

WWA e.10 - 12.03.2023

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **41**
- SRM **8.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **81 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.7 liter(s)**
- Total mash volume **14.2 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **10.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3.2 kg (90.1%) | 80 % | 5 |
| Grain | Strzegom Karmel 300 | 0.2 kg (5.6%) | 70 % | 299 |
| Grain | Pszeniczny | 0.15 kg (4.2%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil | lunga | 20 g | 60 min | 12.6 % |
| Boil | lunga | 10 g | 10 min | 12.6 % |
| Aroma (end of boil) | lunga | 30 g | 1 min | 12.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|------|--------|------------|
| Danstar - Windsor Ale | Ale | Dry | 11.5 g | Danstar |