

JASNE

- Gravity **15.4 BLG**
- ABV ---
- IBU **48**
- SRM **8.4**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **48.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **25.3 liter(s)**
- Total mash volume **35.4 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **73 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **25.3 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **50 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **33.2 liter(s)** of **76C** water or to achieve **48.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | pilzneński klepiskowy | 6 kg (59.4%) | 79 % | 3.5 |
| Grain | Strzegom Monachijski typ II | 2 kg (19.8%) | 79 % | 23 |
| Grain | vienna chateau | 0.6 kg (5.9%) | 79 % | 5.5 |
| Grain | Strzegom Pale Ale | 0.5 kg (5%) | 79 % | 6.5 |
| Grain | Carahell | 0.5 kg (5%) | 77 % | 26 |
| Grain | Żytni | 0.5 kg (5%) | 85 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Magnat | 50 g | 90 min | 11 % |
| Boil | Lubelski | 33 g | 45 min | 3.5 % |
| Boil | Palisade | 27 g | 10 min | 8.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | --- |

| | | | | |
|-----------------------|-----|-------|--------|-----|
| FM 21 odkrycie sezonu | Ale | Slant | 200 ml | --- |
|-----------------------|-----|-------|--------|-----|