

Pszenżyto

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **42**
- SRM **10.6**
- Style **American Wheat or Rye Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.7 liter(s)**

Steps

- Temp **55 C**, Time **20 min**
- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|------------------|-------|-----|
| Grain | Pilzneńsk Weyerman | 1.665 kg (37.7%) | 81 % | 4 |
| Grain | Pszeniczny | 1.53 kg (34.6%) | 85 % | 1 |
| Grain | Żytni | 0.477 kg (10.8%) | 85 % | 8 |
| Grain | Viking Smoked Malt torfowy | 0.6 kg (13.6%) | 80 % | 18 |
| Grain | Weyermann - Acidulated Malt | 0.05 kg (1.1%) | 80 % | 6 |
| Grain | Barwiący | 0.1 kg (2.3%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Marynka | 25 g | 60 min | 6.8 % |
| Boil | Oktawia | 15 g | 60 min | 8.7 % |
| Aroma (end of boil) | Oktawia | 40 g | 5 min | 8.7 % |

Yeasts

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

| | | | | |
|--------------|-----|-----|--------|-----------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |
|--------------|-----|-----|--------|-----------|

Extras

| Type | Name | Amount | Use for | Time |
|-------|------------------|--------|---------|-----------|
| Other | Kwas ascorbinowy | 4 g | Primary | 14 day(s) |