

PDA

- Gravity **10 BLG**
- ABV **4 %**
- IBU **14**
- SRM **3.8**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.9 liter(s)**
- Total mash volume **13.2 liter(s)**

Steps

- Temp **58 C**, Time **4 min**
- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **9.9 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **4 min** at **58C**
- Keep mash **30 min** at **64C**
- Keep mash **50 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.6 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Briess - Pale Ale Malt | 2 kg (60.6%) | 80 % | 7 |
| Grain | Płatki pszeniczne | 1 kg (30.3%) | 85 % | 3 |
| Grain | Płatki owsiane | 0.2 kg (6.1%) | 85 % | 3 |
| Grain | Weyermann - Acidulated Malt | 0.1 kg (3%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil | Centennial | 10 g | 40 min | 10.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale | Dry | 11 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------|----------|--------|---------|--------|
| Spice | kolendra | 8 g | Boil | 40 min |

| | | | | |
|--------|--------|------|------|-------|
| Flavor | skórki | 22 g | Boil | 5 min |
|--------|--------|------|------|-------|