



**Product Specification Sheet**

**AMINO-QUIK**

**Product Information**

Product Description	Enzyme preparation for food use containing protease derived from <i>Carica papaya</i>
Product Number	WLN4200
Country of origin	Belgium
Application market	Beer: Prevents hazing of beer kept in cool storage
Appearance	light brown to brown liquid (appearance may vary from batch to batch)
Standardized activity	81 to 90 TU/mg
Status	- Kosher approved - Halal approved - Food intolerance info available on request

**Regulatory information**

The product complies with general specifications for food enzyme preparations as published by JECFA, FCC and in French "Arrêté auxiliaires technologiques du 19 octobre 2006" and with FDA current GMP standards (21 CFR 110).

**Composition**

Carrier	glycerol 35 to 55 %
Stabilizing agent	sodium metabisulphite (< 2g/kg)

**Chemical properties**

pH	4.0-6.0
Heavy Metals	<30 ppm (as Pb)
Lead	< 5 ppm
Arsenic	<3 ppm
Cadmium	<0.5 ppm
Mercury	<0.5 ppm

**Microbiological properties**


Total Plate Count	<1x10 <sup>4</sup>
Coliforms	< 30 CFU per g
Escherichia coli	absent in 25g
Salmonella	absent in 25g
Staphylococcus aureus	absent in 1g
Sulphate reducers	<10 CFU per g
Anti bacterial activity	absent by test
Mycotoxins	absent by test

**Stability data**

- Recommended storage temperature is 4-8 C
- When stored in recommended condition, the activity loss will be less than 5% within 36 months



## White Labs Fermentation Enzymes

Made with technology from **DSM** 

### Safety and Handling

Please refer to the Materials Safety Data Sheet available on request

### Contact

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## APPLICATION DATA SHEET

# AMINO-QUIK

## Papain for chill proofing

### PRODUCT DESCRIPTION

AMINO-QUIK is a liquid vegetal papain extracted from *Carica papaya*.

### FUNCTION

Brewers must ensure that the finished beer they produce is as clear and bright as possible for answering consumer demand. However, it appears that sometimes chill haze appears progressively when beer is stored at low temperature. Haze is composed of proteins, polyphenols, carbohydrates and inorganic compounds such as iron or copper.

Polyphenols and proteins associate in hydrogen then covalent bonds in time, making haze irreversible. Papain is a cysteine protease that degrades protein fraction of beer, preventing further association with polyphenols.

AMINO-QUIK acts specifically on the haze forming protein components by hydrolyzing bonds with leucine or glycine.

Chill proofing with AMINO-QUIK effectively prevents chill haze without physically removing other important beer components. AMINO-QUIK does not impart any odor or taste to the beer.

### APPLICATION

AMINO-QUIK is easy to use. It must be added to the beer at maturation stage at 1 to 3 ml/hl with metering pump into the lagering tank or on-line when the beer is transferred prior to final filtration.

Optimal temperature is 55-65°C. Just before use, to ensure adequate mixing, it should be diluted at a dosage of 1 Liter in 4 Liters of beer or water.