apppppa

- Gravity **20 BLG**
- ABV **8.8 %**
- IBU **24**
- SRM **9.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **--- %**
- Size with trub loss **15 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.1 liter(s)**

Steps

- Temp **66 C**, Time **60 min**

Mash step by step

- Heat up **16.8 liter(s)** of strike water to **73.2C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **5.9 liter(s)** of **76C** water or to achieve **17.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	2.5 kg *(47.6%)*	80 %	16
Grain	Pilzneński	2.5 kg *(47.6%)*	81 %	4
Grain	Karmelowy Czerwony	0.25 kg *(4.8%)*	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	12 g	Fermentis