

Groszkowe #9 (Książęcy) - Browar na Wyżynie

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **43**
- SRM **7.3**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **4 %**
- Size with trub loss **23.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **26.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- 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 **15 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 **15 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 | pilzneński Viking Malt | 3 kg (60%) | 80 % | 4 |
| Grain | diastatyczny jęczmienny Weyermann® | 1 kg (20%) | 80 % | 4 |
| Grain | pszeniczny jasny Bestmaltz | 0.5 kg (10%) | 82 % | 4 |
| Grain | Arome Castle Malting | 0.5 kg (10%) | 78 % | 100 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|------------|----------------------------------|--------|---------|------------|
| First Wort | Książęcy (Polishhops) - granulát | 30 g | 100 min | 8.5 % |
| Boil | Książęcy (Polishhops) - granulát | 20 g | 20 min | 8.5 % |
| Whirlpool | Książęcy (Polishhops) - granulát | 50 g | 0 min | 8.5 % |

| | | | | |
|---------|-----------------------------------|-------|----------|-------|
| Dry Hop | Książęcy (Polishhops) - granulata | 100 g | 3 day(s) | 8.5 % |
|---------|-----------------------------------|-------|----------|-------|

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale | Slant | 300 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|--------------------------------|--------|---------|--------|
| Water Agent | siarczan wapnia | 6 g | Mash | 60 min |
| Water Agent | chlorek wapnia | 4 g | Mash | 60 min |
| Water Agent | kwas fosforowy 75% zacier | 4 g | Mash | 60 min |
| Water Agent | kwas fosforowy 75% wysładzanie | 2 g | Mash | 60 min |
| Fining | Mech irlandzki | 2 g | Boil | 15 min |
| Other | siarczan cynku | 2 g | Boil | 0 min |