

## Pils

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **47**
- SRM **4.8**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **3 %**
- Size with trub loss **25.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **30 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20.5 liter(s)**

### Steps

- Temp **55 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **61.5C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **30 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **20.6 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount         | Yield  | EBC |
|-------|----------------------------|----------------|--------|-----|
| Grain | Viking Pilsner malt        | 4 kg (72.1%)   | 82 %   | 4   |
| Grain | Pszeniczny                 | 0.2 kg (3.6%)  | 85 %   | 4   |
| Grain | Strzegom Monachijski typ I | 0.8 kg (14.4%) | 79 %   | 16  |
| Grain | Acid Malt                  | 0.2 kg (3.6%)  | 58.7 % | 6   |
| Grain | Karmelowy Jasny 30EBC      | 0.35 kg (6.3%) | 75 %   | 30  |

### Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Magnat  | 30 g   | 90 min | 11.2 %     |
| Aroma (end of boil) | Magnat  | 20 g   | 10 min | 11.2 %     |
| Aroma (end of boil) | Oktawia | 30 g   | 10 min | 7.1 %      |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|                             |       |       |        |     |
|-----------------------------|-------|-------|--------|-----|
| Lalbrew Diamond Lager Yeast | Lager | Slant | 500 ml | #87 |
|-----------------------------|-------|-------|--------|-----|

### Extras

| Type   | Name       | Amount | Use for | Time   |
|--------|------------|--------|---------|--------|
| Fining | Whirlflock | 0.5 g  | Boil    | 10 min |