

## Polski Pale Ale (nr 1)

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- Gravity **13.1 BLG**
- ABV ---
- IBU **51**
- SRM **7.6**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **10 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **24 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **68 C**, Time **50 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **15.6 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **50 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **24 liter(s)** of wort

### Fermentables

| Type  | Name               | Amount          | Yield | EBC |
|-------|--------------------|-----------------|-------|-----|
| Grain | Pilzneński         | 2.65 kg (59.6%) | 81 %  | 4   |
| Grain | Monachijski        | 1.45 kg (32.6%) | 80 %  | 16  |
| Grain | Strzegom Karmel 30 | 0.35 kg (7.9%)  | 75 %  | 30  |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Marynka           | 40 g   | 60 min | 10 %       |
| Aroma (end of boil) | Lublin (Lubelski) | 40 g   | 5 min  | 4 %        |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-05 | Ale  | Dry  | 11.5 g | Safale     |

### Notes

- Warka nr 1  
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