

# Dokarmelowany Gryczany Bitter

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **41**
- SRM **17.7**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

## Mash information

- Mash efficiency **57 %**
- Liquor-to-grist ratio **3.9 liter(s) / kg**
- Mash size **22.1 liter(s)**
- Total mash volume **27.8 liter(s)**

## Steps

- Temp **70 C**, Time **60 min**

## Mash step by step

- Heat up **22.1 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **60 min** at **70C**
- Sparge using **3.8 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Munich dark malt	2.5 kg (44.1%)	80 %	22
Grain	Steinbach gryczany	1 kg (17.6%)	80 %	15
Grain	Viking Pale Ale malt	0.8 kg (14.1%)	80 %	5
Grain	Strzegom Karmel 150	0.75 kg (13.2%)	75 %	150
Grain	Viking Red Active malt	0.62 kg (10.9%)	80 %	35

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	61 g	35 min	6.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - Lalbrew London English-style	Ale	Slant	600 ml	Lallemand
Uwodnione				