

## Brewtan® range

### >>> Natural solutions for beer stabilisation Application fact-sheet

#### >>> INTRODUCTION

Both colloidal and flavour stability are considered as important quality benchmarks of beer. Even after worldwide transport or after months of storage in supermarkets, beer should still be enjoyable to drink. Brewtan® B, Brewtan® C and Brewtan® F can be used very successfully and economically to give this colloidal and flavour stability. Next to these applications, the Brewtan® range is responsible for some important process improvements.

Reacts instantly with haze sensitive proteins by adsorption and precipitation  
Doesn't interact with foam active proteins

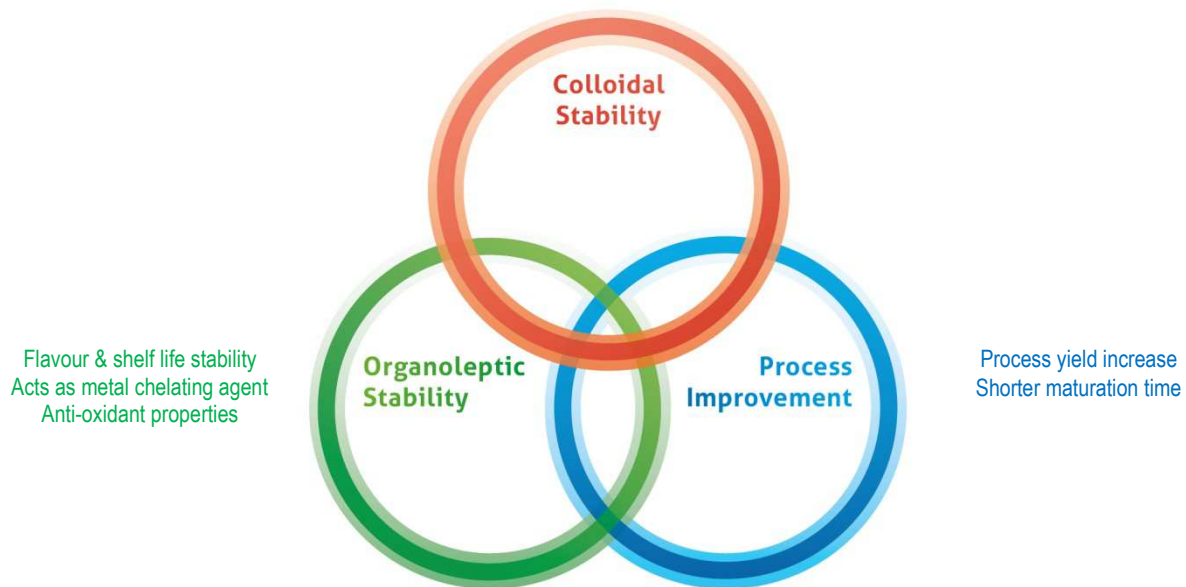


Figure 1.: Properties of Brewtan® range

**Brewtan® B** brings the stabilisation upstream in the brewing process, with an increase in flavour stability when used in mashing-in and an increase in colloidal stability when used at the end of boiling. Brewtan® B can also be used simultaneously in mashing and boiling. The Brewtan® B / protein complex is left in the spent grains when used in mashing or removed in the whirlpool when used at the end of boiling.

**Brewtan® C** is injected proportionally in line before maturation or settling tanks. This is an easy and economical solution for a complete and steady background stabilisation. The Brewtan® C / protein complex is removed by sedimentation during maturation.

**Brewtan® F** is injected in line before end clarification with a filter (Perlite, Kieselguhr) in order to have a perfect stabilisation without beer losses. The Brewtan® / protein complex is removed during filtration.

## >>> BREWTAN® B

### >> Mashing-in

Brewtan® B dissolved in the mash water increases the antioxidant power, inhibits LOX-enzymes, reduces the formation of aldehydes and is a very good metal-chelating agent. This results in a remarkable increase in flavour stability. Also the lautering performance is improved by up to 30%, with a higher extract quality and an increased brewhouse yield.

Typical dosage levels of Brewtan® B at mashing-in range between 1,5 – 4 g/hl, calculated on the volume of final beer (100% malt 12°P). Brewtan® B is added to the mash water prior to the raw materials.

More information is provided in our Application fact-sheet Brewtan® B – Mashing-in.

### >> End of boiling

Brewtan® B used at the end of boiling is an easy way to obtain a good colloidal stability early in the process. Brewtan® B increases the hot-break formation, whirlpool yield and also improves the antioxidant power of the beer. There are also less tank bottoms, shorter maturation times and longer filter runs with a reduction in processing aids, stabilisers and filter aids.

Typical dosage levels of Brewtan® B at the end of boiling range between 1,5 - 4 g/hl, calculated on the volume of final beer. (100% malt 12°P) Brewtan® B is added just before transfer to the whirlpool or proportionally during transfer to the whirlpool.

More information on this application is provided in our Application fact-sheet Brewtan® B – Boiling.

### >> Combined use: mashing-in / end of boiling

The combined use of Brewtan® B at mashing-in and end of boiling provides the advantages of both approaches. This combination results in an increase of flavour and colloidal stability.

Typical dosage levels of Brewtan® B at mashing-in range between 1 - 2,5 g/hl and at the end of boiling between 1 - 3 g/hl, calculated on the volume of final beer (100% malt 12°P).

More information is provided in our Application fact-sheet Brewtan® B – Combined use: Mashing-in / boiling.

## >>> BREWTAN® C

Brewtan® C is an effective, reliable and stand-alone stabilisation solution, with a significant increase in colloidal stability and a powerful metal chelating effect. The application of Brewtan® C at maturation also helps to solve difficult stabilisation issues (fruity beers, high wheat malt concentrations) and helps to increase the filtration cycle.

Typical dosage levels of Brewtan® C at maturation range between 1,5 – 4 g/hl (2 – 6 g/hl if there is no yeast separator before maturation), calculated on the volume of final beer (100% malt 12°P). Brewtan® C is injected proportionally in line during transfer from fermentation to maturation.

More detailed information is provided in our Application fact-sheet Brewtan® C.

**>>> BREWTAN® F**

Brewtan® F is the most economical and rational beer stabiliser and guarantees long-term stability with an increased anti-oxidant power. An optimal performance is obtained when used in combination with Perlite and generates no waste at filtration. Brewtan® F can also easily be used in combination with other stabilising methods.

Typical dosage level of Brewtan® F at end filtration is between 0,5 – 1,5 g/hl, calculated on the volume of final beer (100% malt 12°P). Brewtan® F is dosed in line before end-filtration at a temperature of maximum 0°C.

More information is provided in our Application fact-sheet Brewtan® F.

>>> **OVERVIEW**

Figure 2. shows the different ways of incorporating gallotannins into the brewing process. This allows brewers to choose the most appropriate product for their requirements; it is also possible to combine two or more of these methods to give a combination of process and stability benefits.

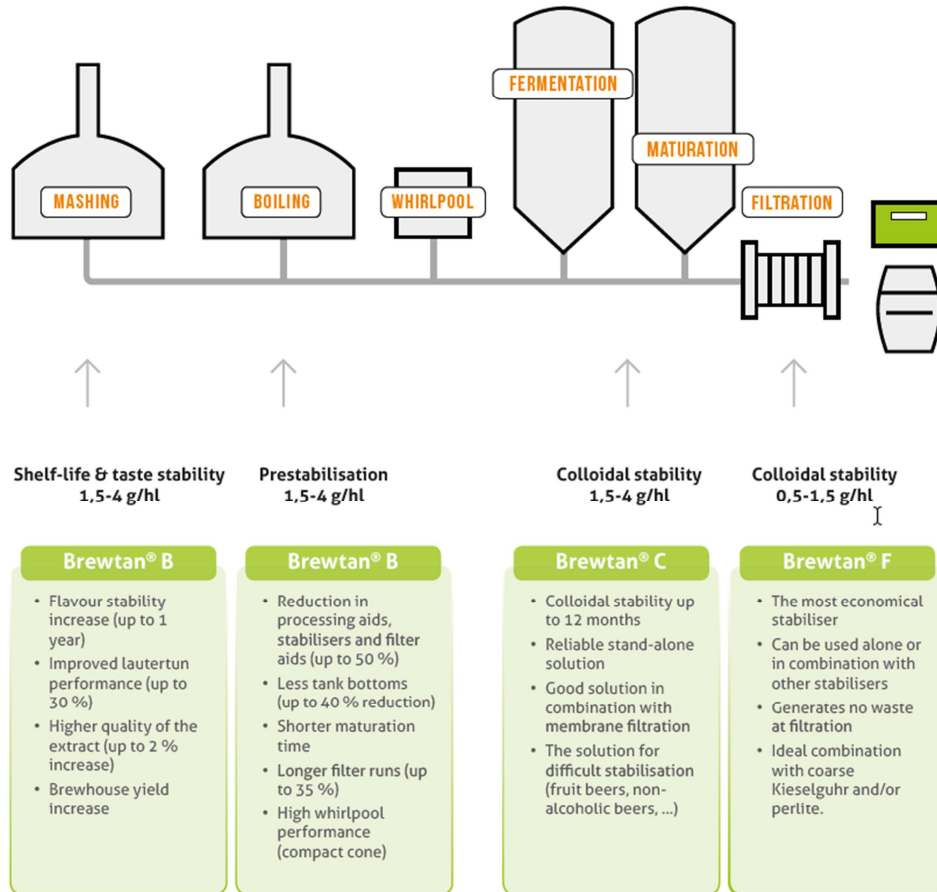


Figure 2.: Brewtan®, your natural beer stabiliser

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