

Jo Polako

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **33**
- SRM **7.2**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **10 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **7.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **18.2 liter(s)** of **76C** water or to achieve **23.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|----------------|------------------------|----------------|-------|-----|
| Grain | Briess - Pale Ale Malt | 2.1 kg (50%) | 80 % | 7 |
| Liquid Extract | Bruntal | 1.7 kg (40.5%) | 81 % | 26 |
| Grain | Płatki orkiszowe | 0.4 kg (9.5%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Marynka | 25 g | 45 min | 10 % |
| Boil | Lublin (Lubelski) | 15 g | 15 min | 4 % |
| Aroma (end of boil) | Marynka | 10 g | 5 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 10 g | 5 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us 04 | Ale | Dry | 11 g | --- |