

Rye APA

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **35**
- SRM **4.2**
- 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 **25.7 liter(s)**

Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.2 liter(s)**
- Total mash volume **22.1 liter(s)**

Steps

- Temp **66 C**, Time **50 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **17.2 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **77C**
- Sparge using **13.4 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 | 4.2 kg (85.7%) | 80 % | 5 |
| Grain | Żytni | 0.7 kg (14.3%) | 85 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 10 g | 60 min | 15.5 % |
| Boil | lunga | 15 g | 60 min | 11 % |
| Whirlpool | Cascade PL | 30 g | 0 min | 5.2 % |
| Dry Hop | Cascade PL | 50 g | 3 day(s) | 5.2 % |
| Dry Hop | Eureka! | 50 g | 3 day(s) | 18 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|------|
| Water Agent | Chlorek wapnia | 5 g | Mash | --- |
| Water Agent | Gips piwowarski | 5 g | Mash | --- |