



DISCOVER AND DELIVER

MagiSol™ HB

Silica Sol

MagiSol™ HB is a 30% special silica sol designed to clarify beer on its own. It will also improve efficiency and increase capacity of separators and filters.

Product Features

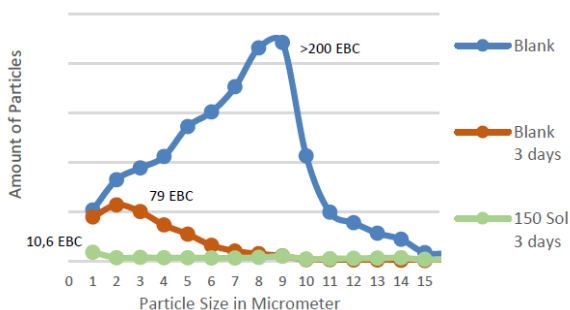
An increasing number of brewers are adopting the dry-hopping process for their specialty beers. Many of them object to certain filtration techniques yet consider beer clarity as a desirable quality parameter.

Benefits

- Improves clarity of the Beer on its own
- Accelerates sedimentation
- Increases capacity of separators and filters
- Can be used at maturation stage
- Causes no chemical reactions, can be fully removed and leaves no trace substances behind
- Meets the requirements of the Reinheitsgebot, the German Purity Law for brewing

Clarification

By complexing finest particles MagiSol HB accelerates sedimentation. Measurements with particle counter OPM 32 from Sigrist show that particles below one micron do not settle well compared to particles above one micron.



When beer is treated with MagiSol HB a significant reduction of one-micron particles can be observed.

Characteristics

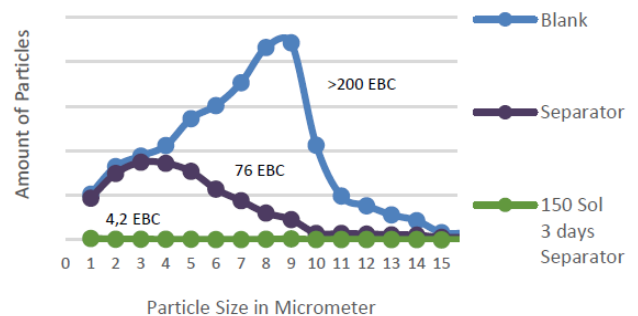
Density: 1.95 – 1.215 g/cm³
Internal Surface Area: 300 m²/g SiO₂
Viscosity at 20°C: < 10 mPas

Direct and indirect Stabilisation Effects

It is known that silicasol has an indirect stabilisation effect by reducing finest particles, which function as haze nuclei. At higher dosage rate MagiSol HB will also have an additional effect on protein stability.

Enhancing Separation

Separators – essentially being sedimentation accelerators – are also more effective in removing particles above one micron. Beers treated with MagiSol HB prior to separation are much clearer, because the one micron and submicron particles have been complexed to larger particles.



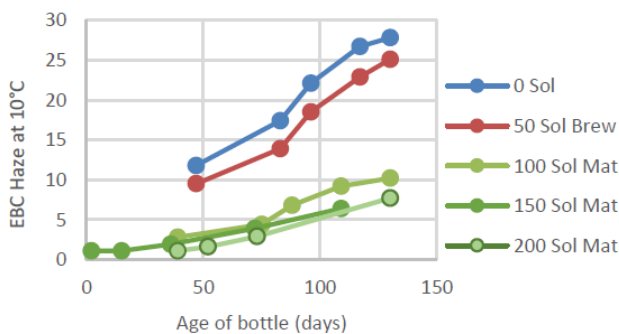
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Actual use in Brewery

A brewery found high haze levels, floating flocks and clouds in their bottles IPA (6.2 Abv. 250 g/hL dry hopping). Today the brewer adds 150 mL / hL of MagiSol HB, one day after dry-hopping. Beer is circulated for 15 minutes through hop dosing device, bottom and racking arm of the 60 hL maturation tank. After 2 days sedimentation time the beer is passed through a separator to the bright beer tank.



The variable haze values (40 – 200 EBC) at maturation stage now reduced to 10 EBC or below.

Sediment is compact and easy to remove. Due to lower and more consistent particle feed the separator is now running at 35 hl/h instead of 10-20 hl/h. The bottled beer is clearer, with a better haze stability and no flocks or clouds observable, even after half a year. No significant impact on beer flavour has been recognised, as long as one day hops contact time is given prior to MagiSol HB dosage.

Dosage Guidelines

It is not possible to give exact advice on the dose rate of MagiSol HB without preliminary tests, but for clarification starting dose rates vary from 100 to 400 ml/hl, depending on initial haze levels. Required dosage rates can easily be evaluated by laboratory tests at half litre scale.

Storage

MagiSol HB is sensitive to chilling and should be stored at ambient temperatures above 0°C (at or below freezing point it converts to water-insoluble silica gel). The material can be held in stock for 18 months, if stored properly.

Packaging

MagiSol HB is available in 6kg pails and 70 kg plastic barrels.

Safety and Enzyme Handling

Inhalation of enzyme dust and mists should be avoided. In case of contact with the skin or eyes, promptly rinse with water for at least 15 minutes.

For detailed handling information, please refer to the Material Safety Data Sheet.



Technical Services

Zymus International Limited welcomes the opportunity to work with customers offering technical services with the use of our products in application development and optimisation.

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