

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **43**
- SRM **4.3**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **44 C**, Time **10 min**
- Temp **50 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **10 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **10 min** at **44C**
- Keep mash **10 min** at **50C**
- Keep mash **30 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **76C**
- Keep mash **2 min** at **78C**
- Sparge using **18.8 liter(s)** of **76C** water or to achieve **30.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) US	5 kg (83.3%)	79 %	4
Grain	Monachijski	0.7 kg (11.7%)	80 %	16
Grain	Weyermann - Carapils	0.3 kg (5%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	45 g	30 min	9.5 %
Boil	Amarillo	30 g	15 min	9.5 %
Dry Hop	Amarillo	20 g	10 day(s)	9.5 %
Dry Hop	Cascade PL	50 g	10 day(s)	5.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

us-05	Ale	Dry	11 g	---
-------	-----	-----	------	-----

## Notes

- litr syropu z wody + 176 gr glikozy  
*Jan 2, 2019, 5:50 PM*