

# Polski Pils Marynka

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **47**
- SRM **3.6**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount       | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Viking Pilsner malt  | 4.5 kg (90%) | 82 %  | 4   |
| Grain | Weyermann - Carapils | 0.5 kg (10%) | 78 %  | 4   |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Marynka | 45 g   | 60 min | 10 %       |
| Aroma (end of boil) | Marynka | 50 g   | 0 min  | 10 %       |

## Yeasts

| Name          | Type | Form  | Amount | Laboratory |
|---------------|------|-------|--------|------------|
| Lutra OYL-071 | Ale  | Slant | 100 ml | Omega      |

## Extras

| Type        | Name            | Amount | Use for | Time   |
|-------------|-----------------|--------|---------|--------|
| Water Agent | Gips piwowarski | 12 g   | Mash    | 60 min |
| Water Agent | Chlorek wapnia  | 3 g    | Mash    | 60 min |
| Water Agent | Kwas Mlekowy    | 0 g    | Mash    | 60 min |

|        |           |     |      |       |
|--------|-----------|-----|------|-------|
| Fining | Whirflock | 4 g | Boil | 5 min |
|--------|-----------|-----|------|-------|

## Notes

- Kwas Mlekowy do korekty pH zacieru (5.2-5.2), Brzeczki nastawnej (5.1 przy wybiciu)  
Whirflock na ostatek 5 min gotowania  
Profil Wody (jasny, chmielowy): Ca-108.6/Mg-4/Na-4/Cl-44.1/SO4-197.9/HCO3-41  
Fermentacja: Zadanie drożdży 30°C, fermentacja w 33°C  
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