

#160 Trzy piosenki i znowu piętnaście minut reklam...

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **24**
- SRM **2.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **22.9 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.333 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **17.9 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **13.8 liter(s)** of strike water to **56.8C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **22.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann pilzneński premium	3.63 kg (87.9%)	81 %	2
Grain	Steinbach pszeniczny	0.5 kg (12.1%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Nectaron NZ 2022 granulat	25 g	30 min	9.9 %
Aroma (end of boil)	Nectaron NZ 2022 granulat	25 g	1 min	9.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - LalBrew Verdant IPA	Ale	Dry	11 g	Lallemand