

Zżyta apa

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **38**
- SRM **4.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **53 C**, Time **5 min**
- Temp **69 C**, Time **60 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **5 min** at **53C**
- Keep mash **60 min** at **69C**
- Keep mash **20 min** at **72C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2 kg (41.7%)	85 %	8
Grain	Strzegom Wiedeński	1 kg (20.8%)	79 %	10
Grain	Pilzneński	1.8 kg (37.5%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Nelson Sauvin	10 g	10 min	11 %
Boil	Moutere	10 g	10 min	14.5 %
Whirlpool	Mix	80 g	10 min	1 %
Boil	Marynka	20 g	60 min	10 %
Boil	Saaz (Czech Republic)	15 g	10 min	4.5 %