

Pale Ale WARKA#2

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **73**
- SRM **3.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **1 %**
- Size with trub loss **24.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **29.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------------|-------------|-------|-----|
| Grain | PALE ALE/PILS 4,5EBC BYDGOSZCZ | 5 kg (100%) | 80 % | 4.5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---|--------|----------|------------|
| Boil | Falconers Flight 11,3% goryczkowy USA | 15 g | 60 min | 11.3 % |
| Boil | lunga 12.5% goryczka PL | 15 g | 60 min | 12.5 % |
| Boil | Mosaic 11.8% aromatyczny USA | 15 g | 30 min | 11.8 % |
| Boil | Sumit 18% goryczka USA | 15 g | 30 min | 18 % |
| Aroma (end of boil) | Citra 14.2 % aromat USA | 15 g | 5 min | 14.2 % |
| Dry Hop | Mosaic 11.8% aromatyczny USA | 15 g | 7 day(s) | 11.8 % |
| Dry Hop | Citra 14.2 % aromat USA | 15 g | 7 day(s) | 14.2 % |

| | | | | |
|---------|--------------------------|------|----------|-------|
| Dry Hop | Sybila 8.4% aromat PL | 30 g | 7 day(s) | 8.4 % |
|---------|--------------------------|------|----------|-------|

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------|------|-------|--------|------------|
| Safale US-05 gęstwa | Ale | Slant | 200 ml | --- |