

SORGAMYL

(see Enzymes CBS, Why and when to use enzymes)

SORGAMYL is a mixture of vegetal and fungal maltogenic amylases (EC 3.2.1.1). Sorgamyl is able to produce high levels of maltose by saccharifying sorghum starch using a conventional brewing material.

TEMPERATURE

Optimum 60-65°C.

pH EFFECT

Optimum pH between 4,5 and 6,5.

PURPOSES

- To increase the brewery extract yield when mashing raw and/or malted sorghum using a conventional brewing house and process.
- To increase the final apparent attenuation of the wort resulting from raw and/or malted sorghum mashing.
- To increase the total sugars content.
- To improve the sugar profile increasing the ratio maltose/glucose.

AVAILABILITY

Powder form.

EXAMPLE 1

Effects of the addition of SORGAMYL (0.05% w/w) to two samples of malted sorghum during mashing. The samples are two well-known Nigerian varieties.

Variety	Farra Farra		SK 5912	
	0,05 % w/w	without	0,05 % w/w	without
Sorgamyl				
Extract Yield (%)	87,4	65,2	87,1	62,1
Final Apparent Attenuation (%)	87,1	62,1	88,6	57,4
Total sugars (g/100 ml)*	9,1	6,4	9,3	5,9
Maltose (%)	48,4	37,9	51,4	36,4
Glucose (%)	17,9	39,0	13,2	42,9
Free Amino Nitrogen (ppm)*	260	260	200	200
Filtration rate	Normal	Slow	Normal	Slow

* Given for a 12°P wort

As shown in EXAMPLE 1, using malted sorghum, SORGAMYL (0.05% w/w) allows to obtain with a short conventional mashing process (maximum 2 hours) a wort composition similar or better than a common malt wort. The free amino nitrogen level and the filtration rate are a function of the malting process but the filtration rate can be enhanced by the use of SORGAMYL. Maltose concentration can be increased using greater amounts of SORGAMYL.

The use of raw instead of malted sorghum has many advantages like no mold growth, no malting losses, normal wort filtration rate and avoids the typical raspberry-like flavour imparted to the beer by malted sorghum.

Our technical advice on the uses of our materials is given without obligation. The buyer is responsible for the application and processing of our products, and he is also liable for observing any third party rights.

EXAMPLE 2

Effects of the addition of SORGAMYL and a liquefying enzyme (LIQUAMYL) at two levels to 100% raw sorghum during mashing (same mashing process as for example 1).

Sorgamyl	0,05% (w/w)	0,2% (w/w)	0,2% (w/w)
Liquamyl T	0,05% (w/w)	0,2% (w/w)	0,2% (w/w)
Sorgainase			0,3% (w/w)
Extract Yield (%)	78,8	80,9	82,1
Final Apparent Attenuation %	81,1	98,5	98,6
Total sugars (g/100 ml)*	8,1	10,5	10,4
Maltose (%)	52,5	65,3	65,4
Maltotriose (%)	43	19,6	19,3
Glucose (%)	3,7	13,1	13,5
Kolbach	17,6	17,6	28,3
Free Amino Nitrogen (ppm)*	30	30	141
Filtration rate	Normal	Normal	Normal

* Given for a 12°P wort

Raw sorghum does not give the required free amino level for the fermentation. It can be adjusted using Sorgainase.

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