

EPA

- Gravity **12.3 BLG**
- ABV ---
- IBU **45**
- SRM **7**
- 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 **5 %/h**
- Boil size **23.1 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.7 liter(s)**

Steps

- Temp **69 C**, Time **80 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **80 min** at **69C**
- Keep mash **5 min** at **76C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (90.3%)	79 %	6
Grain	Strzegom Bursztynowy	0.11 kg (2.5%)	70 %	49
Grain	Strzegom Karmel 30	0.32 kg (7.2%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	pilgrim	25 g	60 min	10.4 %
Boil	pilgrim	25 g	12 min	10.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 04	Ale	Dry	11.5 g	fermentis