

# Jo Polako

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- 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   | ---        |