

American Pale Ale single hop

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **40**
- SRM **7.1**
- 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 **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **22.7 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **17.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.65 kg (92.1%)	81 %	4
Grain	Słód Caramunich Typ II Weyermann	0.4 kg (7.9%)	73 %	120

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	10 g	90 min	6.9 %
Boil	Cascade	15 g	60 min	6.9 %
Boil	Cascade	40 g	30 min	6.9 %
Aroma (end of boil)	Cascade	85 g	0 min	6.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	150 ml	Fermentum Mobile