inop apa

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **36**
- SRM **5.2**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.2 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg *(80%)*	79 %	6
Grain	Monachijski	1 kg *(20%)*	80 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	25 g	50 min	9.5 %
Boil	Citra	25 g	10 min	12 %
Dry Hop	Citra	20 g	5 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis