

Bitter

- Gravity **13.6 BLG**
- ABV ---
- IBU **39**
- SRM **11.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **51.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **20.2 liter(s)**
- Total mash volume **30.3 liter(s)**

Steps

- Temp **65 C**, Time **75 min**

Mash step by step

- Heat up **20.2 liter(s)** of strike water to **76.3C**
- Add grains
- Keep mash **75 min** at **65C**
- Sparge using **41.7 liter(s)** of **76C** water or to achieve **51.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	9 kg (89.1%)	79 %	6
Grain	Cara Gold Castlemalting	0.8 kg (7.9%)	78 %	120
Grain	Strzegom Monachijski typ I	0.3 kg (3%)	79 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger (2015)	50 g	45 min	5.8 %
Boil	Willamette (2014)	50 g	45 min	4.5 %
Boil	Simcoe (2015)	15 g	15 min	13.2 %
Boil	Challenger (2015)	50 g	5 min	5.8 %
Boil	Willamette (2014)	50 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	400 ml	Safale

Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	5 g	Mash	60 min