Biterek

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **56**
- SRM **11.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **21.2 liter(s)**
- Total mash volume **26.5 liter(s)**

Steps

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

Mash step by step

- Heat up **21.2 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **77C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	2.1 kg *(39.6%)*	81 %	6
Grain	Viking Wheat Malt	0.5 kg *(9.4%)*	83 %	5
Grain	Strzegom Karmel 150	0.7 kg *(13.2%)*	75 %	150
Grain	Viking Pale Ale malt	2 kg *(37.7%)*	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	60 g	60 min	7 %
Boil	Sybilla	30 g	15 min	3.5 %
Boil	Lublin (Lubelski)	30 g	15 min	3.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	11.5 g	Danstar