

# PHArturo

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **27**
- SRM **4.5**
- Style **American Wheat or Rye Beer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

## Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.8 kg (50%)	80 %	4
Grain	Strzegom Pszeniczny	2.8 kg (50%)	81 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	15 g	60 min	12 %
Boil	Amarillo	15 g	15 min	9.5 %
Aroma (end of boil)	Citra	10 g	0 min	12 %
Dry Hop	Amarillo	10 g	2 day(s)	9.5 %
Dry Hop	Citra	5 g	2 day(s)	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis