

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **88**
- SRM **12.3**
- 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 **25.4 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **28.7 liter(s)**

Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **19.5 liter(s)**

Steps

- Temp **70 C**, Time **60 min**

Mash step by step

- Heat up **13 liter(s)** of strike water to **82.5C**
- Add grains
- Keep mash **60 min** at **70C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **28.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (76.9%)	80 %	5
Grain	Viking Wheat Malt	0.5 kg (7.7%)	83 %	5
Grain	Strzegom Karmel 150	1 kg (15.4%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	70 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	200 g	10 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Uwodnione