*Technical Information*

# Beverage Stabilization
## SIHA Ca-Bentonite G

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**SIHA Ca-Bentonite G (granular) is a special product for beverage fining. The removal positively charged albuminous substances from wines, fruit juices and vinegar.**

The specific advantages of SIHA Ca-Bentonite G:

- Specially formulated for use in beverages
- Small lees quantity
- High adsorptive capacity thanks to moderate swelling power
- Besides protein adsorption, tannins and heavy metals are also removed to a certain extent

### Application

In order to obtain optimum stabilizing efficiency without using excessive bentonite quantities, we recommend that the bentonite requirements be determined individually by means of a preliminary test with the beverage to treated.

Approximate quantities for various applications

If bentonite is used without carrying out preliminary tests the following figures may serve as a guide. However, always check stability achieved in the finished product.

| Beverage to be fined | SIHA Ca-Bentonite G |
|---|---|
| Wines with low protein content | 50 – 150 g/hl |
| Wines with moderate protein content | 100 – 200 g/hl |
| Wines with high protein content | 150 – 300 g/hl |
| Types/vintages extremely rich in protein | 400 g/hl |
| Heavily oxidized wines | 30 – 180 g/hl |
| Lees-recovery and yeast wine | 100 – 400 g/hl |
| Unfermented grape juices | 200 – 400 g/hl |
| Fruit juices | 40 – 120 g/hl |
| Aroma improvement | 5 - 20 g/hl |
| Fining of vinegar | 70 – 150g/hl |

**Fining process**
SIHA Ca-Bentonite G is easy to suspend and can be added directly to the beverage. They are, however, more efficient if suspended prior to addition. The bentonite quantity required is interspersed into 10 – 15 times the liquid quantity under vigorous stirring, preferably by an agitator. The agitator may only be stopped when a uniform, smooth suspension has been obtained. However, the stabilization will be even more efficient if allowed to swell for some hours, stirring occasionally.

For cost-saving application we recommend that water be used instead of beverage as the swelling liquid cannot be recovered afterwards. Excessive water can be decanted.

The success of bentonite fining depends to a large extent on a thorough mixing of the beverage and fining agent. The beverage to be treated must first be vigorously agitated, preferably by means of an efficient agitator. The freshly prepared bentonite suspension is then slowly added, after which stirring must be continued for another 15 to 30 minutes. Even better protein stabilization is achieved by stirring the mixture again after several hours.

**Clarification after fining:**
SIHA Ca-Bentonite G act very fast and intensely. Separation can therefore be carried out shortly after fining. However the most economic clarification is possible if you take advantage of the good sedimentation properties of bentonite and filter only after self-clarification has been completed. Lees quantities are relatively small and can be handled by rotary drum or frame-type lees filters.

The performance of your lees filter will be considerably improved by the addition of 0.5 – 2 % BECOCEL® 2000 and/or BECOLITE® 5000. and SIHA Ca-Bentonite G contain no polluting substances so that disposal of the lees on a normal waste dump is possible.

### Product Characteristics

The active constituent of SIHA Ca-Bentonite P and SIHA Ca-Bentonite G is montmorrilonite, a mineral with a special crystal structure and high swelling capacity. Montmorrilonite is an aluminium silicate with a laminar structure in which crystal water and exchangeable positive ions in varying quantities are deposited between the silicate layers. Due to this special structure, the mineral has excessive negative charges which will adsorb any positively charged substances, e.g. proteins.

The silicate lamination of the bentonite possesses different swelling properties which depend on the surrounding media, in particular the swelling liquid. The mineral also contains a low quantity of positively charged carriers and is therefore able to adsorb tannins or other negatively charged colloidal matters. The surface energy of bentonite is another factor for its efficiency.

## Safety

When used as directed no negative effects are known.

## Storage

SIHA Ca-Bentonite G is produced and packed with special care. As it is a highly efficient adsorptive agents it will adsorb off-flavors when stored inadequately. It should therefore be stored in carefully sealed package in a dry and well-aerated area, free of off-odors.

## Delivery Information

SIHA Ca-Bentonite G is sold under article no. 61.101 and is available in the following package sizes:

| | |
|---|---|
| 12 x 1 kg | laminar foil bags in carton |
| 10 kg | in plastic drum |
| 25 kg | in laminar foil sack |

H.S. Customs Tariff No. 2508 10 00

## Certified Quality

SIHA Ca-Bentonite G is monitored regularly during the production process to ensure consistently high quality. These inspections cover technical function criteria as well as compliance with the law governing the production and sale of foodstuffs. Strict controls are also carried out immediately before and during final packing.

SIHA Ca-Bentonite G meet the purity criteria as well as the German Wine Law.

Quality Management ISO 9001:2000

Reg. No. 000480 QM



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