

Biterzyna

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **102**
- SRM **11.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **25.4 liter(s)**
- Total mash volume **31.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **25.4 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **77C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	2.52 kg (39.6%)	81 %	6
Grain	Viking Wheat Malt	0.6 kg (9.4%)	83 %	5
Grain	Strzegom Karmel 150	0.84 kg (13.2%)	75 %	150
Grain	Viking Pale Ale malt	2.4 kg (37.7%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Herkules	60 g	60 min	17 %
Boil	Sybilla	36 g	15 min	3.5 %
Boil	Lublin (Lubelski)	36 g	15 min	3.5 %
Dry Hop	Herkules	35 g	3 day(s)	17 %
Dry Hop	Lublin (Lubelski)	20 g	3 day(s)	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	13 g	Danstar