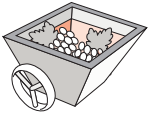
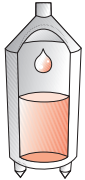
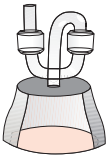
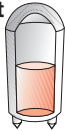
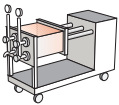


Winemaker's Guide




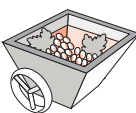
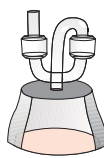
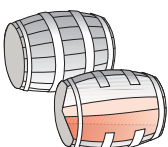
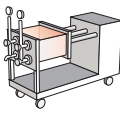
Modern White Wine

Modern consumers look for variety. The key words involved are lightness, elegance, freshness, and harmony just to mention a few. BEGEROW has the aids best suited to your needs.

	Young & Fresh Type	Mouthfeel Type
<p>Grape processing Grape mash processing</p> 	<ul style="list-style-type: none"> - Only fully ripen and 100 % healthy grapes - Harvest grapes as cool and with as little bruising as possible - Quick and reductive processing - 1 – 2 g/100 kg SIHAZYM Extro during mashing time - Add 40 – 50 mg/l SO₂ - Use N₂ for overlaying mash 	<ul style="list-style-type: none"> - Only fully ripen and 100 % healthy grapes - Process quickly - Desteam and mash - 2 – 3 hour mash contact time with 3 - 4 g/100 kg SIHAZYM Extro - Pressing pressure < 1 bar - Δ pH ≤ 0.2 in comparison to first pressings
<p>Must clarification Must treatment</p> 	<ul style="list-style-type: none"> - TIP Cool the must during the entire processing period! - Strong pre-clarification of the must at 60 – 70 turbidity (NTU) residual sediment content - 1 – 2 g/hl SIHAZYM Claro - 2 ml/hl SIHAZYM Flot for flotation and 5 – 15 g/hl SIHA Flotation Gelatine - Overlay with CO₂ or N₂ - If required: 10 – 40 g/hl SIHA GESIL - 100 – 150 g/hl SIHA PURANIT 	<ul style="list-style-type: none"> - Strong pre-clarification of the must to 40 - 50 NTU - 1 – 2 g/hl SIHAZYM Claro - If required: 10 – 40 g/hl SIHA GESIL - 100 – 200 g/hl SIHA PURANIT
<p>Fermentation control</p> 	<ul style="list-style-type: none"> - Cold fermentation at ~ 15 °C - Rehydration with 25 – 30 g/hl of SIHA SpeedFerm - Yeast: 20 – 25 g/hl SIHA CRYAROME plus 20 – 30 g/hl SIHA PROFERM Fit and 40 g/hl SIHA Fermentation Salt (addition in stages) - Sauvignon blanc: SIHA CRYAROME plus 40 g/hl SIHA PROFERM Fit - SIHA BACTIFERM for unfavourable conditions during malolactic fermentation - To liberate polysaccharides add 4 – 6 g/hl SIHAZYM Fine 	<ul style="list-style-type: none"> - Controlled fermentation at 15 – 18 °C - Rehydration with 25–30 g/hl of SIHA SpeedFerm - Yeast: 15 – 20 g/hl SIHA Active Yeast 7 (Riesling yeast) or SIHAFERM Element 0.6 g/1000l SIHA Vitamin B, and 50 g/hl SIHA Fermentation Salt (addition in stages) - Malolactic fermentation: sequential inoculation with VINIFLORA® CH35 - Addition of SIHA BACTIFERM for unfavourable conditions during malolactic fermentation
<p>Young wine development</p> 	<ul style="list-style-type: none"> - "sur lie" treatment: 4 - 6 g/hl SIHAZYM Fine - Recommended sulfurization max. 70 mg/l SO₂ - 1 – 2 g/hl SIHA Isinglass 	<ul style="list-style-type: none"> - Approx. 4 – 6 week yeast contact (bâtonnage) - Diacetyl degradation - Sulphuring max. 50 mg/l SO₂ - Mature for 2 – 3 months in tanks or casks - 1 – 2 g/hl SIHA Isinglass
<p>Filtration</p> 	<ul style="list-style-type: none"> - Filtration with BECOPAD Depth Filter Sheets, BECO Depth Filter Cartridges and BECO Membrane Filter Cartridges. 	<ul style="list-style-type: none"> - Filtration with BECOPAD Depth Filter Sheets, BECO Depth Filter Cartridges and BECO Membrane Filter Cartridges.

Red Wine Vinification

Top red wines already grow in the vineyard. The terroir is decisive. Selecting the right oenological actions in the wine cellar can maximize the results.

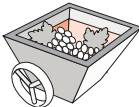
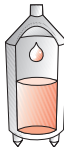
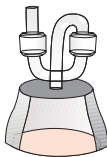
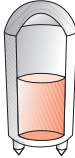
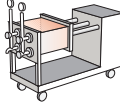
	Burgundy Type	Bordeaux Type
Recommended kinds of vine 	<ul style="list-style-type: none"> - Pinot Noir, Schwarzriesling, Portugieser, Pinotage 	<ul style="list-style-type: none"> - St. Laurent, Cabernet Sauvignon, Cabernet Franc, Merlot, Syrah
Mash processing 	<ul style="list-style-type: none"> - Only fully ripen and 100 % healthy grapes with fully developed colour - Harvest and process grapes cool and healthy - Desteam, space between drums not too close - 2 – 4 g/100 kg SIHAZYM Extro - Add 30 mg/l SO₂ 	<ul style="list-style-type: none"> - Only fully ripen and 100 % healthy grapes - Process quickly - Desteam and mash - 4 – 6 g/100 kg SIHAZYM Extro - Add 10 – 20 % non-desteamed grapes
Fermentation control 	<ul style="list-style-type: none"> - Controlled mash fermentation at 18 – 22 °C - Yeast: 15 – 20 g/hl SIHA Active Yeast 8 (Burgundy yeast) - Yeast nutrient: 20 – 30 g/hl SIHA PROFERM Plus or 20 – 30 g/hl SIHA PROFERM H+² - 6 – 8 g/hl SIHA Tannin FC - Pressing after complete fermentation 	<ul style="list-style-type: none"> - Controlled mash fermentation at 22 – 28 °C - Yeast: 15 – 20 g/hl SIHA Active Yeast 10 (Red Roman) or SIHA Rubino Cru - Yeast nutrient: 20 – 30 g/hl SIHA PROFERM Plus - 6 – 8 g/hl SIHA Tannin FC - SIHAZYM Lyso¹⁾ - Lysozyme inhibiting spontaneous malolactic fermentation during mash fermentation (action time 4 – 6 weeks) - Micro-oxidation with SIHA Tannin MOX - Add 4 – 6 g/hl SIHAZYM Fine to liberate the polysaccharides, mannoproteins - Pressing after complete fermentation
Ageing 	<ul style="list-style-type: none"> - Storage in a mixed set of 1 – 3 year old barriques - Malolactic fermentation using VINIFLORA® OENOS or VINIFLORA® CH16 (for red wines with high alcohol content) - Diacetyl degradation - SIHA BACTIFERM for unfavourable conditions during malolactic fermentation - Late sulphuring with maximum 80 mg/l SO₂ - 2 g/hl SIHA Isinglass 	<ul style="list-style-type: none"> - Storage 6 – 12 months in barriques - Malolactic fermentation with VINIFLORA® OENOS or VINIFLORA® CH16 (for red wines with high alcohol content) - Diacetyl degradation - SIHA BACTIFERM for unfavorable conditions during malolactic fermentation - Late sulphuring with maximum 80 mg/l SO₂ - 2 g/hl SIHA Isinglass
Filtration 	<ul style="list-style-type: none"> - Filtration with BECOPAD Depth Filter Sheets, BECO Depth Filter Cartridges and BECO Membrane Filter Cartridges. 	<ul style="list-style-type: none"> - Filtration with BECOPAD Depth Filter Sheets, BECO Depth Filter Cartridges and BECO Membrane Filter Cartridges.

TIP The filterability of the wine increases considerably by using SIHAZYM Extro, Claro and Fine consistently. Selective wine filtration using BECOPAD depth filter sheets decreases the burden and at the same time increases the filtration performance. An enhancement to your quality.

¹⁾ From 30 June 2012 the use of milk (casein) and chicken (egg protein) products in wine production will be subject to labelling requirements. Please refer to EU and national law.

Eiswein and Noble Sweet

Eiswein and noble sweet wines are regaining popularity. Take advantage of this variety of taste. Less is frequently more and small selective actions maximize the results.

	German Type – „Eiswein“	Sauternes Type
Grape processing Mash processing 	<ul style="list-style-type: none"> - Grapes with at least 120 °Oe, pure botrytis - Remove any grapes with white, pink, and blue mould - Harvest temperature of -10 °C - Pressing: pH ≤ 0.3 in comparison to first pressings 	<ul style="list-style-type: none"> - Grapes with at least 140 °Oe, pure botrytis - Remove any grapes with white, pink, and blue mould - Pressing slowly - Control sugar and pH during pressing; pH 3.5 - pH ≤ 0.3 in comparison to first pressings
Must clarification Must treatment 	<ul style="list-style-type: none"> - Heating up the juice to +10 °C - Strong pre-clarification of the must - 1 – 2 g/hl SIHAZYM Claro - 80 – 100 g/hl SIHA Actiliq GE - 10 – 30 g/hl SIHA Gelatine Fine Granules - 150 – 200 g/hl SIHA Must Bentonite G 	<ul style="list-style-type: none"> - Strong pre-clarification of the must - 2 – 4 g/hl SIHAZYM Claro - If required: 10 – 40 g/hl SIHA GESIL - 100 – 200 g/hl SIHA Must Bentonite G
Fermentation control 	<ul style="list-style-type: none"> - Fermentation at 18 – 22 °C - Rehydration with 25 – 30 g/hl of SIHA SpeedFerm - Yeast: 30 – 50 g/hl SIHA Active Yeast 7 (Riesling yeast) plus 20 – 30 g/hl SIHA PROFERM Plus and 0.6 g/1000 l SIHA Vitamin B₁ - Ferment up to residual sugar concentration of 140 - 150 g/l - Stop fermentation by cooling at temperatures < 4 °C 	<ul style="list-style-type: none"> - Fermentation at 15 – 18 °C in new barriques - Rehydration with 25 – 30 g/hl of SIHA SpeedFerm - Yeast: 30 – 50 g/hl SIHA CRYAROME or SIHA VARIOFERM plus - 20 – 30 g/hl SIHA PROFERM Plus and 30 g/hl SIHA Fermentation Salt (addition in stages) - 0.6 g/1000 l SIHA Vitamin B₁ - If possible, stop fermentation by cooling at < 4 °C - Residual sugar concentration should be approx. 150 g/l
Ageing 	<ul style="list-style-type: none"> - Fast racking of yeast - Sulphuring with at least 140 mg/l SO₂ - Harmonize the wine as required with SIHA OPTISIL or SIHA OPTISIL PLUS - Correct faults with SIHA Gelatine Fine Granules or SIHA Actiliq GE - Bentonite as required - 3 – 4 g/hl SIHA Panzym Fino G to improve sensory profile and the filtration 	<ul style="list-style-type: none"> - According to yeast quality controlled stabilizing on the yeast after first racking - Prolong SO₂ addition - Dosage approx. 150 mg/l SO₂ - Storage in barriques for 6 months - Fining with 2 g/hl SIHA Isinglass - Bentonit as required - SIHAZYM Lyso[®] - lysozyme inhibiting spontaneous malolactic fermentation (max. 50 g/hl)
Filtration 	<ul style="list-style-type: none"> - Filtration with BECOPAD Depth Filter Sheets, BECO Depth Filter Cartridges and BECO Membrane Filter Cartridges. 	<ul style="list-style-type: none"> - Filtration with BECOPAD Depth Filter Sheets, BECO Depth Filter Cartridges and BECO Membrane Filter Cartridges.

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Sparkling Wine

Bottle fermentation

Many consumers have discovered that sparkling wine is not only pearly but can taste of wine as well. An opportunity for many attractive types of sparkling wine.

Sparkling Wine Type

Champagne Type

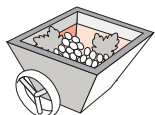
Recommended types of vine



- Riesling, Müller-Thurgau, Pinot Blanc, Kerner, Aromatic vine varieties (Gewürztraminer, Muscat ...)

- Chardonnay, Pinot Blanc, Pinot Gris, Auxerrois, Pinot Noir

Grape processing Mash processing



- Harvest at max. 80 – 85 °Oe
- Total acidity 8 – 10 g/l
- Gentle grape transportation
- Must clarification, minimization of polyphenols
- If required 10 – 40 g/hl **SIHA GESIL**

- Harvest at max. 80 – 85 °Oe
- Total acidity approx. 10 g/l
- A tartaric acid for optimal malolactic fermentation content of approx. 5 g/l
- High clarified must should be running of the press.
- Δ pH < 0.2 in comparison to free run juice

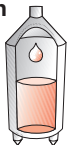
Fermentation control Base wine



- Controlled fermentation at 15 – 18 °C
- Yeast: 15 – 20 g/hl **SIHA Active Yeast 7 (Riesling yeast)** or **SIHA CRYAROME** plus
- 30 – 50 g/hl **SIHA Fermentation Salt** (addition in stages)

- Controlled fermentation at 15 – 18 °C
- Yeast: 15 – 20 g/hl **SIHA WhiteArome** or **SIHAFERM Element**
- Co-inoculation by adding **VINIFLORA® CH11** to the juice
- 30 – 50 g/hl **SIHA Fermentation Salt** (addition in stages)

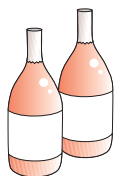
Base wine stabilization



- No malolactic fermentation, at deacidification with **SIHA Potassium Bicarbonate**
- Minimum dosage of SO₂: 30 mg/l total SO₂
- Clarification and tartrate stabilization
- Cuveé the wine

- Diacetyl breakdown
- Minimum dosage of SO₂: 30 mg/l total SO₂
- Clarification and tartrate stabilization
- Cuveé the wine

Sparkling wine making



- Second fermentation: Rehydration with 25 – 30 g/hl **SIHA SpeedFerm**
- Fermentation with 20 – 30 g/hl **SIHA Active Yeast 4**
- Tirage 22 – 24 g/l saccharose
- Max. 30 g/hl **SIHA Fermentation Salt** as a fermentation aid
- 60 ml/hl **SIHA Brillant liquid** as a riddling aid and 60 ml/hl **SIHA Tannin liquid**
- Yeast storage at least for 9 months
- Set liqueur to 12 – 24 g/l residual sugar concentration

- Second fermentation: Rehydration with 25 – 30 g/hl **SIHA SpeedFerm** if necessary
- Fermentation with 20 – 30 g/hl **SIHA Active Yeast 4**
- Tirage 22 – 24 g/l saccharose
- Max. 30 g/hl **SIHA Fermentation Salt** as a fermentation aid
- 60 ml/hl **SIHA Brillant liquid** as a riddling aid and 60 ml/hl **SIHA Tannin liquid**
- Yeast storage at least for 18 months
- Set liqueur to 8 g/l residual sugar concentration

The World Wants New Wines

Globalization is a key word in trade and industrial economy. The oenologist has to open his eyes to this development. New processes and new trends in winemaking are the subject of future discussion.

The Winemaker's Guide represents a clearly arranged comparison of new and traditional types of wine.

The Winemaker's Guide is only as a suggestion and provides room for variation to the different facilities.

The Winemaker's Guide is purposal to serve as an idea making a variety of wines.

BEGEROW is available at any time as a partner to provide assistance in oenology.

All information is given to the best of our knowledge.

They reflect current know-how and do not claim to be complete.

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