

Bitterek

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **28**
- SRM **9.3**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **68 C**, Time **75 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **75 min** at **68C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	4 kg (80%)	80 %	8
Grain	Abbey Castle	0.5 kg (10%)	80 %	45
Grain	Słód Caramunich Typ II Weyermann	0.5 kg (10%)	73 %	120

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	25 g	50 min	8.3 %
Boil	Zula	25 g	10 min	8.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis US-05	Ale	Dry	11.5 g	---