

Urodzinowy bitter

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **22**
- SRM **5.7**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.4 liter(s)**

Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **68 C**, Time **666 min**

Mash step by step

- Heat up **15.4 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **666 min** at **68C**
- Sparge using **20.4 liter(s)** of **76C** water or to achieve **31.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|-----------------|-------|-----|
| Grain | Strzegom Pale Ale | 4.1 kg (93%) | 79 % | 6 |
| Grain | Cookie Viking Malt | 0.154 kg (3.5%) | 72 % | 50 |
| Grain | Strzegom Karmel 150 | 0.154 kg (3.5%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Sybilla | 25 g | 50 min | 4.3 % |
| Boil | Sybilla | 20 g | 30 min | 4.3 % |
| Boil | Sybilla | 30 g | 10 min | 4.3 % |
| Boil | Sybilla | 10 g | 2 min | 4.3 % |
| Aroma (end of boil) | Fuggles | 5 g | 2 min | 3.9 % |
| Aroma (end of boil) | Cascade | 10 g | 2 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------|------|------|--------|------------|
| London English-style (ESB) | Ale | Dry | 11 g | Lallemand |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|-------------|--------------------|--------|------|---------|
| Water Agent | gips | 5 g | Mash | 666 min |
| Fining | whirlfloc t | 2.37 g | Boil | 15 min |
| Other | pożywka do drożdży | 5 g | Boil | 20 min |