-type: none"> <li>▶ Cabernet sauvignon</li> <li>▶ Merlot</li> </ul>	<ul style="list-style-type: none"> <li>▶ Strong fruit expression</li> <li>▶ Low H<sub>2</sub>S</li> <li>▶ Colour stability</li> </ul>	16	Neutral	Moderate
MM2 (New!)		<ul style="list-style-type: none"> <li>▶ Pinot noir</li> <li>▶ Blanc de noir</li> </ul>	<ul style="list-style-type: none"> <li>▶ Strong fruit expression</li> <li>▶ Low H<sub>2</sub>S and SO<sub>2</sub></li> <li>▶ Strong fermenter</li> </ul>	16	Positive	Moderate
Finesse Red		<ul style="list-style-type: none"> <li>▶ Pinot Noir</li> <li>▶ Grenache</li> </ul>	<ul style="list-style-type: none"> <li>▶ Minimal colour loss through lees adsorption</li> <li>▶ Colour stabilisation via phenolic extraction</li> <li>▶ POF<sup>-</sup> for no volatile phenol production</li> </ul>	16	Neutral	Moderate-high

Enzyme	Action	Application	Timing	Purified of	Dosage	Duration
<b>SIHAZYM Uni</b> 	<ul style="list-style-type: none"> <li>▶ Pectolytic</li> <li>▶ Extraction</li> </ul>	<ul style="list-style-type: none"> <li>▶ White skin extraction and/or clarification &amp; settling</li> <li>▶ Red skin extraction and clarification</li> </ul>	<ul style="list-style-type: none"> <li>▶ At crush</li> <li>▶ Ex-press</li> </ul>	<ul style="list-style-type: none"> <li>▶ Cinnamyl esterase</li> </ul>	10 – 40 ppm  10 – 40 g/1000 kg	1 – 6 h
<b>SIHAZYM Claro</b> 	<ul style="list-style-type: none"> <li>▶ Pectolytic</li> </ul>	<ul style="list-style-type: none"> <li>▶ Clarification and settling</li> <li>▶ Flotation</li> </ul>	<ul style="list-style-type: none"> <li>▶ At crush</li> <li>▶ Ex-press</li> </ul>	<ul style="list-style-type: none"> <li>▶ Cinnamyl esterase</li> </ul>	20 – 30 ppm	2 – 6 h
<b>SIHAZYM Extro</b> 	<ul style="list-style-type: none"> <li>▶ Extraction</li> <li>▶ Pectolytic</li> </ul>	<ul style="list-style-type: none"> <li>▶ Red skin extraction and clarification</li> </ul>	<ul style="list-style-type: none"> <li>▶ At crush</li> </ul>	<ul style="list-style-type: none"> <li>▶ Cinnamyl esterase</li> <li>▶ Anthocyanase</li> </ul>	10 – 40 ppm  20 – 40 g/1000 kg	4 – 6 h
<b>CONZYM Pex Uni (liquid)</b> 	<ul style="list-style-type: none"> <li>▶ Pectolytic</li> <li>▶ Extraction</li> </ul>	<ul style="list-style-type: none"> <li>▶ White skin extraction and/or clarification &amp; settling</li> <li>▶ Red skin extraction and clarification</li> </ul>	<ul style="list-style-type: none"> <li>▶ At crush</li> <li>▶ Ex-press</li> </ul>	<ul style="list-style-type: none"> <li>▶ Cinnamyl esterase</li> </ul>	30 – 60 mL/kL  30 – 60 mL/1000 kg	1 – 6 h
Nutrient	Description	Application	Primary characteristics	Dosage		
<b>SIHA SpeedFerm</b>	<ul style="list-style-type: none"> <li>▶ Yeast rehydration nutrient made from inactivated yeast</li> <li>▶ Contains no DAP</li> </ul>	<ul style="list-style-type: none"> <li>▶ Add to water of rehydration prior to yeast</li> </ul>	<ul style="list-style-type: none"> <li>▶ Enzymatic co-factors</li> <li>▶ Micronutrients</li> <li>▶ Improved aromatics</li> <li>▶ Increased alcohol tolerance</li> </ul>	200 – 300 ppm  200 – 300 ppm		
<b>SIHA ProFerm H<sup>+</sup>2</b>	<ul style="list-style-type: none"> <li>▶ General fermentation nutrient made from yeast components (80 %) and DAP (20 %)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Add to the fermentation at any stage up to the final third of ferment</li> </ul>	<ul style="list-style-type: none"> <li>▶ Enzymatic co-factors</li> <li>▶ Micronutrients</li> <li>▶ Improved aromatics</li> <li>▶ Toxin removal</li> </ul>	200 – 400 ppm  200 – 400 ppm		
<b>SIHA ProFerm Red</b>	<ul style="list-style-type: none"> <li>▶ Yeast-derived nutrient enhanced with polysaccharides for colour stabilisation and aroma</li> <li>▶ Contains no DAP</li> </ul>	<ul style="list-style-type: none"> <li>▶ First third of fermentation</li> </ul>	<ul style="list-style-type: none"> <li>▶ Enzymatic co-factors</li> <li>▶ Micronutrients</li> <li>▶ Improved colour stabilisation</li> <li>▶ Improved aromatic expression</li> </ul>	300 – 400 ppm  300 – 400 ppm		
<b>SIHA OnLees</b>	<ul style="list-style-type: none"> <li>▶ Yeast-derived for simulating bâtonnage: mouthfeel</li> <li>▶ Contains no DAP</li> </ul>	<ul style="list-style-type: none"> <li>▶ Post-fermentation</li> </ul>	<ul style="list-style-type: none"> <li>▶ Enhanced mouthfeel and volume</li> <li>▶ Reduced astringency</li> <li>▶ Increased perceived sweetness</li> </ul>	150 – 300 ppm  150 – 300 ppm		

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BHF Technologies is a leading provider of many services to the Australian wine industry, specialising in SIHA oenological products, water filtration (standard cartridge and UF systems), wine and gas filtration products and system design, nitrogen generation and more. Please contact your local representative if we can help you in any way.

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## N<sub>2</sub> generators, chillers, hoses, water cross-flow systems and automated filtration systems

