

polskie ale 3

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **4**

Batch size

- Expected quantity of finished beer **32 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **40.5 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.5 liter(s)**
- Total mash volume **30.2 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **23.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **23.7 liter(s)** of **76C** water or to achieve **40.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Pilzneński | 6.25 kg (93%) | 81 % | 4 |
| Grain | Karmelowy Jasny 30EBC | 0.32 kg (4.8%) | 75 % | 30 |
| Grain | Carabelge | 0.15 kg (2.2%) | 80 % | 35 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil | Magnum | 18 g | 60 min | 10.5 % |
| Boil | East Kent Goldings | 25 g | 20 min | 5.4 % |
| Boil | East Kent Goldings | 25 g | 10 min | 5.4 % |
| Boil | Saaz (Czech Republic) | 20 g | 10 min | 3.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|--------|-------------|------------|
| fm52 | Ale | Liquid | 10001700 ml | fm |