

## 5 zbóż multi-grain ipa

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **42**
- SRM **4.4**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **20.1 liter(s)**

### Steps

- Temp **53 C**, Time **10 min**
- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **15.2 liter(s)** of strike water to **58.3C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (52.6%)	80 %	5
Grain	Weyermann - Pale Wheat Malt	1 kg (17.5%)	85 %	5
Grain	Żytni	0.5 kg (8.8%)	85 %	8
Grain	Weyermann - Spelt Malt	0.4 kg (7%)	81 %	6
Adjunct	Płatki owsiane	0.4 kg (7%)	85 %	3
Adjunct	płatki ryżowe	0.4 kg (7%)	--- %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Styrian Golding	30 g	60 min	3.6 %
Boil	Extra Styrian Dana	15 g	30 min	13.2 %
Boil	Hallertau Blanc	15 g	30 min	11 %
Aroma (end of boil)	Extra Styrian Dana	15 g	5 min	13.2 %
Aroma (end of boil)	Hallertau	15 g	5 min	4.5 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Fining	mech ir.	5 g	Boil	15 min