

# bitter

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **30**
- SRM **47.3**
- Style **Belgian Specialty Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **29.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **29.7 liter(s)**

## Steps

- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**
- Temp **100 C**, Time **90 min**

## Mash step by step

- Heat up **23.1 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **15 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Keep mash **90 min** at **100C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (75.9%)	80 %	5
Grain	Viking Czekoladowy ciemny	0.84 kg (12.7%)	67 %	900
Grain	Carafa III	0.4 kg (6.1%)	70 %	1034
Grain	Brown Malt (British Chocolate)	0.35 kg (5.3%)	70 %	128

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	90 min	10 %
Aroma (end of boil)	Fuggles	30 g	15 min	4.5 %
Aroma (end of boil)	Wai-iti	30 g	10 min	4.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
s 05	Ale	Dry	11.52 g	---

## Notes

- CZEKOLADOWY DODAC PO PRZERWIE 62STOPNI

CARAFKA PODOBNI

*Feb 24, 2024, 12:04 AM*