

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 |