

### 3 FM52 10.03.2021

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **36**
- SRM **4.5**
- Style **American Pale Ale**

#### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **30 %/h**
- Boil size **31.5 liter(s)**

#### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **16.9 liter(s)**
- Total mash volume **21.6 liter(s)**

#### Steps

- Temp **63 C**, Time **20 min**
- Temp **67 C**, Time **40 min**
- Temp **74 C**, Time **5 min**

#### Mash step by step

- Heat up **16.9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **67C**
- Keep mash **5 min** at **74C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **31.5 liter(s)** of wort

#### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	3 kg (63.8%)	80 %	5
Grain	pszeniczny jasny	1 kg (21.3%)	80 %	6
Grain	Monachijski typ I	0.7 kg (14.9%)	79 %	16

#### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	20 g	60 min	13.5 %
Aroma (end of boil)	Saaz (USA)	30 g	10 min	3 %
Aroma (end of boil)	Cascade	20 g	5 min	7.8 %

#### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	1000 ml	Fermentum Mobile

#### Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc T	1 g	Boil	5 min