

## 4 Zboża IPA

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **86**
- SRM **6.8**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **13.5 liter(s)**

### Mash information

- Mash efficiency **57 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **19 liter(s)**

### Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **14.8 liter(s)** of strike water to **72.4C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **2.8 liter(s)** of **76C** water or to achieve **13.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	1.1 kg (26.7%)	82 %	4
Grain	Viking Wheat Malt	1 kg (24.3%)	83 %	4
Grain	Rye Malt	1.02 kg (24.8%)	63 %	9
Grain	Słód owsiany Fawcett	1 kg (24.3%)	61 %	10

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	25 g	60 min	11 %
Boil	lunga Polish Hops	5 g	60 min	10 %
Aroma (end of boil)	Amarillo	20 g	5 min	8.9 %
Aroma (end of boil)	Mosaic	20 g	5 min	13.2 %
Dry Hop	Amarillo	30 g	3 day(s)	8.9 %
Dry Hop	Mosaic	30 g	3 day(s)	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
WLP644	Ale	Slant	100 ml	White Labs