Hacker

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **21**
- SRM **9.9**
- Style **Flanders Red Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.4 liter(s)**
- Total mash volume **24.9 liter(s)**

Steps

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

Mash step by step

- Heat up **19.4 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **10 min** at **72C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	4.5 kg *(81.2%)*	80 %	8
Grain	Rahr - Red Wheat Malt	0.4 kg *(7.2%)*	85 %	89
Grain	Weyermann - Carapils	0.2 kg *(3.6%)*	78 %	4
Grain	Jęczmień palony	0.04 kg *(0.7%)*	55 %	985
Grain	płatki jęczmienne	0.4 kg *(7.2%)*	60 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	50 min	8 %
Boil	El Dorado	15 g	10 min	13.6 %
Aroma (end of boil)	Lublin (Lubelski)	30 g	1 min	4 %

Yeasts

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

Extras

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Flavor	Hibiskus suszony	20 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