

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **36**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **37 liter(s)**
- Trub loss **5 %**
- Size with trub loss **40.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **47.2 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **27.8 liter(s)**
- Total mash volume **36.5 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **27.8 liter(s)** of strike water to **57C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **28.1 liter(s)** of **76C** water or to achieve **47.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	7 kg (80.5%)	79 %	6
Grain	Carahell	1.2 kg (13.8%)	77 %	26
Grain	Strzegom Wiedeński	0.5 kg (5.7%)	79 %	10

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	40 g	60 min	15.7 %
Dry Hop	Zula	50 g	4 day(s)	8.3 %
Dry Hop	Izabella	100 g	4 day(s)	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	400 ml	Fermentis