

Hacker

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **20**
- SRM **9.7**
- Style **Flanders Red Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **10 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.4 liter(s)**
- Total mash volume **17.2 liter(s)**

Steps

- Temp **62 C**, Time **50 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **13.4 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **10 min** at **72C**
- Sparge using **10.2 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	3 kg (78.3%)	80 %	8
Grain	Rahr - Red Wheat Malt	0.3 kg (7.8%)	85 %	89
Grain	Weyermann - Carapils	0.2 kg (5.2%)	78 %	4
Grain	Jęczmień palony	0.03 kg (0.8%)	55 %	985
Grain	Płatki owsiane	0.3 kg (7.8%)	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	20 g	40 min	4 %
Boil	El Dorado	12 g	10 min	13.6 %
Aroma (end of boil)	Lublin (Lubelski)	20 g	1 min	4 %

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
Flavor	Hibiskus suszony	15 g	Boil	5 min
Fining	Mech Irlandzki	5 g	Boil	5 min
Water Agent	Gips Piwowarski	3 g	Mash	60 min
Other	Witamina C	5 g	Boil	60 min