

Apa jasna pełna

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **29**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **63 C**, Time **5 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **5 min** at **63C**
- Keep mash **60 min** at **69C**
- Keep mash **15 min** at **72C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **25.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.3 kg (61.1%)	81 %	4
Grain	Strzegom Wiedeński	1 kg (18.5%)	79 %	10
Grain	Płatki owsiane	1 kg (18.5%)	60 %	3
Grain	Karmelowy Pszeniczny Strzegom	0.1 kg (1.9%)	79 %	130

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Citra	10 g	10 min	12 %
Boil	Nelson Sauvign	10 g	2 min	11 %
Whirlpool	Citra i nelson	40 g	1 min	1 %