

ZACIERAPA_2_UWARZONO

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **46**
- SRM **5.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **32.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **30 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **30 min** at **76C**
- Sparge using **20.3 liter(s)** of **76C** water or to achieve **32.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	5 kg (83.3%)	80 %	7
Grain	Pszeniczny	0.5 kg (8.3%)	85 %	4
Grain	Strzegom Monachijski typ II	0.5 kg (8.3%)	79 %	22

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Summit	8 g	60 min	18 %
Boil	Summit	10 g	30 min	18 %
Boil	Centennial	10 g	30 min	8.5 %
Boil	summit	10 g	15 min	18 %
Boil	Centennial	10 g	15 min	8.5 %
Boil	Summit	10 g	5 min	18 %
Boil	Centennial	10 g	5 min	8.5 %
Boil	Summit	15 g	0 min	18 %
Boil	Centennial	15 g	0 min	8.5 %
Boil	Cascade_pl	15 g	0 min	6 %

Aroma (end of boil)	summit	10 g	-3 min	18 %
Aroma (end of boil)	Cascade_pl	10 g	-3 min	4.5 %
Aroma (end of boil)	Centennial	10 g	-3 min	8.5 %
Dry Hop	Centennial	40 g	4 day(s)	8.5 %
Dry Hop	Summit	35 g	4 day(s)	18 %
Dry Hop	Cascade_pl	25 g	4 day(s)	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Slant	100 ml	ROBOT