

Żytko

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **51**
- SRM **5.8**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24.9 liter(s)**
- Total mash volume **33.2 liter(s)**

Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **24.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **33 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 6 kg (72.3%) | 80 % | 5 |
| Grain | Żytńi | 2 kg (24.1%) | 85 % | 8 |
| Grain | Carared | 0.3 kg (3.6%) | 75 % | 39 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Angus | 25 g | 60 min | 13.9 % |
| Aroma (end of boil) | Amarillo | 60 g | 10 min | 9.5 % |
| Aroma (end of boil) | Citra | 30 g | 10 min | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 11.5 g | --- |