

# Kozłak Tradycyjny - 01-03-2018

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **23**
- SRM **13.3**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount        | Yield  | EBC |
|-------|---------------------------|---------------|--------|-----|
| Grain | Wiedeński Veyermann       | 5 kg (79.4%)  | 81 %   | 8   |
| Grain | Special B Malt            | 0.3 kg (4.8%) | 65.2 % | 350 |
| Grain | Biscuit Malt              | 0.4 kg (6.3%) | 79 %   | 50  |
| Grain | Weyermann - Pale Ale Malt | 0.6 kg (9.5%) | 85 %   | 7   |

## Hops

| Use for             | Name          | Amount | Time   | Alpha acid |
|---------------------|---------------|--------|--------|------------|
| Boil                | Magnum        | 20 g   | 45 min | 12 %       |
| Aroma (end of boil) | Hallertautter | 20 g   | 10 min | 3 %        |

## Yeasts

| Name  | Type  | Form  | Amount | Laboratory |
|-------|-------|-------|--------|------------|
| 34/70 | Lager | Slant | 400 ml | ---        |

## Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|        |               |     |      |        |
|--------|---------------|-----|------|--------|
| Fining | Mech irlancki | 5 g | Boil | 15 min |
|--------|---------------|-----|------|--------|