

pils polska

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **21**
- SRM **4.1**

Batch size

- Expected quantity of finished beer **75 liter(s)**
- Trub loss **2 %**
- Size with trub loss **77.3 liter(s)**
- Boil time **80 min**
- Evaporation rate **5 %/h**
- Boil size **83.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **46.2 liter(s)**
- Total mash volume **61.6 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**

Mash step by step

- Heat up **46.2 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Sparge using **52.4 liter(s)** of **76C** water or to achieve **83.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------------------|-----------------|-------|-----|
| Grain | Słód Pilsner® 2,5-4,5 EBC Weyermann | 12.4 kg (80.6%) | 80 % | 4 |
| Grain | Monachijski | 2.08 kg (13.5%) | 80 % | 16 |
| Grain | Weyermann - Carapils | 0.78 kg (5.1%) | 78 % | 4 |
| Grain | zakwaszający | 0.13 kg (0.8%) | 80 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------------|--------|--------|------------|
| Boil | Galena | 30 g | 80 min | 12 % |
| Boil | Saaz (Czech Republic) | 30 g | 60 min | 4.5 % |
| Boil | Saaz (Czech Republic) | 60 g | 10 min | 4.5 % |
| Boil | Saaz (Czech Republic) | 60 g | 1 min | 4.5 % |

Yeasts

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

| | | | | |
|----------|-------|-------|--------|------------------------------------|
| braniewo | Lager | Slant | 500 ml | Fermentis Division of S.I.Lesaffre |
|----------|-------|-------|--------|------------------------------------|

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|---------|---------|--------|
| Fining | Mech irlandzki | 18.75 g | Boil | 15 min |