



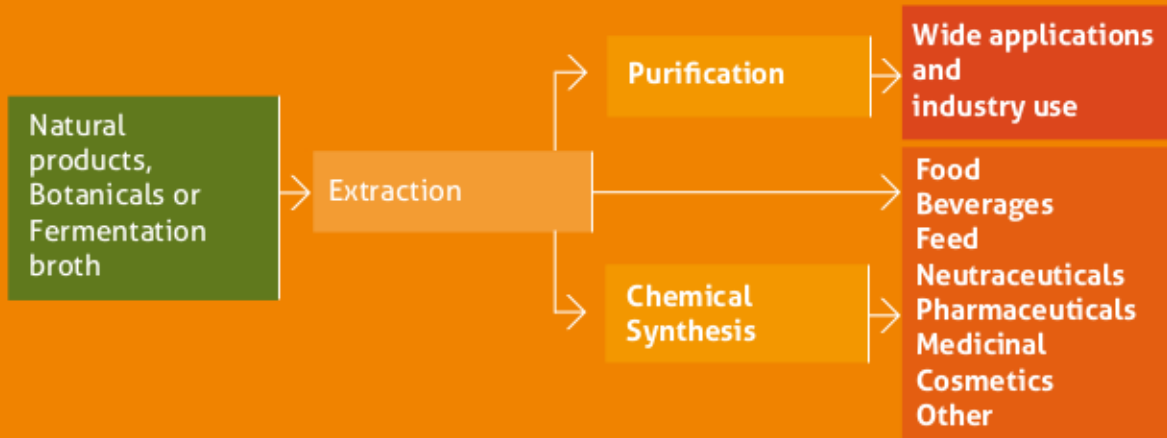
RAW MATERIAL



EXTRACT



TARGET



## NaturalSpecialities, the specialist in extraction of botanicals

Extraction & purification of natural products  
 Continuous process  
 Belgian based manufacturer  
 Quality systems: FSSC22000 and c-GMP RSM Q7

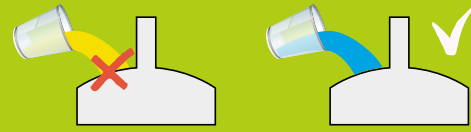
# BREWTAN®

## Natural Solutions for Craft Breweries



## Brewtan® – how to use

Brewtan® is supplied as a granular powder  
Always use Brewtan® as a solution



### Preparation of a Brewtan® solution

- Brewtan® solutions are prepared by adding Brewtan® to brewing water. Adding brewing water to Brewtan® can lead to poor dissolution and lump formation.
- For every kilogram of Brewtan® use 10 litres brewing water.
- Add brewing water to a mixing tank and gradually add Brewtan® while stirring. Do not add Brewtan® all at once as this can lead to lump formation and difficult dissolution.
- Allow for complete dissolution under continued moderate stirring.
- Cold water can be used. Brewtan® will dissolve more rapidly in hot water (e.g. 40 -60°C).



## Brewtan® B at mashing-in

### Taste & Flavour stability

- Metal complexation
  - Binding of free metal ions
  - Inhibition of oxidative reactions
- Anti-oxidant
  - Preservative
  - Colour stabilisation

## Brewtan® B at the end of boiling

### Colloidal stability

- Protein binding through complex formation
- Selective removal of haze sensitive proteins

In order to be outstanding in the market in terms of flavour & colloidal stability, the combined use of Brewtan® B at mashing-in and at the end of boiling is recommended.

## Tanal 02 at maturation

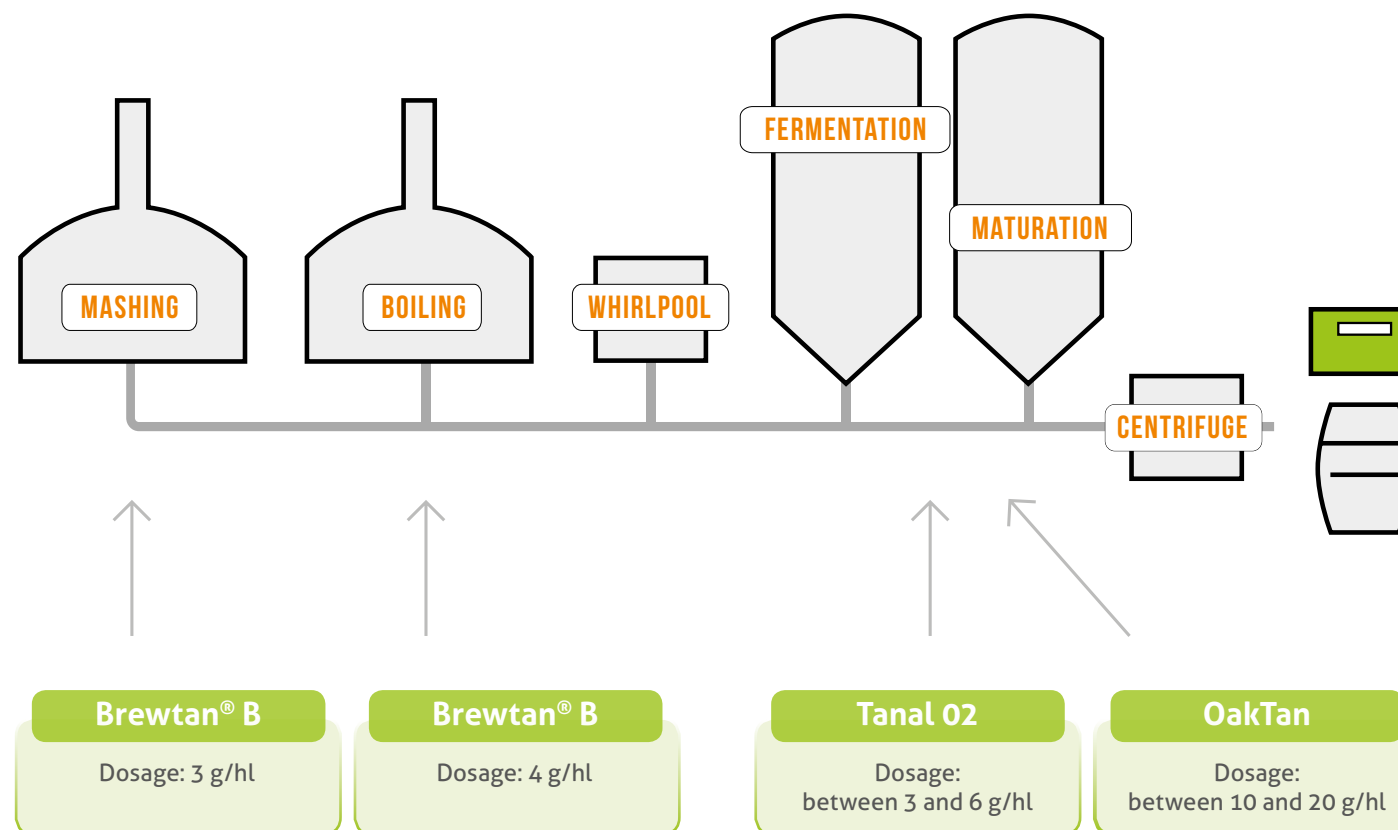
### Haze enhancer

- Interact with haze sensitive proteins in order to enhance yeast & colloidal suspension in beer
- Immediate reaction

## OakTan at maturation

### Mimics barrel ageing

- Different grades available, based on American and French oak
- Toasted and untoasted variants



## Brewtan® B at mashing in

- Dose the Brewtan® B solution in the brewing liquor PRIOR to addition of the raw materials.
- In combination with enzymes: dose the enzymes at least 5 to 10 minutes after the addition of the raw materials.  
Sequence of addition to mash tun: brewing liquor – Brewtan® B solution – raw materials – enzymes.

## Brewtan® B at end of boiling

- Dose the Brewtan® B solution 5 minutes before the end of boiling (at a time there is still enough turbulence in the kettle)  
OR
- Dose the Brewtan® B solution IN LINE during transfer from the kettle to the whirlpool.
- If used in conjunction with copper finings, add the Brewtan® B solution 5 minutes before the copper finings.

## Tanal 02 at maturation

- Make a 10% solution similar to "Preparation of a Brewtan® solution".
- Dose the Tanal 02 solution proportional during transfer from fermentation to maturation  
OR
- Dose the Tanal 02 solution via the bottom of the unitank, followed by 30 minutes of CO<sub>2</sub> sparging.

## OakTan at maturation

- Make a 10% suspension. Follow the same protocol as "Preparation of a Brewtan® solution". In this case a suspension is obtained.
- Dose the OakTan solution proportional during transfer from fermentation to maturation  
OR
- Dose the OakTan solution via the bottom of the unitank, followed by 30 minutes of CO<sub>2</sub> sparging.