

Rye Pale Ale

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **46**
- SRM **4.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Pale Malt (2 Row) US | 3.5 kg (64.8%) | 79 % | 4 |
| Grain | Żytni | 1 kg (18.5%) | 85 % | 8 |
| Grain | Płatki pszeniczne | 0.5 kg (9.3%) | 85 % | 3 |
| Grain | Monachijski | 0.2 kg (3.7%) | 80 % | 16 |
| Grain | Strzegom Karmel 30 | 0.2 kg (3.7%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | Chinook | 15 g | 60 min | 13 % |
| Whirlpool | Citra | 30 g | 30 min | 12 % |
| Whirlpool | Amarillo | 30 g | 30 min | 9.5 % |
| Dry Hop | Citra | 20 g | 1 day(s) | 12 % |
| Dry Hop | Amarillo | 70 g | 1 day(s) | 9.5 % |