

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **47**
- SRM **9.5**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **4 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **30 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **70 C**, Time **120 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **120 min** at **70C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3 kg (54.5%)	82 %	4
Grain	Viking Munich Malt	2 kg (36.4%)	78 %	18
Grain	Strzegom Karmel 150	0.5 kg (9.1%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	100 g	1 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Fermentis