

FAH

- Gravity **10.9 BLG**
- ABV ---
- IBU **47**
- SRM **3.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **15 %**
- Size with trub loss **23 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **28.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **13.6 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **40 C**, Time **5 min**
- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **40 min**

Mash step by step

- Heat up **13.6 liter(s)** of strike water to **42.9C**
- Add grains
- Keep mash **5 min** at **40C**
- Keep mash **15 min** at **64C**
- Keep mash **40 min** at **72C**
- Sparge using **18.6 liter(s)** of **76C** water or to achieve **28.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (100%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	90 min	11.8 %
Boil	Lublin (Lubelski)	40 g	45 min	3.8 %
Boil	Lublin (Lubelski)	13 g	7 min	3.8 %
Dry Hop	Lublin (Lubelski)	20 g	10 day(s)	3.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale