

Urodzinowe

- Gravity **13.8 BLG**
- ABV ---
- IBU **20**
- SRM **4.9**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **75C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------|--------------|--------|------|
| Grain | Słód pilzneński | 2.5 kg (50%) | 80 % | 4 |
| Grain | Słód wiedeński | 1.6 kg (32%) | 79.8 % | 8 |
| Grain | Słód monachijski | 0.3 kg (6%) | 78.8 % | 17.5 |
| Grain | Słód pszeniczny | 0.6 kg (12%) | 82.8 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Tradition | 20 g | 60 min | 5.5 % |
| Boil | Tradition | 15 g | 30 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|-------|------|--------|------------|
| German lager | Lager | Dry | 11 g | --- |