

AAAAAAAAAAAA

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **79**
- SRM **9.2**

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 **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **17.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **77C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (70.2%)	79 %	6
Grain	Viking Malt Wędzony Czereśnią	1 kg (17.5%)	82 %	10
Grain	Płatki owsiane	0.6 kg (10.5%)	85 %	3
Grain	Strzegom Karmel 600	0.1 kg (1.8%)	68 %	601

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	60 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	20 g	25 min	15.5 %
Boil	Citra	10 g	10 min	12 %
Boil	Citra	10 g	5 min	12 %
Boil	Cascade	15 g	5 min	6 %

Yeasts

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