

Bitter beer maters

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **32**
- SRM **5.5**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **14.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **6 liter(s)**
- Total mash volume **7.7 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **14.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	0.5 kg (29.4%)	79 %	22
Grain	Strzegom Karmel 30	0.2 kg (11.8%)	75 %	30
Grain	Viking Pale Ale malt	1 kg (58.8%)	90 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	10 g	60 min	4.5 %
Boil	Fuggles	15 g	30 min	4.5 %
Boil	Fuggles	10 g	15 min	4.5 %
Boil	Fuggles	15 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Slant	70 ml	Fermentum Mobile
Gestwa z #12				

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	2.5 g	Boil	10 min