Otwarcie

- Gravity **13.1 BLG**
- ABV **---**
- IBU **51**
- SRM **5.2**
- Style **American Pale 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 **15 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **55 C**, Time **5 min**
- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **25 min** at **64C**
- Keep mash **25 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.2 kg *(90.3%)*	81 %	4
Grain	carabelge	0.3 kg *(6.5%)*	74 %	32
Grain	Pszeniczny	0.15 kg *(3.2%)*	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	20 g	60 min	10 %
Boil	Mosaic	20 g	30 min	10 %
Aroma (end of boil)	Mosaic	20 g	15 min	10 %
Whirlpool	Mosaic	30 g	0 min	10 %
Dry Hop	Mosaic	30 g	14 day(s)	10 %

Yeasts

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

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