

## #17 COLD HOPS

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **44**
- SRM **3.6**
- 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 **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (90.9%)	81 %	4
Grain	Płatki pszeniczne	0.5 kg (9.1%)	60 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Blanc	30 g	40 min	9.9 %
Aroma (end of boil)	Cascade PL	45 g	15 min	7.8 %
Dry Hop	Strata	100 g	4 day(s)	14.5 %
Dry Hop	Citra	100 g	4 day(s)	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	11.5 g	---

### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	10 min